

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PETITION OF CITGO PETROLEUM) AS ____ - ____
CORPORATION FOR AN ADJUSTED) (Adjusted Standard – Air)
STANDARD FROM 35 ILL. ADM. CODE)
SECTION 216.121)

NOTICE OF FILING

TO: Mr. Don A. Brown
Clerk of the Board
Illinois Pollution Control Board
60 E. Van Buren Street, Suite 630
Chicago, Illinois 60605
don.brown@illinois.gov

VIA ELECTRONIC MAIL

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board, **CITGO PETROLEUM CORPORATION'S PETITION FOR AN ADJUSTED STANDARD AND ENTRIES OF APPEARANCE**, copies of which are hereby served upon you.

Respectfully submitted,

CITGO PETROLEUM CORPORATION

Dated: September 10, 2025

By: /s/ Melissa S. Brown
One of Its Attorneys

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CERTIFICATE OF SERVICE

I, the undersigned, on oath state the following: That I have served the attached **CITGO PETROLEUM CORPORATION'S PETITION FOR AN ADJUSTED STANDARD AND ENTRIES OF APPEARANCE**, via electronic mail upon:

Don Brown
Clerk of the Board
Illinois Pollution Board
60 E Van Buren Street, Suite 630
Chicago, Illinois 60605
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That my email address is Melissa.Brown@heplerbroom.com.

That the number of pages in the email transmission is 406.

That I have sent the email transmission on September 10, 2025.

Date: September 10, 2025

/s/ Melissa S. Brown
Melissa Brown

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SECTION 216.121	)	

ENTRY OF APPEARANCE OF ALEC MESSINA

NOW COMES Alec Messina of the law firm HEPLERBROOM, LLC, and hereby enters his appearance in this matter on behalf of CITGO PETROLEUM CORPORATION.

Respectfully submitted,

Dated: September 10, 2025

By: /s/ Alec Messina

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ENTRY OF APPEARANCE OF MELISSA S. BROWN

NOW COMES Melissa S. Brown of the law firm HEPLERBROOM, LLC, and hereby enters her appearance in this matter on behalf of CITGO PETROLEUM CORPORATION.

Respectfully submitted,

Dated: September 10, 2025

By: /s/ Melissa S. Brown

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**CITGO PETROLEUM CORPORATION’S
PETITION FOR AN ADJUSTED STANDARD**

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**CITGO PETROLEUM CORPORATION’S
PETITION FOR AN ADJUSTED STANDARD**

The CITGO Petroleum Corporation (“CITGO”), by and through their undersigned counsel and pursuant to 415 ILCS 5/28.1 and 35 Ill. Adm. Code Part 104, Subpart D, submits this Petition for an Adjusted Standard to the Illinois Pollution Control Board (“Board”), seeking an adjusted standard from 35 Ill. Adm. Code 216.121. Specifically, CITGO requests an adjusted standard from the standard for carbon monoxide (“CO”) emissions applicable to fuel combustion emission sources as a result of the removal of the startup, malfunction, and breakdown relief provisions. CITGO seeks this adjusted standard for its petroleum refinery located in Will County, near Lemont, Illinois. An adjusted standard is being sought to allow for compliance with an alternative emission limitation (“AEL”) in lieu of the Section 216.121 CO standard during periods of startup and shutdown of select fuel combustion emission sources at the refinery. In support of this Petition, CITGO states as follows:

I. INTRODUCTION

On July 20, 2023, the Board adopted amendments to Parts 201, 202, and 212 of the Board’s air regulations, amending and removing provisions governing applying for and obtaining startup, malfunction, and breakdown (“SMB”) relief in air operating permits. Opinion and Order, PCB R 23-18 (July 20, 2023). CITGO had previously applied for and obtained SMB relief conditions pursuant to Part 201, authorizing CO emissions from select fuel combustion emission

sources to exceed the CO standards in Section 216.121 during periods of SMB. The Board's amendments adopted in PCB R 23-18, particularly the amendment and removal of the SMB provisions in Part 201 and subsequent potential for enforcement for excess emissions during SMB periods, adversely impacts CITGO and its ability to continuously comply with the CO standard in Section 216.121 during all modes of operation of select fuel combustion emission sources.

CITGO petitions for an adjusted standard from Section 216.121. The adjusted standard relief requested by CITGO is an AEL that would apply during periods of startup and shutdown of select fuel combustion emission source in lieu of the CO standard in Section 216.121. The proposed AEL consists of incorporating by reference provisions containing alternative standards applicable to periods of startup and shutdown from the National Emission Standards for Hazardous Air Pollutants ("NESHAP") for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 40 CFR Part 63, Subpart DDDDD.¹ In promulgating NESHAP Subpart DDDDD, the United States Environmental Protection Agency ("USEPA") recognized the unique and important operating conditions that fuel combustion emission sources must follow during startup and shutdown to ensure safe operations and to minimize emissions. These unique operating conditions are discussed in detail in this Petition and in the Technical Support Document ("TSD") attached hereto as Exhibit 1. CITGO respectfully requests that the Board accept CITGO's proposed Adjusted Standard.

¹ NESHAP Subpart DDDDD is publicly available at the GovInfo's website at <https://www.govinfo.gov/content/pkg/CFR-2024-title40-vol15/pdf/CFR-2024-title40-vol15-part63-subpartDDDDD.pdf>. Excerpts of pertinent provisions of NESHAP Subpart DDDDD are attached to the Petition as referenced below.

II. BACKGROUND

A. SMB in Illinois

The SMB provisions in Illinois were adopted in the rulemaking for new regulations for emission control of sulfur dioxide, nitrogen oxides, CO, hydrocarbons, and particulate matter. Final Order and Opinion, PCB R 71-23, at 1 (April 13, 1972). In that rulemaking, the Board adopted the initial 200 ppm CO standard applicable to fuel combustion emission sources now in Section 216.121. *Id.* at 4-255.² In PCB R 71-23, the Board acknowledged, in adopting the original SMB provisions in Part 201 (then Rule 105), that “[n]o machine works perfectly all the time” and “startup conditions may result in less than optimum emission control.” *Id.* at 4-305. The Board recognized fifty years ago that sources may be unable to comply with the general emission limitations or standards being adopted in PCB R 71-23 (including the original 200 ppm CO standard applicable to fuel combustion emission sources) during startup due to the conditions of startup. Despite great advances in technology and control equipment, there are still instances where emissions units cannot meet generally applicable emission limitations during periods of SMB. The reasons for originally adopting the SMB provisions still hold true today.

The Board removed the SMB relief provisions from Part 201 on July 20, 2023, in PCB R 23-18. Final Opinion and Order, PCB R 23-18 (July 20, 2023) (amending Sections 201.149, 201.157, and 201.301, and repealing Sections 201.261 through 201.265). The amendments became effective on July 25, 2023. 47 Illinois Register 12089 (Aug. 11, 2023).

In its Second Notice Opinion and Order in PCB R 23-18, the Board directed the clerk to open a sub-docket to consider proposals for AELs. Second Notice Opinion and Order, PCB R

² As adopted in PCB R 71-23, Rule 206(a) provided: “No person shall cause or allow the emission of carbon monoxide into the atmosphere from any fuel combustion emission source with actual heat input greater than 10 million btu per hour to exceed 200 ppm, corrected to 50 per cent excess air.”

23-18 at 22-23 (April 6, 2023). On August 7, 2023, several petitioners, including the Illinois Environmental Regulatory Group (“IERG”), filed proposals for AELs in the sub-docket PCB R 23-18(A). IERG’s Proposal requested an AEL from the fuel combustion emission source CO standard in 35 Ill. Adm. Code 216.121. IERG’s Proposal for Regulations of General Applicability, PCB R 23-18(A) (Aug. 7, 2023). As its proposed AEL, IERG proposed to incorporate the work practice standards applicable during periods of startup and shutdown in NESHAP Subpart DDDDD. *Id.* IERG proposed that its proposed AEL would apply to all fuel combustion emission sources in Illinois that were subject to 35 Ill. Adm. Code 216.121. *Id.* Ultimately, the Board declined to adopt IERG’s AEL proposal, explaining that the proposal was not narrowly tailored and could apply to thousands of emission units. Second Notice Opinion and Order, PCB R 23-18(A), at 136 (July 11, 2024).

As demonstrated throughout this petition, CITGO’s proposed AEL differs from IERG’s proposal in several key respects, including that CITGO’s proposed AEL is based on a narrow set of defined emission units (fuel combustion emission units at the refinery greater than 10 MMBtu/hr. equipped with continuous emissions monitoring systems (“CEMS”) for CO and oxygen) and covers a narrower range of fuel combustion emission unit sizes (design heat input ratings greater than 10 MMBtu/hr., up to 396 MMBtu/hr.). CITGO’s proposal also includes monitored emissions data representing a range of types of fuel combustion devices (natural draft, balanced draft, and forced air), each of which have monitoring and modeling data, and data covering emission units with nominal heat input capacity ranging from 113.3 MMBtu/hr. to 396 MMBtu/hr., covering all three types of devices. CITGO’s proposal also reflects the actual firing rate during CO events at fuel gas combustion devices monitored for CO ranging from 11 MMBtu/hr. to 206 MMBtu/hr. (depending on the event and emission unit) and is supported by

worst-case dispersion modeling for each of the emission units for which continuous emission monitoring data is available.

B. Federal SSM

On June 12, 2015, USEPA published in the Federal Register a final rule clarifying, restating, and updating USEPA's national policy regarding SSM provisions in SIPs. *State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction*, 80 Fed. Reg. 33840 (June 12, 2015), attached as Exhibit 2 hereto.³ USEPA announced in the 2015 final action its SSM policy, which concluded that broad SSM exemption provisions and affirmative defense SIP provisions are generally viewed as inconsistent with the requirements of the Clean Air Act ("CAA"). *Id.* at 33851. However, USEPA also recognized that there are approaches to addressing emissions during SSM events that are consistent with the requirements of the CAA. *Id.* at 33844. USEPA explained:

The EPA emphasizes that there are other approaches that would be consistent with CAA requirements for SIP provisions that states can use to address emissions during SSM events. While automatic exemptions and director's discretion exemptions from otherwise applicable emission limitations are not consistent with the CAA, SIPs may include criteria and procedures for the use of enforcement discretion by air agency personnel. Similarly, SIPs may, rather than exempt emissions during SSM events, include emission limitations that subject those emissions to alternative numerical limitations or other technological control requirements or **work practice requirements** during startup and shutdown events, so long as those components of the emission limitations meet applicable CAA requirements The EPA acknowledges that for some states, this rulemaking entailed the EPA's evaluation of SIP provisions that may date back several decades. Aware of that fact, the EPA is committed to working closely with each of the affected states to develop approvable SIP submissions consistent with the guidance articulated in the updated SSM Policy in this final action.

³ This Federal Register is also publicly available on the U.S. Government's "GovInfo" website at <https://www.govinfo.gov/content/pkg/FR-2015-06-12/pdf/2015-12905.pdf>.

Id. (emphasis added). USEPA then restated its seven criteria for developing AELs. The seven criteria are addressed in the TSD, attached as Exhibit 1 to this Petition. If CITGO's proposed Adjusted Standard is adopted by the Board, it is CITGO's understanding that the adopted Adjusted Standard will be submitted by the Illinois Environmental Protection Agency ("Illinois EPA") to USEPA for approval as a revision to the Illinois SIP. CITGO's proposed Adjusted Standard was drafted to address and satisfy USEPA's seven AEL criteria.

In the 2015 SIP Call, USEPA issued findings of substantial inadequacy for SIP provisions applying to excess emissions during SSM periods for 36 states/air agencies, including Illinois, and issued a SIP Call to each of those states/air agencies, requiring them to adopt and submit revisions to USEPA to correct identified SSM-related deficiencies by November 22, 2016. *Id.* at 33840, 33848, and 33930. After legal challenges and a series of revisions to USEPA's SSM policy, on January 12, 2022, USEPA published in the Federal Register a final rule finding that 12 States or local air pollution control districts, including Illinois, failed to submit SIP revisions required by the CAA in a timely manner to address USEPA's 2015 findings of substantial inadequacy and SIP Call. *Findings of Failure to Submit State Implementation Plan Revisions in Response to the 2015 Findings of Substantial Inadequacy and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction*, 87 Fed. Reg. 1680 (Jan. 12, 2022), attached hereto as Exhibit 3.⁴ The 2022 final action became effective on February 11, 2022 and required the impacted states to submit SIP revisions addressing the findings of inadequacy relating to SSM within 18 months from the effective date (i.e., by August 11, 2023). *Id.* at 1682. The amendments adopted by the Board in PCB R 23-18 were intended to meet the SIP Call and Findings of Substantial Inadequacy requirements.

⁴ This Federal Register is also publicly available on the U.S. Government's "GovInfo" website at <https://www.govinfo.gov/content/pkg/FR-2022-01-12/pdf/2022-00138.pdf>.

III. ANALYSIS AND PETITION CONTENT REQUIREMENTS

CITGO cannot guarantee continuous compliance with the generally applicable CO standard in Section 216.121 during periods of startup and shutdown of select fuel combustion emission sources. CITGO is now unable to avail itself of the SMB provisions previously under Part 201 as to those fuel combustion emission sources for which relief was previously obtained and unable to obtain authorization for excess emissions during SMB events under Part 201 in the future, leaving CITGO in a position of facing potential, and in some scenarios likely, noncompliance with the CO standards in Section 216.121 during periods of startup and shutdown. CITGO requests an adjusted standard, which provides that CITGO would be able to comply with an AEL during periods of startup and shutdown of select fuel combustion emission sources subject to Section 216.121.

A. Standard From Which an Adjusted Standard is Sought [35 IAC 104.406(a)]

The rule of general applicability for which CITGO requests an adjusted standard is 35 Ill. Adm. Code 216.121. Section 216.121 of the Board's regulations states:

Section 216.121 Fuel Combustion Emission Sources

No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmbtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

35 Ill. Adm. Code 216.121. Section 216.121 (then Rule 206(a)) was adopted in PCB R 71-23 with an effective date of April 14, 1972. Final Order and Opinion, PCB R 71-23, at 4-255 (April 13, 1972).

B. Whether the Regulation of General Applicability was Promulgated to Implement the Requirements of the CWA, Safe Drinking Water Act, Comprehensive Environmental Response, Compensation and Liability Act, CAA, or the State Programs Concerning RCRA, UIC, or NPDES [35 IAC 104.406(b)]

The CO emission standard in Section 216.121 was promulgated to implement the requirements of the Clean Air Act. Section 216.121, originally adopted as Rule 206(a) in PCB R 71-23, was adopted as part of Illinois' SIP to meet the recently adopted federal air quality standards for CO. Opinion and Order of the Board, PCB R 71-23, 4-299 (Apr. 13, 1972).

C. Level of Justification as Specified by the Regulation of General Applicability [35 IAC 104.406(c)]

Section 216.121 does not include a specified level of justification for an adjusted standard. Because there is not a specified level of justification, the applicable level of justification are the following factors identified in Section 28.1(c) of the Act and Section 104.426 of the Board's regulations:

- (1) factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner;
- (2) the existence of those factors justifies an adjusted standard;
- (3) the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and
- (4) the adjusted standard is consistent with any applicable federal law.

415 ILCS 5/28.1(c)(1)-(4); 35 Ill. Adm. Code 104.426. The above factors are addressed in detail in the following subsections.

D. Nature of the Petitioner's Activity that is the Subject of the Proposed Adjusted Standard (35 IAC 104.406(d))

The refinery is located near Lemont, Illinois, at 135th Street and New Avenue in DuPage Township, Will County, Illinois (ID No. 197090AAI) (hereinafter referenced as the "Lemont Refinery"). The Lemont Refinery is not located in an environmental justice area.⁵ The Lemont

⁵ See Section 3.3.3 of the TSD.

Refinery is a strategic supplier of transportation fuels, particularly in the upper Midwest. The refinery has a crude processing capacity of 177,000 barrels per day and manufactures several grades of gasoline, diesel, jet fuel, and high-quality gasoline, diesel, other distillate fuels, and hydrocarbon solvents used in the production of paints, adhesives and coatings. The refinery has approximately 1,050 employees and contractors averaged over a 3-year period. The refinery constructed twenty-two of the emission units in 1968-1970, with six units constructed earlier (1957 and 1965), and eight emission units after (mid-to-late 1980s, 2004, 2007, and 2018).

The Lemont Refinery operates twenty refining process units (not including blending, bulk storage, and product transfer) supported by four boilers, thirty-one process heaters and one air heater. The air heater and one of the boilers (the CO Boiler) are associated with the Fluid Catalytic Cracking Unit; the other three boilers are entirely for steam production, and range in size from 322 MMBtu/hr. to 396 MMBtu/hr. The process heaters range in size from 5.8 MMBtu/hr. to 376.5 MMBtu/hr./hr.; of the thirty-one process heaters, three are less than 10 MMBtu/hr. and cannot have actual firing greater than 10 MMBtu/hr., so are not subject to the existing CO standard at 35 Ill. Adm. Code 216.121. The remaining twenty-eight process heaters are all rated greater than 10 MMBtu/hr. and, depending on actual firing rate, potentially subject to the existing CO standard at 35 IAC 216.121. Of the boilers and process heaters subject to 35 Ill. Adm. Code 216.121, seven are equipped with continuous emissions monitoring systems (“CEMS”) for CO and oxygen (“O₂”). Appendix A of the TSD contains a list of the fuel combustion emission sources that would be subject to the proposed AEL. More detailed descriptions of the fuel combustion emission sources at issue are contained in Section 1.2 of the TSD. Under normal operations and good fuel combustion practices, no control for CO is necessary.

CO emissions from the fuel combustion emission sources during normal operations are typically quite low (averaging nominally 2 ppmv @ 50% excess air). The emissions during startup and shutdown that would be subject to the proposed AEL are not new; they have been occurring since the refinery began operation. During a fuel combustion emission source startup (and sometimes shutdown), CO emissions have been observed as high as 4,620 ppmv @ 50% excess air (1-hr avg.). The elevated CO occurs because during startup, the fuel combustion emission source's firebox temperature is inherently not at the autoignition temperature of carbon monoxide (1,128 °F). Additionally, sometimes when a shutdown needs to be gradual and fuel gas flow is slowly reduced (as opposed to instantly cut off), instability of flue gas flows within the firebox can occur, causing inconsistent temperature regions within the firebox and resulting in elevated CO.

E. Efforts Necessary to Comply with the Regulation of General Applicability [35 IAC 104.406(e)]

CITGO is seeking an adjusted standard from 35 Ill. Adm. Code 216.121 as a result of the removal of the SMB relief provisions in Part 201. Currently CITGO must comply with the CO standard in Section 216.121 during all modes of operation of the fuel combustion emission sources subject to the standard, including periods of startup and shutdown. There is no known technology to begin startup of a process heater or boiler with its firebox already at the CO auto-ignition temperature of 1,128 °F. Therefore, there is no known technology to aid in controlling CO emissions of these fuel combustion emission sources during startup, as well as gradual shutdown. There is no feasible engineering control option during startups and shutdowns to continuously meet the Section 216.121 standard other than the work practices proposed by this Adjusted Standard.

F. Description of Proposed Adjusted Standard and Efforts Necessary to Achieve the Proposed Standard [35 IAC 104.406(f)]

1. Proposed Adjusted Standard

Part 216 of the Board's rules addresses CO emissions. 35 Ill. Adm. Code Part 216. The CO standards are organized by categories of sources: fuel combustion emission sources, incinerators, petroleum refining and chemical manufacture, and primary and fabricated metal products. 35 Ill. Adm. Code 216, Subparts B, C, N, and O. The provisions in Part 216 only contain CO standards – they do not contain requirements for monitoring, testing, recordkeeping or reporting. *See id.* The federal NESHAP standards for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 40 CFR 63, Subpart DDDDD are more comprehensive. The standards in Subpart DDDDD are based on Maximum Achievable Control Technology ("MACT") and provide requirements for continuous monitoring, testing, recordkeeping and reporting. 40 CFR 63, Subpart DDDDD. Under NESHAP Subpart DDDDD, CO is regulated as a surrogate for organic hazardous air pollutant ("HAP") species, as good combustion results in the elimination of CO and organic HAP.

Currently, the applicable fuel combustion emission sources at the Lemont Refinery must comply with the Section 216.121 CO standard at all times, including periods of startup and shutdown. However, given the unique operating conditions of the fuel combustion emission sources during startup and gradual shutdown periods, CITGO will likely be unable to achieve the Section 216.121 CO standard throughout the entirety of each startup and shutdown event. Therefore, CITGO proposes an adjusted standard that would apply during periods of startup and shutdown of fuel combustion emission sources equipped with CEMS for CO and O₂ in lieu of the CO standards in Section 216.121. CITGO proposes the following language for a Board order to impose an adjusted standard:

1. Pursuant to Section 28.1 of the Environmental Protection Act (“Act”) (415 ILCS 5/28.1), the Board grants CITGO Petroleum Corporation (“CITGO”) and its successors an adjusted standard from 35 Ill. Adm. Code 216.121, effective as of the date of this order. The adjusted standard applies to the emissions of carbon monoxide (“CO”) into the atmosphere from fuel combustion emission sources with actual heat input greater than 10 mmbtu/hr subject to 35 Ill. Adm. Code Section 216.121 and equipped with continuous emissions monitoring systems (“CEMS”) for CO and oxygen (“O₂”) at the petroleum refinery located near Lemont Illinois, at 135th Street & New Avenue, DuPage Township, Will County, Illinois (collectively, the “Affected Units”).
2. During periods of startup and shutdown of the Affected Units, CITGO and its successors must comply with either the standard in 35 Ill. Adm. Code 216.121 or the requirements applicable to fuel combustion emission sources during startup and shutdown in 40 CFR 63 Subpart DDDDD Table 3 Items 5 and 6, 40 CFR 63.7500(a)(3) and (f), 40 CFR 63.7505(e), 40 CFR 63.7535(b), and 40 CFR 63.7555(d)(9)-(12) as to those Affected Units.
3. If electing to comply with the requirements in 40 CFR Subpart DDDDD referenced in Paragraph 2 above during startup and shutdown of the Affected Units, the CO standard in 35 Ill. Adm. Code 216.121 does not apply.
4. The definitions of “startup,” “shutdown,” and “useful thermal energy” in 40 CFR 63.7575 apply to this adjusted standard.

The proposed adjusted standard language incorporates provisions from the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 40 CFR Part 63, Subpart DDDDD. As proposed, CITGO would have the option to either comply with the CO standard in Section 216.121 during periods of startup and shutdown or can elect to comply with the alternative standards incorporated by reference from NESHAP Subpart DDDDD. Additionally, the proposed Adjusted Standard would specify that, for purposes of the Adjusted Standard, the terms “startup,” “shutdown,” and “useful thermal energy” would be defined as those terms are defined in 40 CFR 63.7575.

The provisions from NESHAP Subpart DDDDD that CITGO proposes to incorporate by reference are discussed in the following sections.

i. 40 CFR 63.7500(f)

40 CFR 63.7500 provides the requirements for emission limitations, work practice standards, and operating limits for boilers and process heaters at major sources. Section 63.7500(f) provides which standards are applicable during periods of startup and shutdown. Section 63.7500(f) states:

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

40 CFR 63.7500(f), attached hereto as Exhibit 4.

Section 63.7500(f) states that the generally applicable standards under Boiler MACT do not apply during periods of startup and shutdown. Pursuant to Section 63.7500(f), only the requirements in NESHAP Subpart DDDDD, Table 3, Items 5 and 6 are applicable during periods of startup and shutdown.

ii. 40 CFR 63.7500(a)(3)

40 CFR 63.7500 provides the requirements for emission limitations, work practice standards, and operating limits for boilers and process heaters at major sources. Section 63.7500(a)(3) states:

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b) through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR 63.7500(a)(3), attached hereto as Exhibit 4.

Under this provision, CITGO will be required to operate and maintain its fuel combustion emission sources during startup and shutdown in a manner consistent with safety and good air pollution control practices for minimizing emissions. CITGO proposes to incorporate this provision in order to mirror the SMB permit conditions concerning the duty to minimize emissions during SMB periods. Additionally, USEPA's criteria for developing AELs require that the AEL include a requirement that the frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable, and that the facility is operated in a manner consistent with good practice for minimizing emissions. Incorporating this provision is intended to satisfy those criteria.

iii. 40 CFR Part 63, Subpart DDDDD, Table 3, Items 5 and 6

Table 3 of NESHAP Subpart DDDDD provides the work practice standards applicable to boilers and process heaters at major sources. Items 5 and 6 of Table 3 state:

If your unit is . . .	You must meet the following . . .
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 15 to this subpart during startup	a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry

	biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
	c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using paragraph (1) of the definition of “startup” in § 63.7575, once you start firing fuels that are not clean fuels you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using paragraph (2) of the definition of “startup” in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e).
	d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart during shutdown	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when

	necessary to comply with other standards applicable to the source that require operation of the control device.
	If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

40 CFR 63, Table 3, Items 5 and 6, attached hereto as Exhibit 4.

Item 5 of Table 3 requires fuel combustion emission sources, during periods of startup, to comply with the following requirements:

- Operate all continuous monitoring systems (“CMS”) during startup.
- Use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
- Comply with either of the following work practice standards:
 - o If you choose to comply using paragraph (1) of the definition of “startup” in § 63.7575, once you start firing fuels that are not clean fuels you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose,
 - o If you choose to comply using paragraph (2) of the definition of “startup” in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices

so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e).

- Collect monitoring data during periods of startup.
- Keep records during periods of startup and provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555

Item 6 of Table 3 requires fuel combustion emission sources, during periods of shutdown, to comply with the following requirements:

- Operate all CMS during shutdown.
- While firing fuels that are not clean fuels during shutdown, vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.
- If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
- Collect monitoring data during periods of startup.
- Keep records during periods of startup and provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555

The following describe possible startup scenarios for the fuel combustion emission sources that would be subject to the proposed Adjusted Standard:

- For boilers and process heaters that burn only clean fuel, have CMS installed, and use the “startup” definition (1) for compliance, CITGO would be required to

operate the CMS during startup. Consistent with the “startup” definition (1), startup would end when steam or heat is supplied for any purpose. CITGO would also be required to operate the CMS during shutdown of these units.

- For boilers and process heaters that burn only clean fuel, have CMS installed, and use the “startup” definition (2) for compliance, CITGO would be required to comply with the standard in 35 Ill. Adm. Code 216.121 within four hours of start of supply of useful thermal energy. CITGO would also be required to develop and implement a written startup and shutdown plan for these units, as well as operate all CMS on these units during startup and shutdown.

The references to collecting monitoring data and keeping records in the above provision are addressed in more detail in the following subsections.⁶

iv. 40 CFR 63.7505(e)

40 CFR 63.7505 provides the general requirements for complying with NESHAP Subpart DDDDD. Section 63.7505(e) requires the development and implementation of a written startup and shutdown plan. Section 63.7505(e) states:

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in § 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

⁶ Note that Table 3 references providing “reports concerning activities and periods of [startup/shutdown], as specified in 63.7555.” However, Section 63.7555 contains requirements for recordkeeping and does not contain requirements specific to reporting. 40 CFR 63.7550 contains the reporting requirements for Boiler MACT. Section 63.7550 requires the submittal of compliance reports. Among numerous other information, a compliance report must include, for each instance of startup or shutdown, the information required to be monitored, collected, or recorded according to Section 63.7555(d). 40 CFR 63.7550(c)(xviii). Additionally, the compliance report must include, for each deviation from the work practice standards for periods of startup and shutdown, the description of the deviation; and information on the number, duration, and cause of the deviations and corrective action taken. 40 CFR 63.7550(d). CITGO does not intend to incorporate the compliance report requirements from Section 63.7550 as the compliance report requirements are structured for semi-annual submittals and structured to include numerous non-startup and non-shutdown related information.

40 CFR 63.7505(e), attached hereto as Exhibit 4. This provision requires CITGO to develop a startup and shutdown plan if the facility complies using the definition (2) of “startup.”

v. 40 CFR 63.7535(b)

40 CFR 63.7535 provides the minimum amount of monitoring data that sources are required to obtain under NESHAP Subpart DDDDD. Section 63.7535(b) states:

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

40 CFR 63.7535(b), attached hereto as Exhibit 4.

vi. 40 CFR 63.7555(d)(9)-(12)

40 CFR 63.7555 provides the recordkeeping requirements under NESHAP Subpart DDDDD. Sections 63.7555(d)(9)-(12) state:

(d) For each boiler or process heater subject to an emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in § 63.7575 you must maintain records of the time

that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in § 63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (e.g., CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

40 CFR 63.7555(d)(9)-(12), attached hereto as Exhibit 4.

In proposing to incorporate these provisions, when choosing to comply with the AEL, CITGO will be required to maintain the NESHAP Subpart DDDDD standards during periods of startup and shutdown in lieu of complying with the CO standard in 35 Ill. Adm. Code 216.121.

vii. 40 CFR 63.7575

CITGO’s proposed Adjusted Standard would incorporate the definitions of “startup,” “shutdown,” and “useful thermal energy” in NESHAP Subpart DDDDD. 40 CFR 63.7575 provides the following definitions:

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process

heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Startup means:

- (1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or
- (2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Useful thermal energy means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

40 CFR 63.7575, attached hereto as Exhibit 4.

2. Efforts Necessary to Achieve the Proposed Standard

The efforts necessary to achieve the proposed Adjusted Standard would not be any different than what CITGO is currently implementing at the Lemont Refinery. CITGO currently complies with the provisions from NESHAP Subpart DDDDD proposed to be incorporated by reference in the proposed Adjusted Standard. CITGO has been subject to the applicable provisions of NESHAP Subpart DDDDD since its promulgation. Prior to the amendments to Part

201, CITGO was authorized to exceed the CO standards in Section 216.121 during periods of SMB for select fuel combustion emission units, as long as the permit conditions concerning startup were complied with including minimizing duration of startups and minimizing emissions during these periods. During periods of startup and shutdown of all subject fuel combustion emission sources, CITGO would comply and will continue to comply with the NESHAP Subpart DDDDD provisions applicable during startup and shutdown to minimize emissions during those modes of operation. Because CITGO has been complying with the NESHAP Subpart DDDDD provisions proposed to be incorporated into the proposed Adjusted Standard, there would be no difference in costs between CITGO's prior compliance actions and CITGO's compliance actions if the proposed Adjusted Standard is adopted. See Sections 4.3.3 and 4.3.4 of the TSD (Exhibit 1) for additional discussion regarding technical feasibility and economic reasonableness of the proposed Adjusted Standard.

G. Description of Impact on the Environment of Complying with the Regulation of General Applicability versus Complying with the Adjusted Standard [35 IAC 104.406(g)]

There will be no adverse impact of CITGO's operation if CITGO were to comply with the rule of general applicability as compared to the impact on the environment if CITGO were to comply with the proposed Adjusted Standard. CITGO complies with the applicable CO standard in Section 216.121 during all modes of operation of the subject fuel combustion emission sources, except that CITGO is unable to guarantee continuous compliance with the standard during each startup and shutdown of the fuel combustion emission sources at issue. As discussed above, prior to the Board's amendments to Part 201 removing the SMB relief provisions, during the times that CITGO was likely unable to meet Section 216.121 during a startup period, CITGO was already complying with the alternative standards under NESHAP Subpart DDDDD. The

same would occur during startup and shutdown if CITGO's proposed Adjusted Standard is adopted by the Board. As such, the impact to the environment from CITGO's operation of the fuel combustion emission sources during startup and shutdown would not change if CITGO's proposed Adjusted Standard is adopted.

As discussed in detail in the TSD, dispersion modeling of worst-case startup scenarios demonstrates that CO emissions during startup and shutdown have an insignificant impact to air quality and do not result in an exceedance of either CO NAAQS (1-hr. or 8-hr average). Therefore, CITGO's proposed adjusted standard would have no negative measurable impact to the environment or health.

H. Justification of Proposed Adjusted Standard [35 IAC 104.406(h)]

Section 216.121 does not include a specified level of justification for an adjusted standard. Therefore, the applicable level of justification are the factors identified in Section 28.1 of the Act. Each of the Section 28.1 factors is addressed below in relation to CITGO's proposed Adjusted Standard.

1. Factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner [415 ILCS 5/28.1(c)(1)]

The Board first adopted the 200 ppm CO standard applicable to fuel combustion emission sources in PCB R 71-23. Final Order and Opinion, PCB R 71-23, at 4-255 (April 13, 1972). In the same rulemaking, the Board adopted the original SMB provisions in Part 201 (then Rule 105). *Id.* at 4-305. In adopting both the emission standards (for CO, as well as standards for sulfur dioxide, nitrogen oxides, hydrocarbons, and particulate matter) and the SMB provisions, the Board recognized the need for SMB provisions, explaining that “[n]o machine works perfectly all the time” and “startup conditions may result in less than optimum emission control.”

Id. The Board recognized fifty years ago that sources may be unable to comply with the general emission limitations or standards being adopted in PCB R 71-23 (including the original 200 ppm CO standard applicable to fuel combustion emission sources) during startup due to the conditions of startup. Despite great advances in technology and control equipment, there are still instances where emissions units cannot meet generally applicable emission limitations during periods of SMB. The reasons for originally adopting the SMB provisions still hold true today.

The factors relating to CITGO are substantially and significantly different from the factors relied upon by the Board in initially adopting the 200 ppm CO standard in PCB R 71-23. As explained above, when the Board adopted the 200 ppm CO standard, it had the SMB provisions in mind. CITGO cannot guarantee continuous compliance with the generally applicable CO standard in Section 216.121 during periods of startup and shutdown of the subject fuel combustion emission sources. CITGO previously relied upon SMB conditions in its permit for select fuel combustion emission sources, which authorized CO emissions exceeding the Section 216.121 standard during startup of those fuel combustion emission sources. See below language from a permit authorizing the construction of two boilers at the Lemont Refinery:

- b.
 - i. Each affected boiler is subject to 35 IAC 216.121, which provides that no person shall cause or allow the emission of CO into the atmosphere from any subject fuel combustion emission source to exceed 200 ppm, corrected to 50 percent excess air.
 - ii. Notwithstanding the above, subject to the following terms and conditions, the Permittee is authorized to operate an affected boiler in violation of 35 IAC 216.121 during startup. This authorization is provided pursuant to 35 IAC 201.149, 201.161 and 201.262, as the Permittee has applied for such authorization in its application, generally describing the efforts that will be used "... to minimize startup emissions, duration of individual starts, and frequency of startups."
 - A. This authorization does not relieve the Permittee from the continuing obligation to demonstrate that all reasonable

efforts are made to minimize startup emissions, duration of individual startups and frequency of startups.

- B. The Permittee shall conduct startup of the affected boilers in accordance with written procedures which shall be maintained at the refinery, that are specifically developed to minimize emissions from startups.
- C. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Condition 2.1.10(i) and 2.1.11(f).
- D. As provided by 35 IAC 201.265, this authorization for excess emission during startup does not shield a Permittee from enforcement for any violation of applicable emission standard(s) that occurs during startup and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.

See excerpts from Construction Permit 17060030 attached hereto as Exhibit 5 to the Petition.⁷

However, the SMB provisions that the Board adopted in PCB R 71-23 were amended by the Board in PCB R 23-18. CITGO is now unable to avail itself of the SMB provisions previously in Part 201 either via the relief obtained in its permit for select fuel combustion emission sources or by obtaining relief in the future, leaving CITGO in a position of facing likely noncompliance with the CO standards in Section 216.121 during periods of startup and shutdown of the select fuel combustion emission sources. CITGO requests the proposed Adjusted Standard, which provides that CITGO would be able to comply with an AEL during periods of startup and shutdown of the select fuel combustion emission sources.

In removing the SMB relief provisions from Part 201, and therefore removing the underlying authority for the SMB permit conditions and ability to seek similar relief in the future, CITGO must now comply with the Section 216.121 CO standard during all modes of

⁷ CITGO submitted this construction permit to Illinois EPA as a supplement to its pending CAAPP Permit renewal application.

operation of the fuel combustion emission sources, including startup and shutdown. However, as explained herein and in the TSD, CITGO is unable to guarantee continuous compliance with the applicable CO standards in Section 216.121 during each startup and shutdown of the select fuel combustion emission sources. In PCB R 23-18, the Board did not take into account the impact, in practice, to CITGO's ability to continuously comply with the Section 216.121 standards at all times when adopting the amendments in Part 201. Instead, the Board removed the SMB relief provisions in Parts 201, 202, and 212 because they were required to be removed by USEPA per the 2015 and 2022 SSM SIP Calls. Second Notice Opinion and Order of the Board, PCB R 23-18 (Apr. 6, 2023); Final Opinion and Order of the Board, PCB R 23-18 (July 20, 2023).

2. The existence of those factors justifies an adjusted standard [415 ILCS 5/28.1(c)(2)]

The existence of the substantially and significantly different factors relating to CITGO justifies that an adjusted standard is needed for CITGO to continuously comply with the applicable CO standard in Section 216.121 during the entirety of each startup and shutdown of the select fuel combustion emission sources. CITGO must currently comply with the applicable CO standard in Section 216.121 at all times. However, as explained above and in the attached TSD, CITGO is unable to guarantee continuous compliance with the applicable CO standards in Section 216.121 during the entirety of each startup and shutdown of the select fuel combustion emission sources. No other control options exist to ensure continuous compliance with the Section 216.121 standard during each startup and shutdown. An AEL, as proposed herein, is needed so that CITGO can be in continuous compliance during periods of startup and shutdown of the select fuel combustion emission sources.

In promulgating NESHAP Subpart DDDDD, USEPA recognized the generally applicable emissions limitations may not be able to be met during periods of startup and shutdown of fuel

combustion emission sources. The Adjusted Standard proposed by CITGO incorporates startup and shutdown provisions from NESHAP Subpart DDDDD, which were promulgated by USEPA in November 2015. *See National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, 80 Fed. Reg. 72790 (Nov. 20, 2015), attached hereto as Exhibit 6.⁸ The amendments relating to SSM were proposed in response to public comments and to address USEPA's concerns regarding SSM exemptions. *Id.* at 72792. Specifically, USEPA proposed two alternative definitions to startup. *Id.* USEPA explained:

The first definition defines “startup” to mean the first-ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity or for any other purpose. Under this definition, startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, producing electricity, or any other purpose. The EPA is also adopting an alternative definition of “startup” which defines the period as beginning with the first ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler or process heater for the purpose of supplying useful thermal energy for heating, cooling, or process purposes or for producing electricity, and ending four hours after the boiler or process heater supplies useful thermal energy for those purposes. Sources demonstrating compliance using the alternative definition will be required to meet enhanced recordkeeping provisions. These enhancements will document when useful thermal energy is provided, what fuels are used during startup, parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged.

Id. As such, the existence of these unique factors and substantially and significantly different factors justifies an adjusted standard here.

⁸ This Federal Register is also publicly available on the U.S. Government's “GovInfo” website at <https://www.govinfo.gov/content/pkg/FR-2015-11-20/pdf/2015-29186.pdf>.

3. The requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability [415 ILCS 5/28.1(c)(3)]

CITGO's proposed Adjusted Standard will not result in environmental or health effects more adverse than the effects considered by the Board in adopting the rule of general applicability. CITGO has been complying with the alternate standards in NESHAP Subpart DDDDD that CITGO proposes to incorporate by reference during periods of startup and shutdown since their promulgation. As to the adoption of the CO standard in Section 216.121, as explained above, the Board adopted the standard while taking into account the relief provided during periods of SMB by also adopting the SMB provisions in the same rulemaking. There will be no change in environmental or health effects if the proposed Adjusted Standard is adopted.

As to the amendments adopted in PCB R 23-18, the Board did not consider the proposed AELs or their justifications in PCB R 23-18. Instead, the Board held that the amendments did "not change emission limits or a source's obligations to comply with them" and that they did not "impose any new or additional obligations such as emission limits or control requirements on affected sources." Final Opinion and Order, PCB R 23-18, at 4 (July 20, 2023). Because the Board found that the amendments only affected "a source's ability to request and obtain a 'prima facie' defense," the Board did not consider the impacts to the environment or health in PCB R 23-18. *See id.* In practice, there will be no adverse impacts to the environment or health from CITGO's operation of the fuel combustion emission sources during startup and shutdown under the proposed Adjusted Standard as compared to CITGO's operation prior to the amendments to Part 201. CITGO is likely unable to meet Section 216.121 during startup and shutdown and, during those times, CITGO will continue to comply with the alternate standards under NESHAP Subpart DDDDD applicable to startup and shutdown. During all other modes of operation,

CITGO will continue to comply with the applicable CO standard in Section 216.121. Therefore, the environmental or health effects will not change with CITGO's proposed Adjusted Standard. Additionally, as discussed in detail in the TSD, the requested Adjusted Standard will not result in a significant impact to air quality and does not cause an exceedance of a NAAQs.

4. The adjusted standard is consistent with any applicable federal law [415 ILCS 5/28.1(c)(4)]

CITGO's proposed Adjusted Standard is consistent with applicable federal law. See discussion regarding consistency with federal law in the following section.

I. Reasons the Board May Grant the Proposed Adjusted Standard Consistent with Federal Law (35 IAC 104.406(i))

The Board may grant CITGO's proposed Adjusted Standard consistent with federal law. First, the alternative standards that CITGO proposes to incorporate into its Adjusted Standard are from NESHAP Subpart DDDDD. These federal MACT provisions were promulgated by USEPA in November 2015 pursuant to Section 112 of the CAA, 42 U.S.C. 7412. See Exhibit 6, 80 Fed. Reg. 72790 (Nov. 20, 2015). The amendments relating to SSM in NESHAP Subpart DDDDD were proposed in response to public comments and to address USEPA's concerns regarding SSM exemptions, as explained above. *Id.* at 72792.

USEPA understood the concerns with meeting a generally applicable MACT standard during periods of startup and shutdown. USEPA therefore promulgated alternative standards to apply during these periods consistent with the CAA. As such, by incorporating these provisions into CITGO's Adjusted Standard, the Board can adopt the proposed Adjusted Standard consistent with the CAA and federal law.

Further, in the June 12, 2015 SSM final action, USEPA recognized that there are approaches to address emissions during SSM events that are consistent with the requirements of

the CAA. See Exhibit 2, 80 Fed. Reg. 33840, 33844. USEPA explained that, “SIPs may, rather than exempt emissions during SSM events, include emission limitations that subject those emissions to alternative numerical limitations or other technological control requirements or work practice requirements during startup and shutdown events, so long as those components of the emission limitations meet applicable CAA requirements.” *Id.* USEPA reiterated that alternative requirements applicable during periods of SSM must be “narrowly tailored and take into account considerations such as the technological limitations of the specific source category and the control technology that is feasible during startup and shutdown” in order to be approvable. *Id.* at 33913. USEPA developed seven criteria for developing AELs consistent with the CAA. These seven criteria are discussed in detail in the TSD attached as Exhibit 1 to this Petition. Because CITGO’s proposed Adjusted Standard meets the seven AEL criteria, the Board can adopt CITGO’s proposed Adjusted Standard consistent with the CAA and federal law.

J. Hearing on the Petition [35 IAC 104.406(j)]

CITGO does not request a hearing on this Petition. CITGO believes sufficient information is included in this Petition and the TSD that adequately demonstrates the burden of proof required to grant CITGO’s proposed Adjusted Standard.

K. Cites to Supporting Documents [35 IAC 104.406(k)]

As required by 35 Ill. Admin. Code 104.406(k), CITGO has provided the citations to relevant supporting documents and legal authorities throughout this Petition.

L. Additional Information [35 IAC 104.406(l)]

As required by 35 Ill. Admin. Code 104.406(l), CITGO has provided required information as applicable to its request. There is no additional information that needs to be provided.

IV. CONCLUSION

For the reasons stated above, CITGO Petroleum Corporation requests that the Illinois Pollution Control Board enter an Order granting CITGO's proposed Adjusted Standard as set forth herein.

Respectfully submitted,

CITGO PETROLEUM
CORPORATION

Dated: September 10, 2025

By: /s/ Melissa S. Brown
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TECHNICAL SUPPORT DOCUMENT

For

PROPOSED ADJUSTED STANDARD

TITLE: 35 ENVIRONMENTAL PROTECTION

SUBTITLE B: AIR POLLUTION

CHAPTER 1: POLLUTION CONTROL BOARD

**SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY
SOURCES**

PART 216 CARBON MONOXIDE EMISSIONS

SUBPART B: FUEL COMBUSTION EMISSION SOURCES

SECTION 216.121 FUEL COMBUSTION EMISSION SOURCES

Prepared by CITGO Petroleum Corporation



CITGO PETROLEUM CORPORATION

LEMONT REFINERY

FACILITY ID No. 197090AAI

CAAPP APPLICATION No. 96030079

July 2025

Executive Summary

This document reviews fuel combustion emission source information for the CITGO Petroleum Corporation Lemont Refinery in support of a proposed Adjusted Standard for carbon monoxide (CO) from fuel combustion emission sources equipped with continuous emission monitoring systems (CEMS) for CO and oxygen (O₂) during startup and shutdown. Startup (and sometimes shutdown) of fuel combustion emission sources can inherently result in CO above the applicable standard for CO from Fuel Combustion Emission Sources (35 Illinois Administrative Code (IAC) 216.121). This is because of the inability to start up with the firebox temperature at or near the CO auto-ignition temperature and the time it takes to approach that temperature.

Because of this, and with the July 20, 2023 repeal of the Illinois provisions for Malfunctions, Breakdowns, or Startups at 35 IAC 201 Subpart I (35 IAC 201.261-201.265), effective on July 25, 2023, this proposed Adjusted Standard provides relief from potential deviations of 35 IAC 216.121 during startups and shutdowns. The proposed Adjusted Standard is based on implementing an Alternative Emission Limit (AEL), pursuant to criteria U.S. EPA articulated in 2015 when U.S. EPA issued a final rule obligating states to revise their state implementation plans to remove broad approval of startup, shutdown, and malfunction without corresponding limits during such periods.

This Technical Support Document (TSD) contains the following basic elements:

- Describes the Lemont Refinery and the fuel gas combustion emission sources of concern.
- Describes the regulation of concern (35 IAC 216.121).
- Presents a basis for worst-case emissions.
- Summarizes dispersion modeling results for worst-case emissions.
- Presents a proposed Adjusted Standard (which is effectively an AEL).
- Evaluates the proposed Adjusted Standard against U.S. EPA criteria for AELs.
- Evaluates the economic reasonableness and technical feasibility of the proposed AEL.

The dispersion modeling results indicate that the worst-case emissions during startup and shutdown:

- Are insignificant (do not exceed a Significant Impact Level (SIL) for CO), and
- Do not result in an exceedance of the National Ambient Air Quality Standards (NAAQS) for CO.

The proposed AEL is based on the use of the existing National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 63 Subpart DDDDD. This document demonstrates that the use of the proposed AEL during periods of startup and shutdown meets the criteria for AEL set forth by U.S. EPA and how the proposed Adjusted Standard is both economically reasonable and technically feasible.

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1. Introduction

1.1. Facility Description

The CITGO Petroleum Corporation Lemont Refinery is in DuPage Township in Will County. The Lemont Refinery is a strategic supplier of transportation fuels, particularly in the upper Midwest. The refinery has a crude processing capacity of 177,000 barrels per day (BPD) and manufactures several grades of gasoline, diesel, jet fuel, and high-quality gasoline, diesel, other distillate fuels, and hydrocarbon solvents used in the production of paints, adhesives and coatings. The refinery has approximately 1,050 employees and contractors averaged over a 3-year period.

The Lemont Refinery operates twenty (20) refining process units (not including blending, bulk storage, and product transfer) supported by four (4) boilers, thirty-one (31) process heaters, and one (1) air heater. The air heater and one of the boilers (the CO Boiler) are associated with the Fluid Catalytic Cracking Unit (FCCU); the other three boilers are entirely for steam production, and range in size from 322 MMBtu/hr. to 396 MMBtu/hr. The process heaters range in size from 5.8 MMBtu/hr. to 376.5 MMBtu/hr.; of the thirty-one process heaters, three are less than 10 MMBtu/hr. and cannot have actual firing greater than 10 MMBtu/hr., so are not subject to the existing CO standard at 35 IAC 216.121. The remaining twenty-eight process heaters are all rated greater than 10 MMBtu/hr. and, depending on actual firing rate, potentially subject to the existing CO standard at 35 IAC 216.121.

Of these thirty-one (31) process heaters and boilers (not including the FCCU's CO Boiler), seven (7) emission units, ranging from 113.3 MMBtu/hr. to 396 MMBtu/hr. are equipped with CEMS for CO and O₂. These seven fuel combustion emission sources are the subject of this Petition and Technical Support Document (TSD). See Appendix A.

1.2. Fuel Combustion Emission Sources Description

The Lemont Refinery fuel combustion emission sources, besides being a wide variety of sizes, have varying designs, shapes, and monitoring. The following subsections discuss general design, firebox shapes, monitoring, and controls for fuel combustion emission sources.

1.2.1. General Design

Fuel combustion emission sources are typically one of three combustion designs, as discussed briefly below.

- The boilers are all forced-draft design (*i.e.*, equipped with a combustion air blower).
- The process heaters are of two general designs:
 - o All Lemont Refinery process heaters except for one are natural draft design (*i.e.*, the heater has no forced draft or induced draft fan but rather relies on a

draft created by the temperature gradient between the cooler stack and the warmer firebox).

- One process heater is a balanced draft design. *I.e.*, the heater has:
 - a combustion air blower for make-up air,
 - an induced draft fan on the flue gas, and
 - a heat exchanger for the warmer flue gas to preheat the combustion air).
- Of the fuel combustion emission sources equipped with CEMS for CO and O₂:
 - Three (3) are boilers.
 - Three (3) are natural draft process heaters.
 - One (1) is a balanced draft process heater.

1.2.2. Firebox Shape

The fuel combustion emission source firebox shape and internal design can also influence how startups proceed. Lemont Refinery fuel combustion fireboxes are of varying shapes.

- The three boiler fireboxes are horizontal cabins (rectangular prisms).
- Process heater fireboxes are either:
 - Vertical cylinders (6),
 - Vertical cabin (24, vertical rectangular prisms), or
 - Vertical potbelly cabin (1, wider at base than at top of firebox))
- Additionally, certain process heaters may include partial internal reed or checker walls to minimize flames impingement from one set of burners adversely impacting another set of burner flames. This can be found sometimes when the heater has parallel rows of burners.
- Of the seven fuel (7) combustion emission sources equipped with CEMS for CO and O₂:
 - Three (3) are horizontal cabins (the three boilers).
 - Four (4) are vertical cabins

1.2.3. Emissions Monitoring

Table 1, below, summarizes the information for the seven (7) fuel gas combustion emission sources equipped with CEMS for CO and O₂.

Table 1 – Lemont Refinery Fuel Combustion Emission Sources with CO/O₂ CEMS

<i>Fuel Combustion Emission Source ID</i>	<i>Description</i>	<i>Fuel</i>	<i>Draft Type</i>	<i>Nominal Heat Input Capacity (MMBtu/hr.)</i>	<i>CO CEMS Type</i>	<i>Stack Parameters Monitored</i>
109B-62	Steam Methane Reformer Heater	Natural Gas/ PSA Purge Gas ^a	Balanced	113.3	Extractive	NO _x , CO, O ₂
111B-1A	Crude Atmospheric Heater	Refinery f.g. ^b	Natural	376.5	<i>In Situ</i>	NO _x , CO, O ₂ , H ₂ O
111B-1B	Crude Atmospheric Heater	Refinery f.g. ^b	Natural	376.5	<i>In Situ</i>	NO _x , CO, O ₂ , H ₂ O

<i>Fuel Combustion Emission Source ID</i>	<i>Description</i>	<i>Fuel</i>	<i>Draft Type</i>	<i>Nominal Heat Input Capacity (MMBtu/hr.)</i>	<i>CO CEMS Type</i>	<i>Stack Parameters Monitored</i>
111B-2	Crude Vacuum Heater	Refinery f.g. ^b	Natural	219.8	<i>In Situ</i>	NO _x , CO, O ₂ , H ₂ O
430B-1	Auxiliary Boiler	Refinery f.g. ^b	Forced	396.0	Extractive	NO _x , CO, O ₂
430B-24	South Boiler	Refinery f.g. ^b	Forced	340.0	Extractive	NO _x , CO, O ₂
431B-25	North Boiler	Refinery f.g. ^b	Forced	322.0	Extractive	NO _x , CO, O ₂

^a PSA Purge Gas = Pressure Swing Absorption Purge Gas – a gas from the Reformer/PSA process. For this heater, Natural Gas and PSA Purge gas have separate flow meters, but the heater combusts both fuels simultaneously.

^b Refinery f.g. = Refinery Fuel Gas (nominally like natural gas in terms of heat content).

The above process heaters and boilers are the subject of the proposed Adjusted Standard.

1.2.4. Emission Control

This section briefly discusses the Lemont Refinery fuel gas combustion emission source controls for CO.

All Lemont Refinery fuel gas combustion emission sources utilize good fuel combustion practices to minimize CO emissions. Combustion O₂ near the top of the firebox (not to be confused with stack O₂) is monitored on all heaters and boilers to ensure good combustion.

Furthermore, the Lemont Refinery only combusts gaseous fuel in its boilers and process heaters. The fuel combusted is refinery fuel gas in all process heaters (Process heater 109B-62 fires natural gas, besides the unit's Pressure Swing Absorption purge gas -- a refinery fuel gas). Refinery gas and natural gas are both considered "clean fuel" in U.S. EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, at 40 CFR 63 Subpart DDDDD.¹ The Lemont Refinery does not combust (and is not equipped to combust) fuel oil or coal in its boilers or process heaters. "Clean fuel" will combust more fully than fuels not considered "clean".

1.2.5. Impacted Fuel Combustion Emission Sources

Of the fuel combustion emission sources noted above and not associated with the FCCU, thirty-one (three boilers and twenty-eight process heaters) have a design heat input greater than 10 MMBtu/hr. Accordingly, the Illinois Standards for CO for Fuel Combustion Emission Sources, at 35 IAC 216.121 are potentially applicable. The Adjusted Standard being sought is applicable to seven fuel combustion emission sources that are equipped with CO and O₂ CEMS. The list of Lemont Refinery Fuel Combustion Emission Sources in Appendix A indicates which fuel combustion emission sources would be subject to the proposed Adjusted Standard.

¹ 40 CFR 63 Subpart DDDDD, Table 3 Row 5 Item b, and Row 6.

2. Shutdown/Startup Emissions

2.1. Reasons for Occurrence

Shutdowns of fuel combustion emission sources typically occur due to the following:

- Planned shutdowns:
 - Boilers are typically shutdown for biennial pressure vessel inspection required by the Office of State Fire Marshall.
 - Process heaters are typically shut down when the associated process unit shuts down for planned unit maintenance.
- Unplanned shutdowns:
 - Unplanned shutdowns can occur if an instrument malfunctions or a process upset occurs, triggering a Safety Instrumented System automatic shutdown or other shutdown, either of which would shut off fuel gas.
 - Once fuel gas to the fuel combustion emission source ceases, excess CO does not occur as there is no fuel gas combustion.
 - Sometimes a fuel combustion emission source shutdown (cessation of fuel combustion) may not occur instantly if the process requires a gradual ramp-down.

Startups of fuel combustion emission sources typically occur due to the following:

- Initial startup of the device
- Startup after a planned shutdown
 - For boilers:
 - After a shutdown for the biennial pressure vessel inspection required by Office of State Fire Marshall.
 - Certain outages may also entail refractory repair. Startups following this scope can take even longer to accommodate the refractory dry-out process which occurs a stepwise increasing temperature (raise to a temperature and hold, repeat to a higher temperature, and so forth).
 - For process heaters, after a shutdown of the associated process unit for planned unit maintenance.
 - Depending on conditions in related and upstream or downstream process units, the overall startup of the unit may entail multiple heater startups, with

intermediate unplanned shutdowns to address unit issues discovered during the startup.

- Startup after an unplanned shutdown.
 - Depending on the nature of the problem that caused the shutdown and how long it might take to identify the issue, the firebox temperature will continue to decrease if there is no fuel combustion.
 - Once the issue is resolved or repaired, for longer outage times, the associated startup will often be longer to get the firebox up to a temperature that sustains CO combustion.

Simultaneous Startups

- Of the units equipped with CO CEMS, a review of the startups following the last three Crude/Coker turnarounds showed that the Crude Unit Atmospheric Tower process heaters (111B-1A and 111B-1B) started up nearly simultaneously. These two heaters are identical and provide heat to the Unit 111 Crude Unit Atmospheric Tower, startup (fuel gas to the heaters) is typically within a few minutes of each other.
- Of the other units equipped with CO CEMS, startups do not occur simultaneously, except for heaters 111B-1A and 111B-1B as noted above. These other CO/O₂ CEMS-equipped fuel combustion emission sources non-simultaneous startups are discussed below.
 - South Plant
 - Heater 111B-2 is the vacuum heater, heating the atmospheric tower bottoms for further processing in the Crude Unit's vacuum section. This heater starts after the atmospheric heaters because the atmospheric tower needs to be producing atmospheric tower bottoms first.
 - Boilers do not start up when the Crude Unit heaters start up.
 - For more than twenty years, boilers have not come down when the Crude Unit and its three heaters are down for a turnaround.
 - Prior to that, when the Lemont Refinery took common outages (all units down) approximately every 8 years every 8 years (no longer the practice at Lemont Refinery since 2002):
 - The Aux Boiler (430B-1) started up 11 days before the Crude Unit Startup)
 - The North Boiler (at that time, 431B-20, which was replaced in 2018 by 431B-25) started up 6 days after the Crude Unit startup.
 - Boiler startups in the South Plant (430B-1 and 430B-24) are independent of:
 - Each other's startups as well as the North Boiler's (431B-25, formerly 431B-20) startups. These boilers come down biennially (nominally every two years) for mandated Office of Illinois State Fire Marshall (OSFM). The boilers are taken down at separate times to ensure sufficient steam to the refinery (*i.e.*, two boilers remain operating when one boiler is down for its inspection).

- Unit 109 startups. The South Plant boilers typically remain operating during 109B-62 startups.
- North Plant
 - The North Plant Boiler (currently 431B-25, prior to late 2018 431B-20) startup is independent of:
 - The Unit 109 startup (including 109B-62 Steam Methane Reformer process heater). The startup of the North Boiler has not been observed to occur simultaneously the Unit 109 startup.
 - The startup of the other boilers. See the above discussion for South Plant Boilers.
 - The 109B-62 Steam Methane Reformer Heater startup is independent of:
 - The North Plant boiler startup (as noted above for the North Plant Boiler),
 - The Crude Unit startups, and
 - Other South Plant Boiler and Aux Boiler startups.

The only simultaneous startup case to consider is that of 111B-1A and 111B-1B process heaters.

2.2. Reason for Elevated CO

Elevated CO concentrations occur during startup because the firebox temperature has not approached or achieved the CO autoignition temperature of 1128 °F (609 °C).² In some instances, if the shutdown period is relatively short and the firebox has not cooled down to approaching ambient temperature, the period of excess emissions may be brief enough so that the 200 ppmv CO @ 50 excess air limit is not exceeded based on the averaging period being utilized. However, if the fuel gas combustion emission source is down for a protracted period and the firebox cools, the process of starting the emission source and getting it up to its normal operating temperature can result in variable flow distribution patterns within the firebox, and the firebox temperature being below the CO autoignition temperature. Accordingly, excess CO is likely to occur until the firebox temperature approaches the CO autoignition temperature and the flow patterns within the firebox are relatively stable. Appendix B shows an example trend of CO, O₂, and firebox temperature for one event.

2.3. Related Permit Background

Two of the refinery fuel combustion emission sources (boilers 430B-24 and 431B-25) were new construction in 2018. IEPA issued Construction Permit No. 17060030 for these boilers. That construction permit contained conditions specifically related to startup. See Appendix C for the permit's startup-related language. The permit authorized operation above the CO limit of 35 IAC 216.121 during periods of startup of either of the two boilers. The permit also included recordkeeping and reporting requirements for startups of the two boilers.

² https://www.engineeringtoolbox.com/fuels-ignition-temperatures-d_171.html

2.4. Data Review

2.4.1. Fuel Combustion Emission Sources

As noted above, continuous monitoring data for fuel combustion emission source startups and shutdowns is available for seven of the refinery's fuel combustion emission sources (three boilers and four process heaters) equipped with CEMS. This data included stack concentrations of CO and O₂, fuel gas flow data, fuel gas properties (higher heating value (HHV), F_d factor), stack temperature.

- Fuel gas flow, fuel gas HHV, Fuel gas F_d factor and [CO] enabled determining mass emission rates.
- Fuel gas flow, fuel gas HHV, Fuel gas F_d factor, moisture content (assumed for heaters with extractive CEMS), and stack temperature enabled determining actual volumetric flow and stack tip velocity.

Startup and shutdown events from these fuel combustion emission sources were reviewed to determine worst-case emission scenarios. Most events with excess emissions are due to startup; of the 47 startup and shutdown events reviewed with excess emissions (on either a 1-hr. or 8-hr. average basis), all but one were startup events. All reviewed shutdown and startup events with excess emissions were utilized to develop the worst-case emission scenarios.

2.4.2. Review Period(s)

For the fuel combustion emission sources with CO monitoring, Table 2, below, summarizes the periods evaluated for startup events.

Table 2 – Periods Used for Data Review

<i>Fuel Combustion Emission Source ID</i>	<i>Review Period</i>	<i>Comment</i>
109B-62	2019-current	
111B-1A	2012-Current	These heaters shut down with planned maintenance turnarounds at Unit 111 (Crude Unit). The past three Turnarounds have occurred in 2012, 2017, and 2022. After the turnaround, for each heater there typically are a couple of individual heater startup attempts within the overall unit startup.
111B-1B	2012-Current	
111B-2	2012-Current	
430B-1	2019-current	
430B-24	2019-current	
431B-25	2019-current	

3. Emission Impacts

3.1. Events with Average CO > 200 ppmv @ 50% Excess Air

Fuel combustion emission sources with elevated CO during startup and/or shutdown events were evaluated to determine if the emissions resulted in a significant impact or exceeded either a Significant Impact Level (SIL) or National Ambient Air Quality Standard (NAAQS) during startup or shutdown. The CO SIL and NAAQS both have values for 1-hr. average and 8-hr average. As noted, the startup and shutdown events were reviewed to determine both 1-hr. average emissions and 8-hr. average emissions. Appendix D details events for the fuel combustion emission sources with continuous CO emission data during the periods noted in Section 2, on both a 1-hr average and 8-hr average, in D.1 and D.2, respectively. Table 3 below summarizes the number of events reviewed for each fuel combustion emission source with continuous CO emission data.

Table 3 – Overview of Events Evaluated

Fuel Combustion Emission Source ID	Review Period	No. of startups reviewed	No. shutdowns reviewed	No. of startup/shutdown events	No. of startup/shutdown events w/ CO > 200 ppmv @ 50% Excess Air	
					1-hr Avg. Basis	8-hr Avg. Basis
430B-1	2019-current	10		10	4	2
430B-24	2019-current	17		17	13	6
431B-25	2019-current	18		18	9	5
109B-62	2019-current	14	1	15	10	10
111B-1A	2012-Current	5		5	4	4
111B-1B	2012-Current	5		5	3	3
111B-2	2012-Current	7		7	4	4
Total		76	1	77	47	34

3.2. Basis for Worst-Case Emissions

To further evaluate the events, a Statistical Worst Case was developed for each of the evaluated fuel combustion emission sources. Table 4, below, shows the criteria for the key parameters in the Statistical Worst-Case.

Table 4 – Basis for Statistical Worst-Case Emissions

Parameter	Statistical Worst-Case Criteria
Emission rate	Average plus 2 Standard Deviations
Stack Temperature	Lesser of Minimum T event or Avg. minus 2 Standard Deviations
Stack Velocity (flow rate)	Maximum Emission Rate event flow ³

³ The data showed that maximum emission rate tends to occur with either maximum stack flow or close to maximum flow. Stack flow is a function of firing rate, adjusted for oxygen content and moisture. It was thus not reasonable to expect a maximum emission rate to occur with a minimum flow rate/firing rate.

3.3. Dispersion Modeling

Dispersion modeling of fuel combustion emission source (boilers and process heaters) startup carbon monoxide (CO) emissions was conducted by a third-party contractor for each of the Lemont Refinery boilers and process heaters with continuously monitored CO and O₂ data to confirm there was no significant ambient impact. Modeled CO concentrations were compared with U.S. EPA's Significant Impact Levels (SILs) and National Ambient Air Quality Standards (NAAQS) for CO.

This dispersion modeling evaluated two scenarios for each of the noted Lemont Refinery boilers and process heaters with CO and O₂ CEMS. The two scenarios modeled for each monitored heater or boiler were:

- 1) Statistical worst-case (SWC) scenario
- 2) The maximum actual worst case emission rate scenario (ME).

The statistical boundaries used for Scenario 1 were generally greater than the observed max for emission rate and less than the observed minimum for temperature and set at the maximum emission rate event stack flow, as noted earlier in Section 3.2. This ensures the model results are conservative. Scenario 2 (maximum emission rate case) was included to confirm the statistical worst-case scenarios were indeed conservative.

Additionally, while startups usually occur independently (that is, normally two fuel combustion emission sources are not in true startup at the same time), one exception to this is the Crude Unit's Atmospheric heaters (111B-1A and 111B-1B). Following a Crude Unit turnaround (planned maintenance), those two heaters typically start up at the same time. Accordingly, that case was also modeled.

Table 5 below summarizes the dispersion modeling inputs.

Table 5 – Fuel Combustion Emission Source Dispersion Modeling Inputs

<i>Fuel Combustion Emission Source ID</i>	<i>Stack Height (m)</i>	<i>Stack Diameter (m)</i>	<i>Case ^a</i>	<i>Averaging Period</i>	<i>Emission Rate (g/s)</i>	<i>Stack Temperature (°K)</i>	<i>Exit Velocity (m/s)</i>	<i>Stack flow rate (acfm)</i>
109B-62	45.7200	1.8593	SWC	1-hr avg.	22.8500	351.5544	2.5390	14,606.60
				8-hr. avg.	5.8936	336.9973	2.6940	15,498.20
			ME	1-hr avg.	22.8500	424.2898	2.5390	14,606.60
				8-hr avg.	4.9718	415.5685	2.6940	15,498.20
111B-1A	74.6760	2.4079	SWC	1-hr avg.	19.8516	402.0801	7.8172	75,427.92
				8-hr avg.	16.5920	420.5323	7.3435	70,856.71
			ME	1-hr avg.	16.3610	524.2015	7.8172	75,427.92
				8-hr avg.	11.8694	503.4686	7.3435	70,856.71
111B-1B	74.6760	2.4079	SWC	1-hr avg.	12.2233	329.3035	5.3313	51,441.60
				8-hr avg.	11.0287	402.3962	6.9628	67,184.09
			ME	1-hr avg.	9.3050	384.1524	5.3313	51,441.60
				8-hr avg.	8.2188	521.3848	6.9628	67,184.09

Fuel Combustion Emission Source ID	Stack Height (m)	Stack Diameter (m)	Case ^a	Averaging Period	Emission Rate (g/s)	Stack Temperature (°K)	Exit Velocity (m/s)	Stack flow rate (acfm)
111B-2	70.1040	1.7678	SWC	1-hr avg.	10.9328	280.8854	5.3047	27,589.64
				8-hr avg.	9.1523	380.8528	5.4620	28,407.40
			ME	1-hr avg.	7.4417	542.3856	5.3047	27,589.64
				8-hr avg.	7.2654	543.6056	5.4620	28,407.40
430B-1	42.6720	2.3774	SWC	1-hr avg.	8.6259	373.7637	5.1050	48,018.34
				8-hr avg.	1.0850	353.4905	0.5536	5,206.91
			ME	1-hr avg.	6.6352	410.6337	5.1050	48,018.34
				8-hr avg.	0.5878	370.8922	0.5536	5,206.91
430B-24	30.4800	1.8288	SWC	1-hr avg.	5.3380	376.4967	0.8292	7,653.34
				8-hr avg.	3.0258	362.8233	1.4638	8,147.43
			ME	1-hr avg.	5.3380	396.6311	1.3751	7,653.34
				8-hr avg.	3.0258	396.5388	1.4638	8,147.43
431B-25	30.4800	1.8288	SWC	1-hr avg.	8.2302	321.0594	0.6249	24,769.17
				8-hr avg.	2.9357	358.5017	1.3702	7,626.18
			ME	1-hr avg.	8.2302	402.017	5.1052	28,414.33
				8-hr avg.	2.1098	390.379	1.3702	7,626.18
111B-1A/B	See above for simultaneous modeling		SWC	1-hr avg.	See 111B-1 A and B above for simultaneous modeling inputs			
				8-hr avg.				
			ME	1-hr avg.	See 111B-1 A and B above for simultaneous modeling inputs			
				8-hr avg.				

^a SWC = Statistical Worst Case. ME = Maximum Emission Rate event.

Appendix E, at Data Tables E.1 and E.2, provides more granularity as to the underlying basis and shows the potential 1-hr and 8-hr average modeling parameters for each startup event as well as how the statistical worst case was developed.

3.3.1. Modeling Inputs

The following were entered into U.S. EPA's AERMOD modeling system (version 23132) to determine the ambient CO impacts of fuel combustion emission sources startup/shutdown events.

- Dispersion modeling inputs shown above.
- 5-year meteorological data set (2018-2022, provided by Illinois EPA).
 - o Surface data from Chicago's O'Hare International Airport
 - o Upper air data from National Weather Service Forecast Office in Davenport Iowa
- Terrain elevations as determined by AERMAP.
- Fenceline receptors and Cartesian receptor grids of decreasing density with increasing distance from the refinery.

Background concentrations for purposes of comparison with the NAAQS were based on the 2-year average ppm concentration values for 2021 to 2023 for the Illinois EPA's CO ambient monitor located in Lansing, Illinois. Use of this monitor for background is

conservative, as the monitor is located adjacent to a heavily trafficked interstate roadway, I-80/94, just west of Torrence Avenue in Lansing. Due to this monitor's proximity to this roadway, it is likely that it measures extensive levels of vehicle emissions.

For comparison, the closest expressway to the Lemont Refinery is two miles away (I-355) and is not as heavily trafficked as I-80/94. Additionally, the two nearest industrial facilities (Oxbow and Will County Generating Station) were shut down in November 2013 and June 2022, respectively. Thus, the concentrations for the Lansing monitor are a conservative basis for background concentration for the Lemont Refinery.

The model's building downwash algorithms reflect Lemont Refinery building heights, locations, and dimensions.

Appendix F of this support document provides the consultant's report, containing more details regarding the model, modeling input, and results.

3.3.2. Modeling Results

Tables 6, 7, and 8, below, summarize the modeling results relative to the U.S. EPA Significant Impact Levels (SILs) and National Ambient Air Quality Standards (NAAQS) for CO.

3.3.2.1. Significant Impact Limit Evaluation

Table 6 shows the Lemont Refinery fuel combustion emission sources' startup/shutdown events have insignificant impacts on air quality, as the Statistical Worst Case (SWC) is well below U.S. EPA's established SIL for Carbon Monoxide (both 1-hr and 8-hr average).

Table 6 – Summary of Lemont Refinery Fuel Combustion Emission Sources Startup Significant Impact Level (SIL) CO Dispersion Modeling Results

Fuel Combustion Emission Source ID No.	Case	SIL Modeled CO Concentration, Maximum ($\mu\text{g}/\text{m}^3$)		CO SIL ($\mu\text{g}/\text{m}^3$)		SIL-Modeled CO Concentration (Maximum) as % of SIL	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
430B-1	SWC	65.5327	15.3090	2,000	500	3.28%	3.06%
	ME	42.3685	7.2087	2,000	500	2.12%	1.44%
430B-24	SWC	536.5509	67.4219	2,000	500	26.83%	13.48%
	ME	278.2073	69.2934	2,000	500	13.91%	13.86%
431B-25	SWC	132.8731	65.2031	2,000	500	6.64%	13.04%
	ME	100.5987	35.9404	2,000	500	5.03%	7.19%
109B-62	SWC	719.0931	60.7821	2,000	500	35.95%	12.16%
	ME	329.5521	30.4303	2,000	500	16.48%	6.09%
111B-1A	SWC	99.3342	25.6438	2,000	500	4.97%	5.13%

Fuel Combustion Emission Source ID No.	Case	SIL Modeled CO Concentration, Maximum ($\mu\text{g}/\text{m}^3$)		CO SIL ($\mu\text{g}/\text{m}^3$)		SIL-Modeled CO Concentration (Maximum) as % of SIL	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
111B-1B	ME	73.4720	16.4788	2,000	500	3.67%	3.30%
	SWC	75.9195	17.6948	2,000	500	3.80%	3.54%
	ME	51.5422	11.3698	2,000	500	2.58%	2.27%
111B-2	SWC	173.3528	43.2858	2,000	500	8.67%	8.66%
	ME	41.2531	14.9213	2,000	500	2.06%	2.98%
111B-1A/B ^a	SWC	573.3868	23.9863	2,000	500	28.67%	4.80%
	ME	124.0542	27.7433	2,000	500	6.20%	5.55%
Overall Max	SWC	719.0931	67.4219	2,000	500	26.83%	13.48%
	Source	109B-62	430B-24				
	ME	329.5521	69.2934	2,000	500	16.48%	13.86%
	Source	109B-62	430B-24				

^a Simultaneous startup of heaters 111B-1A and 111B-1B

3.3.2.2. National Ambient Air Quality Standards Evaluation

Table 7, below, shows the modeled fuel combustion emission sources' startup CO ambient CO concentration along with background and shows the total concentration and the NAAQS for CO. This shows the Total CO impact with background is well below the NAAQS for CO.

Table 7 – Summary of Lemont Refinery Fuel Combustion Emission Sources Startup Dispersion Modeling Results for Impact on CO NAAQS

Fuel Combustion Emission Source ID No.	Case	NAAQS Modeled CO Impact, 2nd High ($\mu\text{g}/\text{m}^3$)		CO Background Conc. ($\mu\text{g}/\text{m}^3$)		NAAQS Modeled CO Impact (2nd High) w/ CO Background ($\mu\text{g}/\text{m}^3$)		CO NAAQS ($\mu\text{g}/\text{m}^3$)	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
430B-1	SWC	64.7408	11.5775	2,329.4	1,412.9	2,394.1458	1,424.4953	40,000	10,000
	ME	39.6118	5.9860	2,329.4	1,412.9	2,369.0168	1,418.9038	40,000	10,000
430B-24	SWC	519.4058	62.7449	2,329.4	1,412.9	2,848.8108	1,475.6627	40,000	10,000
	ME	278.0235	58.2322	2,329.4	1,412.9	2,607.4285	1,471.1500	40,000	10,000
431B-25	SWC	1,108.4165	40.4952	2,329.4	1,412.9	3,437.8215	1,453.4130	40,000	10,000
	ME	97.8782	27.0592	2,329.4	1,412.9	2,427.2832	1,439.9770	40,000	10,000
109B-62	SWC	707.5143	54.7180	2,329.4	1,412.9	3,036.9193	1,467.6358	40,000	10,000
	ME	328.3526	30.0066	2,329.4	1,412.9	2,657.7576	1,442.9244	40,000	10,000
111B-1A	SWC	55.2887	22.9988	2,329.4	1,412.9	2,384.6937	1,435.9166	40,000	10,000
	ME	36.6909	14.5295	2,329.4	1,412.9	2,366.0959	1,427.4473	40,000	10,000

Fuel Combustion Emission Source ID No.	Case	NAAQS Modeled CO Impact, 2nd High ($\mu\text{g}/\text{m}^3$)		CO Background Conc. ($\mu\text{g}/\text{m}^3$)		NAAQS Modeled CO Impact (2nd High) w/ CO Background ($\mu\text{g}/\text{m}^3$)		CO NAAQS ($\mu\text{g}/\text{m}^3$)	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
111B-1B	SWC	62.8922	16.1719	2,329.4	1,412.9	2,392.2972	1,429.0897	40,000	10,000
	ME	32.9210	10.2475	2,329.4	1,412.9	2,362.3260	1,423.1653	40,000	10,000
111B-2	SWC	107.9176	21.0160	2,329.4	1,412.9	2,437.3226	1,433.9338	40,000	10,000
	ME	29.1033	13.2020	2,329.4	1,412.9	2,358.5083	1,426.1198	40,000	10,000
111B-1A/B ^a	SWC	39.2040	21.0160	2,329.4	1,412.9	2,368.6090	1,433.9338	40,000	10,000
	ME	66.9108	24.7696	2,329.4	1,412.9	2,396.3158	1,437.6874	40,000	10,000
Overall Max	SWC	1,108.4165	62.7449	2,329.4	1,412.9	3,437.8215	1,475.6627	40,000	10,000
	Source	431B-25	430B-24						
	ME	328.3526	58.2322	2,329.4	1,412.9	2,657.7576	1,471.1500	40,000	10,000
	Source	109B-62	430B-24						

^a Simultaneous startup of heaters 111B-1A and 111B-1B.

Table 8, below, presents the above concentrations during fuel combustion emission source startups as percentages of the CO NAAQS. This table clearly shows the estimated ambient CO concentration (background plus modeled startup emissions):

- 1) Increases by only 2.8% or 0.6% of the applicable CO NAAQS, depending on averaging period, and
- 2) Is still less than 8.6% or 14.8% of the applicable CO NAAQS, depending on the averaging period.

Table 8 – Lemont Refinery Fuel Combustion Emission Sources Startup CO Dispersion Modeling Results Compared with the CO NAAQS

Fuel Combustion Emission Source ID No.	Case	CO Background as % of CO NAAQS		Modeled Impact as % of CO NAAQS		Total as % of CO NAAQS	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
430B-1	SWC	5.82%	14.13%	0.16%	0.12%	5.99%	14.24%
	ME	5.82%	14.13%	0.10%	0.06%	5.92%	14.19%
430B-24	SWC	5.82%	14.13%	1.30%	0.63%	7.12%	14.76%
	ME	5.82%	14.13%	0.70%	0.58%	6.52%	14.71%
431B-25	SWC	5.82%	14.13%	2.77%	0.40%	8.59%	14.53%
	ME	5.82%	14.13%	0.24%	0.27%	6.07%	14.40%
109B-62	SWC	5.82%	14.13%	1.77%	0.55%	7.59%	14.68%
	ME	5.82%	14.13%	0.82%	0.30%	6.64%	14.43%

Fuel Combustion Emission Source ID No.	Case	CO Background as % of CO NAAQS		Modeled Impact as % of CO NAAQS		Total as % of CO NAAQS	
		1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.	1-hr. avg.	8-hr. avg.
111B-1A	SWC	5.82%	14.13%	0.14%	0.23%	5.96%	14.36%
	ME	5.82%	14.13%	0.09%	0.15%	5.92%	14.27%
111B-1B	SWC	5.82%	14.13%	0.16%	0.16%	5.98%	14.29%
	ME	5.82%	14.13%	0.08%	0.10%	5.91%	14.23%
111B-2	SWC	5.82%	14.13%	0.27%	0.21%	6.09%	14.34%
	ME	5.82%	14.13%	0.07%	0.13%	5.90%	14.26%
111B-1A/B ^a	SWC	5.82%	14.13%	0.10%	0.21%	5.92%	14.34%
	ME	5.82%	14.13%	0.17%	0.25%	5.99%	14.38%
Overall Max	SWC	5.82%	14.13%	2.77%	0.63%	8.59%	14.76%
	ME	5.82%	14.13%	0.82%	0.58%	6.64%	14.71%

^a Simultaneous startup of heater 111B-1A and 111B-1B

3.3.3. Environmental Justice

For purposes of determining whether additional EJ review is warranted, IEPA's "EJ Start" Geographic Information System (GIS) mapping tool was reviewed.⁴ Superimposing the CITGO Lemont Refinery boundary on Illinois EPA's "EJ Start" tool shows CITGO Lemont Refinery is in eastern Will County, located south southeast of Bolingbrook Illinois in an area deemed "Not EJ Area". See Appendix G. The screening tool indicates that the specific block in which the Lemont Refinery is located (Block ID 171978805021, nominally bounded by 135th Street, Smith Road, U.S. Interstate 55, and Illinois Rt. 53) has a Minority Status of zero (0), an Income Status of 0, and EJ Status of 0. Thus, no further EJ assessment is necessary.

⁴ <https://experience.arcgis.com/experience/aa364c77db684dfa92afa5094b69f6ff>. See also Appendix G of this Technical Support Document.

4. Proposed Adjusted Standard

4.1. Background

On July 20, 2023, as part of PCB R23-18, the Illinois Pollution Control Board (the Board, or “IPCB”) adopted amendments to 35 IAC Part 201, proposed by IEPA, that removed provisions at 35 IAC 201 Subpart I (201.261-265), allowing sources to request, and the IEPA to grant, advance permission to continuous operating during a malfunction, or to violate emission limitations during startup. The IPCB adopted the repeal of these provisions on July 23, 2023 and subsequently submitted the adopted repeal of these provisions to the Secretary of State on July 25, 2023, which was the effective date.⁵

Subsequently, in PCB R2023-18(A) and on August 7, 2023, the Illinois Environmental Regulatory Group (“IERG”) submitted a proposal to amend the Board’s CO standard applicable to fuel combustion emission sources in Part 216 because of the Board’s removal of the Startup Malfunction Breakdown (“SMB”) provisions in Part 201 in PCB R 23-18. Their proposal incorporated, by reference, select provisions of the National Emission Standards for Hazardous Air Pollutants (“NESHAP”) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 40 CR Part 63 Subpart DDDDD. In promulgating NESHAP Subpart DDDDD, the United States Environmental Protection Agency (“USEPA”) recognized the unique and important operating conditions that fuel combustion emission sources must follow during startup and shutdown to ensure operations and minimize emissions. IERG’s proposal also included technical support based on generic modeling based on limited data input.

On July 11, 2024, the Board declined to include IERG’s proposal in its proposal for second notice.⁶ This was due to the broad applicability (potentially 3,900 fuel combustion emission sources at 1,500 facilities) of IERG’s proposal and lack of modeling of the effects on air pollution from this broad set of unidentified fuel combustion emission sources. The Board indicated they were unable to know that IERG’s proposal would not harm human health and the environment.

To obtain relief for elevated CO that may occur during startups and shutdowns of fuel combustion emission sources, CITGO is proposing an Adjusted Standard specific to the Lemont Refinery. CITGO’s proposed Adjusted Standard is similar to what IERG had proposed, in that it:

- Is applicable during startups and shutdowns,
- Has a similar technical basis, and
- Also incorporates select provisions of 40 CFR Subpart DDDDD.

However, CITGO’s proposal is different from IERG’s proposal as it:

⁵ PCB R2023-018. IPCB Notice of Adopted Rules, submitted to Secretary of State on July 25, 2023, <https://pcb.illinois.gov/documents/dsweb/Get/Document-108654>

⁶ PCB R2023-018(A). Opinion and Order of the Board by M. Gibson: Proposed Rule, Second Notice. IPCB Document No. 110547, p. 136

- Is based on a narrow set of defined fuel combustion emission sources (the set of fuel combustion emission sources greater than 10 MMBtu/hr. and equipped with CEMS for CO and O₂ at the Lemont Refinery),
- Covers a narrower range of fuel combustion emission source sizes (design heat input ratings greater than 113 MMBtu/hr., up to 396 MMBtu/hr.),
- Has monitored emissions data representing:
 - o A range of types of fuel combustion emission sources (natural draft, balanced draft, and forced air), each of which have monitoring and modeling.
 - o Data covering fuel combustion emission sources with design heat input ratings ranging from 113.3 MMBtu/hr. to 396 MMBtu/hr., covering all three types of fuel gas combustion emission sources.
- Reflects actual firing rate during CO events at fuel gas combustion emission sources monitored for CO ranging from 11-206 MMBtu/hr. (depending on the event and fuel combustion emission source), and
- Is supported by worst-case dispersion modeling for each of fuel combustion emission source for which continuous emission monitoring data is available. The CO modeling results show that CO emissions during startup and shutdown:
 - o Do not result in a significant CO impact on ambient air quality on either a 1-hr. average or 8-hr. average basis, and
 - o Do not result in an exceedance of the National Ambient Air Quality Standards for CO on either a 1-hr. average or 8-hr. average basis.

4.2. Proposed Adjusted Standard

The proposed Adjusted Standard is an alternate emission limit (AEL), applicable during startup and/or shutdown. The proposed Adjusted Standard utilizes requirements U.S. EPA has already approved at 40 CFR Part 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters – “NESHAP” for heaters/boilers, or “Heater/Boiler Maximum Achievable Control Technology – “Heater/Boiler MACT”).

The proposed AEL would require fuel combustion emission sources at the Lemont Refinery with actual firing rate > 10 MMBtu/hr. and equipped with CO and O₂ CEMS to comply with either:

- The applicable standard at 35 IAC 216.121, or
- Certain requirements in U.S. EPA’s Heater Boiler MACT at 40 CFR 63 Subpart DDDDD.

Compliance with the Heater Boiler MACT startup/shutdown requirements requires the following:

- Combust a clean fuel during startup (natural gas and refinery gas are among the listed clean fuels listed in 40 CFR 63 Subpart DDDDD Table 3 item 5, requirement b).
- Follow startup/shutdown procedures.

The specific proposed adjusted standard language is located on P-17 of the Petition and discussed in more detail later in this document at §4.3.

4.3. AEL Evaluation

The following subsections contain an evaluation of the AEL included in this proposed Adjusted Standard against the AEL criteria established by U.S. EPA.

4.3.1. Background

On June 12, 2015, USEPA published in the Federal Register a final rule clarifying, restating, and updating USEPA's national policy regarding startup, shutdown, and malfunction ("SSM") provisions in State Implementation Plans ("SIP"). *State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction.*⁷ A Notice of Proposed Rulemaking was first published in the Federal Register for these revisions on February 22, 2013.⁸ The revisions were USEPA's response to a 2011 Petition for Rulemaking filed by Sierra Club.⁹

USEPA announced in the 2015 final rule its SSM policy, stating that broad SSM exemption provisions and affirmative defense SIP provisions are generally viewed as inconsistent with the requirements of the Clean Air Act ("CAA").¹⁰ Specifically, USEPA granted Sierra Club's Petition "on the request to rescind its SSM Policy element that interpreted the [Clean Air Act] to allow states to elect to create affirmative defense provisions in SIPs."¹¹

However, USEPA also recognized that there are approaches to address emissions during SSM events that are consistent with the requirements of the CAA.¹² USEPA explained:

The EPA emphasizes that there are other approaches that would be consistent with CAA requirements for SIP provisions that states can use to address emissions during SSM events. While automatic exemptions and director's discretion exemptions from otherwise applicable emission limitations are not consistent with the CAA, SIPs may include criteria and procedures for the use of enforcement discretion by air agency personnel. Similarly, SIPs may, rather than exempt emissions during SSM events, include emission limitations that subject those emissions to alternative numerical

⁷ 80 Fed. Reg. 33840 (June 12, 2015)

⁸ Ibid, at 33842 (referencing February 22, 2013)

⁹ Ibid

¹⁰ Footnote 9, at 33851

¹¹ Ibid

¹² Ibid, at 33844

limitations or other technological control requirements or work practice requirements during startup and shutdown events, so long as those components of the emission limitations meet applicable CAA requirements . . . The EPA acknowledges that for some states, this rulemaking entailed the EPA's evaluation of SIP provisions that may date back several decades. Aware of that fact, the EPA is committed to working closely with each of the affected states to develop approvable SIP submissions consistent with the guidance articulated in the updated SSM Policy in this final action.¹³

USEPA also offered additional explanation as to USEPA's recommended criteria for developing alternative emission limitations ("AELs") that would be applicable during periods of SSM:

In addition, the EPA is providing in this document some additional explanation and clarifications to its recommended criteria for developing alternative emission limitations applicable during startup and shutdown. The EPA continues to recommend that, in order to be approvable (i.e., meet CAA requirements), alternative requirements applicable to the source during startup and shutdown should be narrowly tailored and take into account considerations such as the technological limitations of the specific source category and the control technology that is feasible during startup and shutdown. Accordingly, the EPA continues to recommend the seven specific criteria enumerated in section III.A of the Attachment to the 1999 SSM Guidance as appropriate considerations for SIP provisions that establish alternative emission limitations that apply to startup and shutdown. . . .

The EPA seeks to make clear in this document that the recommended criteria are intended as guidance to states developing SIP provisions that include emission limitations with alternative emission limitations applicable to specifically defined modes of source operation such as startup and shutdown. A state may choose to consider these criteria in developing such a SIP provision. The EPA will use these criteria when evaluating whether a particular alternative emission limitation component of an emission limitation meets CAA requirements for SIP provisions. Any SIP revision establishing an alternative emission limitation that applies during startup and shutdown would be subject to the same procedural and substantive review requirements as any other SIP submission.¹⁴

¹³ Ibid (emphasis added)

¹⁴ Ibid. at 33913. USEPA defined an "alternative emission limitation" as "an emission limitation in a SIP that applies to a source during some but not all periods of normal operation (e.g., applies only during a specifically defined mode of operation such as startup or shutdown). An alternative emission limitation is a component of a continuously applicable SIP emission limitation, and it may take the form of a control measure such as a design,

USEPA then restated the seven criteria for developing AELs, which are as follows:¹⁵

- (1) The revision is limited to specific, narrowly defined source categories using specific control strategies (e.g., cogeneration facilities burning natural gas and using selective catalytic reduction);
- (2) Use of the control strategy for this source category is technically infeasible during startup or shutdown periods;
- (3) The alternative emission limitation requires that the frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable;
- (4) As part of its justification of the SIP revision, the state analyzes the potential worst-case emissions that could occur during startup and shutdown based on the applicable alternative emission limitation;
- (5) The alternative emission limitation requires that all possible steps are taken to minimize the impact of emissions during startup and shutdown on ambient air quality;
- (6) The alternative emission limitation requires that, at all times, the facility is operated in a manner consistent with good practice for minimizing emissions and the source uses best efforts regarding planning, design, and operating procedures; and
- (7) The alternative emission limitation requires that the owner or operator's actions during startup and shutdown periods are documented by properly signed, contemporaneous operating logs or other relevant evidence.

USEPA also recognized that it may be appropriate to establish AELs for modes of source operation other than startup and shutdown, but the same criteria should be utilized.¹⁶

4.3.2. Review of Criteria for Approvability of Alternate Emission Limits

The above seven U.S. EPA criteria for AEL approvability are each reviewed below.

4.3.2.1. Narrowly defined source categories

U.S. EPA's specific criterion is:

The revision is limited to specific, narrowly defined source categories using specific control strategies (e.g., cogeneration facilities burning natural gas and using selective catalytic reduction).

equipment, work practice or operational standard (whether or not numerical). This definition of the term is independent of the statutory use of the term 'alternative means of emission limitation' in sections 111(h)(3) and 112(h)(3), which pertain to the conditions under which the EPA may pursuant to sections 111 and 112 promulgate emission limitations, or components of emission limitations, that are not necessarily in numeric format." 80 Fed. Reg 33842

¹⁵ Ibid. at 33914.

¹⁶ Ibid.

The proposed AEL for this Adjusted Standard is limited to the applicable set of fuel combustion emission sources at the Lemont Refinery with actual firing greater than 10 MMBtu/hr. and equipped with CEMS for CO and O₂. This limits the sources to those that could have credible evidence of elevated CO concentrations during startup or shutdown. These fuel combustion emission sources utilize the same control strategy (good fuel combustion practices) to minimize CO.

4.3.2.2. Control strategy is technically infeasible during startup or shutdown periods.

U.S. EPA's specific criterion is:

Use of the control strategy for this source category is technically infeasible during startup or shutdown periods.

As noted earlier in Section 2.2 of this TSD, it is technically infeasible for fuel combustion emission sources with actual heat input above 10 mmBtu/hr. to reliably comply with the CO standard in Section 216.121 during startup. Compliance with Section 216.121 is also an issue for fuel combustion emission sources during periods of shutdown, especially for fuel combustion emission sources that are coal-fired or solid fuel-fired. CO is emitted from boilers and process heaters as a product of incomplete combustion. Factors that influence complete combustion include time, temperature, and turbulence.¹⁷ CO emissions can be minimized when boilers operate at sufficiently high combustion temperature and with sufficient time and turbulence (mixing) in the firebox to allow for more complete combustion to occur. These factors are not technically feasible to sufficiently achieve during startup conditions.

Using a boiler as an example, it can take considerable time during a boiler startup to reach sufficient operating temperature for good combustion, particularly when startup occurs after a longer period of shutdown. The length of a startup can vary, depending on the shutdown that necessitated the startup. Depending on the nature of the shutdown, startups can result in durations varying between several minutes to more than a day. After a longer shutdown, the combustion temperature increases slowly to avoid damaging the boiler/process heater equipment including the refractory. Heating the boiler up too fast can result in refractory damage, with hot spots then forming in the boiler, degrading boiler performance.

Excess CO emissions during boiler or process heater shutdown are limited primarily to coal-fired and solid fuel-fired boilers and process heater, as those devices may have residual fuel in their systems while they are cooling down. Excess CO emissions during shutdowns for gas-fired boilers and process heaters may not be as much of an issue, but

¹⁷ "Combustion Efficiency Optimization Manual for Operators of Oil- and Gas-Fired Boilers", USEPA (EPA-340/1-83-023), Section 2.2. publicly available on USEPA's website at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/50000KGB.PDF?Dockey=50000KGB.PDF> See also Appendix H of this Technical Support Document.

still can occur if the gas-fired fuel combustion emission source is ramped down instead of suddenly shut down.¹⁸

A boiler or process heater shutdown is typically just a matter of ceasing fuel flow/feed to the boiler or process heater, which can often occur rapidly for gas-fired fuel combustion emission sources. For natural gas-fired (or other gas such as refinery fuel gas) boilers and process heaters, combustion ceases once the fuel gas flow to the fuel combustion emission source ceases. However, coal-fired and solid fuel-fired boilers and process heaters may have a longer residence time for fuel remaining in the combustor after fuel delivery ceases. As a result, there can be a brief period of incomplete combustion as the fuel stops burning and bed temperature cools off, resulting in elevated CO emissions.

To better understand the formation of CO emissions during combustion and specifically during startup it is important to understand the relationship between combustion temperatures and the autoignition temperature for CO (the temperature at which it combusts). The autoignition temperature for CO is approximately 1128 °F.¹⁹ Generally, CO emissions should be minimized when combustion temperatures are more than the autoignition temperature for CO. In reviewing available data from Lemont Refinery boilers and process heaters, this relationship between these parameters and the technical infeasibility to control CO emissions during startup become clear. In looking at fuel combustion emission sources with CEMS data for CO emissions as well as data regarding firebox temperature, the relationship between emissions and temperature is profound.

Figure 1 in Appendix B illustrates this. Elevated CO concentrations occur at the beginning of startup and remain elevated until firebox temperatures begin to approach the CO autoignition temperature, at which point the CO emissions fall drastically to barely measurable levels.

CITGO is not aware of a technical means to control excess CO emissions during these startup periods, other than to follow standard startup procedures to achieve good fuel combustion and normal operating conditions as quickly as possible while minimizing potential damage to the fuel gas combustion emission source (i.e., minimizing the duration of startup while maintaining safe operation).

4.3.2.3. AEL requires frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable.

U.S. EPA's specific criterion is:

¹⁸ Similarly, a boiler or process heater malfunction or breakdown in many cases may just lead to a shutdown to address the cause of the malfunction. In some instances, if there is a rapid change in process operating conditions due to an upset or malfunction, this could cause a rapid change in boiler or process heater demand which could result in temperature differentials within the firebox that could result in excess CO emissions; however, this is not typically the case.

¹⁹ Footnote 2. Ibid

The alternative emission limitation requires that the frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable.

It is to the facility's benefit to minimize startup duration of boilers and process heaters to the greatest extent possible. However, the startup durations (and shutdown durations) vary widely.

As discussed earlier in Section 5.6.2.2, CITGO is proposing to incorporate the general duty to minimize emissions under 40 CFR 63 DDDDD. See 40 CFR 63.7500(a)(3).

As such, CITGO's proposed adjusted standard includes a requirement to minimize emissions at all times, including during startup and shutdown.

4.3.2.4. Analyze potential worst-case emissions that could occur based on the applicable alternative emission limitation.

U.S. EPA's specific criterion is:

As part of its justification of the SIP revision, the state analyzes the potential worst-case emissions that could occur during startup and shutdown based on the applicable alternative emission limitation.

Section 3 of this Technical Support Document (TSD) discussed and evaluated worst-case emissions during startups and shutdowns. Dispersion modeling, discussed in Section 3 and in the detailed modeling report in Appendix F, shows that worst-case startup and shutdown emissions have an insignificant impact to air quality (do not exceed a USEPA Significant Impact Level) and do not result in an exceedance of either CO NAAQS (1-hr. and 8-hr. averages).

4.3.2.5. Require all steps are taken to minimize impact of emission during startup and shutdown on ambient air quality.

U.S. EPA's specific criterion is:

The alternative emission limitation requires that all possible steps are taken to minimize the impact of emissions during startup and shutdown on ambient air quality.

CITGO's proposed adjusted standard incorporates the Heater/Boiler MACT startup requirements mandating the use of clean fuels, as well as the shutdown requirement mandating use of clean fuels during shutdown if another fuel must be used to support the shutdown process. Notably, refinery gas and natural gas, the fuel gases

utilized at Lemont Refinery, are both listed clean fuels.²⁰ CITGO's preexisting use of clean fuels will minimize the impact of emissions of CO during startup and shutdown on ambient air quality.

4.3.2.6. AEL requires facility is operated in a manner consistent with good practices for minimizing emissions.

U.S. EPA's specific criterion is:

The alternative emission limitation requires that, at all times, the facility is operated in a manner consistent with good practice for minimizing emissions and the source uses best efforts regarding planning, design, and operating procedures.

As discussed earlier in Section 5.6.2.2, CITGO is proposing to incorporate the general duty to minimize emissions under 40 CFR 63 DDDDD. See 40 CFR 63.7500(a)(3).

As such, CITGO's proposed adjusted standard includes a requirement to minimize emissions at all times, including during startup and shutdown.

4.3.2.7. AEL requires startup and shutdown periods are documented by properly signed, contemporaneous logs or other evidence.

U.S. EPA's specific criterion is:

The alternative emission limitation requires that the owner or operator's actions during startup and shutdown periods are documented by properly signed, contemporaneous operating logs or other relevant evidence.

As discussed earlier in Section 5.6.2.6, CITGO is proposing to incorporate this criterion from the Heater/Boiler MACT provisions. 40 CFR 63.7555 requires the following records relating to startup and shutdown be kept:²¹

- Records of calendar date, time, occurrence and duration of each startup and shutdown
- Records of the type(s) and amounts(s) of fuels used during each startup and shutdown.
- For each startup period, for units selecting paragraph (2) of the definition of "startup" in §63.7575:
 - o Records of the time that clean fuel combustion begins; the time when starting to feed fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.
 - o Records of hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (e.g., CEMS, PM

²⁰ 40 CFR 63, Subpart DDDDD, Table 3, Rows 5 and 6.

²¹ See 40 CFR 63.7555(d)(9)-(12).

CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, maintain records as specified in paragraphs (d)(12(i) through (III) of this section....

- Development and implementation of a written startup and shutdown plan.

4.3.3. AEL Technical Feasibility

The proposed Adjusted Standard incorporates startup and shutdown provisions are from NESHAP Subpart DDDDD. USEPA first promulgated these MACT provisions in 2013 and subsequently revised them in 2015. USEPA, by promulgating those rulemakings incorporating startup/shutdown provisions, found that the startup/shutdown provisions were technically feasible. The fuel combustion emission sources at the CITGO Lemont Refinery are currently subject to requirements of 40 CFR 63 Subpart DDDDD.

NESHAP DDDDD establishes various emission limits for various Hazardous Air Pollutants (HAPs), and CO (as a surrogate for organic HAPs) for fuel combustion emission sources combusting different types of solid, liquid, and certain gaseous fuels (other than natural gas, refinery gas and similar gases low in mercury).²² These emission limits vary by fuel and combustion source type and have varying averaging periods.

But as noted above in Section 4.2, 40 CFR 63 Subpart DDDDD Work Practices establish alternate requirements for periods of startup and shutdown.²³ The Work Practices specifically indicate that the emission limits are not applicable during periods of startup and shutdown, and that the affected source must:

- Utilize a clean fuel (*e.g.*, natural gas or refinery gas), and
- Follow startup and shutdown procedures.

By not requiring compliance with any of the listed emission limits (including the listed CO limits) during startups and shutdowns, even when combusting a clean fuel ("Other Gas 1", *i.e.*, natural gas or refinery gas), 40 CFR 63 Subpart DDDDD effectively acknowledges that compliance with CO limits during periods of startup and shutdown is not practicable, and that minimization of emissions occurs by using a clean gas and following startup and shutdown procedures.

The Lemont Refinery fuel combustion emission sources all:

- Combust refinery fuel gas (a clean fuel under NESHAP DDDDD) and
- Follow startup and shutdown procedures during those periods.

Thus, the proposed adjusted standard is technically feasible.

²² 40 CFR 63 Subpart DDDDD, at 40 CFR 63.7500 (a)(1) and Tables 1-2, 11-15

²³ 40 CFR 63 Subpart DDDDD, at 40 CFR 63.7500 (a)(1) and Table 3, Items 5, 6

4.3.4. AEL Economic Reasonableness

As to economic reasonableness, by publishing the Heater/Boiler MACT provisions at 40 CFR 63 Subpart DDDDD, USEPA found the MACT provisions to be economically justified. Per USEPA, the estimated average national price increases for industrial sectors were less than 0.01%.²⁴ As for the CITGO Lemont Refinery, the fuel combustion emission sources impacted by CITGO's proposal are already subject to 40 CFR 63 Subpart DDDDD. The only obligation is to follow startup/shutdown procedures and recordkeeping. Therefore, there should not be any additional economic impact.

CITGO is not proposing to require compliance with only the proposed AEL encompassed by the proposed Adjusted Standard. Rather, CITGO's proposal provides the option to choose between compliance with the existing CO standard in Section 216.121 or with the proposed Adjusted standard during startup and shutdown.

²⁴ *NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters*, 78 Fed. Reg. 7138, 7156 (Jan. 31, 2013). See also *NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters*, 80 Fed. Reg. 72806 (Nov. 20, 2015).

5. Conclusion

This document supports a proposed Adjusted Standard in lieu of 35 IAC 216.121 for Carbon Monoxide from Fuel Combustion Emission Sources equipped with CEMS for CO and O₂ at Lemont Refinery during startup and shutdown. Dispersion modeling of worst-case emission scenarios during startup/shutdown confirms no significant impact to air quality and no exceedance of either the 1-hr avg. CO NAAQS or 8-hr. avg. CO NAAQS. The proposed Adjusted Standard is justified as it is not feasible to achieve the current generally applicable standard for CO at 35 IAC 216.121 during startup and some shutdowns of select fuel combustion emission sources.

Appendix A

Lemont Refinery Fuel Combustion Emission Sources

Appendix A - Lemont Refinery Fuel Gas Combustion Devices

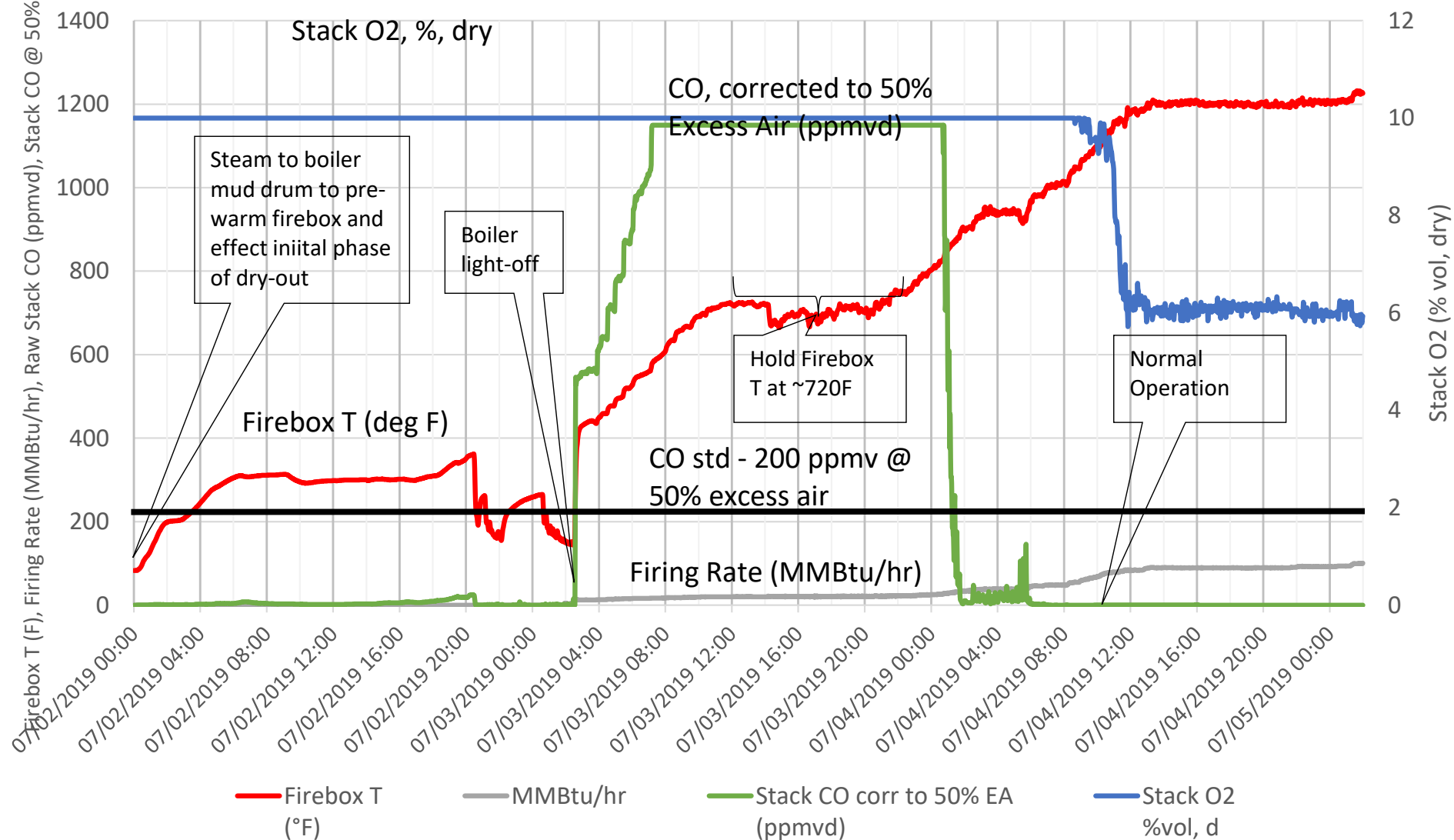
Emission Unit	Description	Fuel Combustion Emission Unit	Cabin Type	Draft Type	Fuel	Design Firing Rate (MMBtu/hr.)	Controls ^a		CEMS Monitoring		Nominal planned startup frequency
		Type					CO	NOx	CO	NOx	
Units subject to 35 IAC 216.121 and the proposed Adjusted Standard (able to fire > 10 MMBtu/hr., equipped with CO/O ₂ CEMS)											
109B-62	Steam Methane Reformer heater	Process Heater	Vertical Cabin	Balanced	Natural Gas/PSA Purge Gas	113.3	GFCP	LNB	X	X	Once every 5-10 yrs, plus other outages to perform repairs.
111B-1A	Crude Atmospheric heater	Process Heater	Vertical Cabin	Natural	Refinery Fuel Gas	376.5	GFCP	ULNB	X	X	Once every 5 yrs
111B-1B	Crude Atmospheric heater	Process Heater	Vertical Cabin	Natural	Refinery Fuel Gas	376.5	GFCP	ULNB	X	X	Once every 5 yrs
111B-2	Crude Vacuum heater	Process Heater	Vertical Cabin	Natural	Refinery Fuel Gas	219.8	GFCP	ULNB	X	X	Once every 5 yrs
430B-1	Auxiliary Boiler	Boiler	Horizontal Cabin	Forced	Refinery Fuel Gas	396	GFCP	LNB, FGR	X	X	Required every 2 years, plus following other outages to perform repairs
430B-24	South Boiler	Boiler	Horizontal Cabin	Forced	Refinery Fuel Gas	340	GFCP	LNB, SCR	X	X	Required every 2 years, plus following other outages to perform repairs
431B-25	North Boiler	Boiler	Horizontal Cabin	Forced	Refinery Fuel Gas	322	GFCP	LNB, SCR	X	X	Required every 2 years, plus following other outages to perform repairs

Appendix B

Figure 1 - Example Startup Trend Showing CO and Other Parameters (430B-24, Refractory Dry-out)

Figure 1

Example Startup Trend Showing Involving Refractory Dry-out, 430B-24



Appendix C

Language Pertaining to Startup from Construction Permit 17060030

Language Pertaining to Startup from Construction Permit 17060030



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/785-1705

CONSTRUCTION PERMIT - REVISED¹
NESHAP SOURCE - NSPS SOURCE

PERMITTEE

CITGO Petroleum Corporation
Attn: Michael G. Mee
135th Street and New Avenue
Lemont, Illinois 60439

Application No.: 17060030

I.D. No.: 197090AAI

Applicant's Designation:

Date Received: September 3, 2020

Subject: Two Boilers

Date Issued: September 15, 2020

Location: 135th Street and New Avenue, Lemont

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of two boilers, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s).

If you have any questions on this permit, please contact Jason Schnepf at 217/524-3724.

Raymond E. Pilapil

Raymond E. Pilapil
Manager, Permit Section
Bureau of Air

REP:JMS:tan

cc: Office of Community Relations
CES

¹ This permit has been revised at the request of the Permittee to lower the permitted emissions of volatile organic material (VOM) of these boilers based on the results of emissions testing. This permit was also revised at the Permittee's request to address the timing for required periodic emission testing in months rather than in years, e.g., within 61 months rather than within five years.

Language Pertaining to Startup from Construction Permit 17060030

...

2.1.4-2 Applicable State Emission Standards

...

- b. i. Each affected boiler is subject to 35 IAC 216.121, which provides that no person shall cause or allow the emission of CO into the atmosphere from any subject fuel combustion emission source to exceed 200 ppm, corrected to 50 percent excess air.
- ii. Notwithstanding the above, subject to the following terms and conditions, the Permittee is authorized to operate an affected boiler in violation of 35 IAC 216.121 during startup. This authorization is provided pursuant to 35 IAC 201.149, 201.161 and 201.262, as the Permittee has applied for such authorization in its application, generally describing the efforts that will be used "...to minimize startup emissions, duration of individual starts, and frequency of startups."
 - A. This authorization does not relieve the Permittee from the continuing obligation to demonstrate that all reasonable efforts are made to minimize startup emissions, duration of individual startups and frequency of startups.
 - B. The Permittee shall conduct startup of the affected boilers in accordance with written procedures which shall be maintained at the refinery, that are specifically developed to minimize emissions from startups.
 - C. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Condition 2.1.10(i) and 2.1.11(f).
 - D. As provided by 35 IAC 201.265, this authorization for excess emissions during startup does not shield a Permittee from enforcement for any violation of applicable emission standard(s) that occurs during startup and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.

...

Language Pertaining to Startup from Construction Permit 17060030

2.1.10 Recordkeeping Requirements

...

- j. The Permittee shall maintain the following records for each affected boiler related to startups:
 - i. Date and duration of each startup, i.e., start time and time normal operation is achieved.
 - ii. For each startup in which refractory must be dried and cured after maintenance and each other startup if normal operation was not achieved within 30 hours:
 - A. A detailed description of the startup, including whether startup was conducted in accordance with the written procedures required by Condition 2.1.4(d)(ii)(B)(2) and why the startup could not have been completed more quickly.
 - B. An explanation why established startup procedures could not be performed, if not performed.
 - C. Whether exceedance of 35 IAC 216.121 may have occurred during startup. If an exceedance may have occurred, an explanation of the severity and duration of the exceedance and whether the exceedance ended before the conclusion of startup.

...

2.1.11(f) Reporting Requirements

...

- f. For startups of each affected boiler, the Permittee shall submit semi-annual startup reports to the Illinois EPA. These reports may be submitted along with other semi-annual reports required for the source, e.g., CAAPP semi-annual reports, and shall include the following information for startups of the affected boiler during the reporting period:
 - i. A list of the startups for each affected boiler, including the date, duration and description of each startup, accompanied by a copy of the records pursuant to Condition 2.1.10(j)(ii) for each startup for which such records were required.
 - ii. If there have been no startups for an affected boiler during the reporting period, this shall be stated in the report.

Appendix D

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS

- D.1 Events evaluated on 1-hr average basis
- D.2 Events evaluated on an 8-hr avg. basis.

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
109B-62	U109 H2 Plant Reformer Htr.	Unit shutdown to repair 09E-66 steam generator	6/24/2019 18:47	6/25/2019 10:17	15.50	6/25/2019 8:00	6/25/2019 10:00	2	783.4	964.7	9.60	13.76	5,669.2	1.2094	1.8593	45.7200	422.3643	0.9855
109B-62	U109 H2 Plant Reformer Htr.	Unit startup	7/4/2019 11:29	7/6/2019 1:32	38.05	7/4/2019 20:00	7/5/2019 14:00	18	2,346.3	816.7	31.97	14.34	5,326.9	4.0276	1.8593	45.7200	392.7544	0.9259
109B-62	U109 H2 Plant Reformer Htr.	Unit startup (after unit trip due to loss of compressor motor)	6/18/2020 15:53	6/18/2020 16:48	0.92	6/18/2020 15:00	6/18/2020 16:00	1	846.4	1,390.2	48.00	58.57	20,094.7	6.0482	1.8593	45.7200	448.6286	3.4930
109B-62	U109 H2 Plant Reformer Htr.	Unit startup (after PSA skid trip due to loose air bonnet valve)	12/24/2020 3:47	12/24/2020 13:42	9.92	12/24/2020 3:00	12/24/2020 9:00	4	4,618.1	1,437.6	181.35	40.32	14,606.6	22.8500	1.8593	45.7200	424.2898	2.5390
109B-62	U109 H2 Plant Reformer Htr.	PSA shutdown for 09E-72 repairs	5/18/2022 6:48	5/19/2022 14:58	32.17	5/18/2022 12:00	5/19/2022 14:00	2	531.5	1,060.4	7.44	14.74	6,062.7	0.9372	1.8593	45.7200	441.6893	1.0539
109B-62	U109 H2 Plant Reformer Htr.	PSA startup	6/3/2022 5:10	6/4/2022 20:39	39.48	6/3/2022 10:00	6/3/2022 11:00	1	244.6	1,018.7	3.11	11.03	4,158.7	0.3924	1.8593	45.7200	411.6012	0.7229
109B-62	U109 H2 Plant Reformer Htr.	Shutdown unit to replace unit's process logic control system.	9/25/2023 8:47	9/25/2023 23:13	14.43	9/25/2023 11:00	9/25/2023 22:00	2	358.1	1,578.6	3.93	11.57	4,651.4	0.4958	1.8593	45.7200	434.4265	0.8085
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/12/2023 4:00	10/15/2023 9:42	77.70	10/13/2023 2:00	10/13/2023 17:00	7	1,131.9	413.6	31.34	29.15	10,046.6	3.9488	1.8593	45.7200	351.5544	1.7464

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/15/2023 15:00	10/15/2023 20:40	5.67	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/16/2023 16:20	10/16/2023 23:14	6.90	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/17/2023 7:54	10/24/2023 15:40	175.77	10/17/2023 8:00	10/17/2023 9:00	1	690.6	1,222.9	7.62	11.59	4,023.3	0.9597	1.8593	45.7200	379.6168	0.6994
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/31/2023 8:59	11/16/2023 19:25	394.43	NA	NA	0	NA	NA	NA		NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/1/2024 14:22	2/1/2024 17:38	3.27	2/1/2024 15:00	2/1/2024 16:00	1	481.4	1,372.9	12.38	26.78	9,499.1	1.5598	1.8593	45.7200	427.9682	1.6512
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/8/2024 11:02	2/8/2024 17:36	6.57	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/9/2024 14:43	2/9/2024 14:47	0.07	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
111B-1A	Crude Atm. Htr. 1A	Initial startup of heater following 2012 Turaround. Cut short after ~23 hours.	6/5/2012 21:47	6/6/2012 20:41	22.90	6/6/2012 15:00	6/6/2012 21:00	6	547.3	420.0	19.24	38.75	12,616.0	2.4245	2.4079	74.6760	481.7471	1.3075
111B-1A	Crude Atm. Htr. 1A	Full startup of heater following 2012 Turnaround and initial lining out of unit.	6/10/2012 2:51	6/11/2012 8:14	29.38	6/11/2012 0:00	6/11/2012 8:00	8	668.6	1,119.5	129.85	213.46	75,427.9	16.3610	2.4079	74.6760	524.2015	7.8172

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
111B-1A	Crude Atm. Htr. 1A	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 10:00	10/14/2017 18:59	32.98	10/14/2017 7:00	10/14/2017 16:00	8	921.0	468.3	55.87	74.56	21,521.8	7.0390	2.4079	74.6760	443.2294	2.2305
111B-1A	Crude Atm. Htr. 1A	Restart following an unplanned boiler trip due to fuel gas control issues	8/23/2022 0:07	8/23/2022 12:40	12.55	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-1A	Crude Atm. Htr. 1A	Successful restart following unplanned boiler trip due to fuel gas control issues.	8/27/2022 2:01	8/27/2022 18:10	16.15	8/27/2022 10:00	8/27/2022 13:00	3	450.0	557.7	39.12	94.47	31,019.5	4.9290	2.4079	74.6760	451.7853	3.2148
111B-1B	Crude Atm. Htr. 1B	Initial startup of heater following 2012 Turarnound. Cut short after ~23 hours.	6/5/2012 21:16	6/6/2012 20:51	23.58	6/6/2012 15:00	6/6/2012 21:00	6	822.3	396.1	26.98	36.17	14,535.6	3.3996	2.4079	74.6760	497.9333	1.5064
111B-1B	Crude Atm. Htr. 1B	Full startup of heater following 2012 Turnaround and initial lining out of unit.	6/10/2012 2:46	6/12/2012 0:51	46.08	6/11/2012 1:00	6/11/2012 13:00	12	385.2	1,037.5	73.85	210.68	51,441.6	9.3050	2.4079	74.6760	384.1524	5.3313
111B-1B	Crude Atm. Htr. 1B	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 10:52	10/14/2017 15:02	28.17	10/14/2017 7:00	10/14/2017 12:00	5	952.7	724.8	49.57	64.29	19,357.3	6.2451	2.4079	74.6760	448.0230	2.0062
111B-1B	Crude Atm. Htr. 1B	Restart following an unplanned boiler trip due to fuel gas control issues	8/22/2022 23:57	8/23/2022 12:40	12.72	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-1B	Crude Atm. Htr. 1B	Restart attempt following an unplanned boiler trip due to fuel gas control issues	8/27/2022 1:57	8/28/2022 6:47	28.83	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-2	Crude Vacuum Htr.	Initial heater startup following 2012 Turnaround. Cut short after 7.5 hrs.	6/6/2012 13:06	6/6/2012 20:37	7.52	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	393.2126	NA
111B-2	Crude Vacuum Htr.	Second heater startup attempt following 2012 Turnaround. Cut short after 10.5 hrs.	6/8/2012 8:11	6/8/2012 18:30	10.32	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	NA	NA
111B-2	Crude Vacuum Htr.	Full heater startup following 2012 Turnaround and initial lining out of vacuum section.	6/12/2012 1:51	6/13/2012 3:09	25.30	6/12/2012 17:00	6/13/2012 2:00	9	475.7	1,060.6	28.28	65.58	23,709.7	3.5631	1.7678	70.1040	497.2720	4.5587

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
111B-2	Crude Vacuum Htr.	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 6:51	10/14/2017 23:22	40.52	10/13/2017 13:00	10/14/2017 23:00	34	636.6	1,312.4	56.38	107.92	35,976.8	7.1037	1.7678	70.1040	546.2992	6.9174
111B-2	Crude Vacuum Htr.	Restart after shutdown to address a hot spot and irregular flame	8/21/2022 10:14	8/22/2022 2:31	16.28	8/21/2022 14:00	8/22/2022 2:00	8	525.7	465.1	7.69	14.43	39,384.0	0.9686	1.7678	70.1040	342.9536	7.5725
111B-2	Crude Vacuum Htr.	Restart after shutdown to address a hot spot and irregular flame	8/24/2022 15:01	8/24/2022 21:47	6.77	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	NA	NA
111B-2	Crude Vacuum Htr.	Restart (successful) after shutdown to address a hot spot and irregular flame	8/27/2022 13:46	8/30/2022 4:43	62.95	8/28/03:00	8/30/2022 2:00	42	954.8	919.8	59.06	67.27	27,589.6	7.4417	1.7678	70.1040	542.3856	5.3047
430B-1	Aux Boiler	Restart following shutdown due to steam drum low-low level indication malfunction	4/4/2019 17:26	4/5/2019 2:03	8.62	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart following biennial OSFM-required inspection	6/12/2019 18:05	6/13/2019 14:48	20.72	6/12/2019 19:00	6/13/2019 1:00	2	310.7	500.5	23.8	86.10784	17,868.3	2.9936	2.3774	42.6720	384.1524	2.4893
430B-1	Aux Boiler	Restart after shutdown to address a hot spot and irregular flame	10/25/2019 9:03	10/25/2019 20:45	11.70	10/25/2019 11:00	10/25/2019 18:00	5	362.8	1,040.3	52.7	163.1976	34,280.1	6.6352	2.3774	42.6720	410.6337	5.1050
430B-1	Aux Boiler	Restart after boiler trip on low steam drum level	11/10/2020 18:18	11/10/2020 20:13	1.92	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after required OSFM boiler inspection	6/21/2021 14:58	6/22/2021 14:01	23.05	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after an unplanned boiler trip	8/19/2021 15:25	8/19/2021 16:39	1.23	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after boiler trip due to fuel gase vent chopper valve solenoid failure	4/4/2023 12:03	4/4/2023 20:14	8.18	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Shutdown for OSFM-required biennial inspection.	6/12/2023 5:47	6/12/2023 8:18	2.52	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-1	Aux Boiler	Restart after boiler shutdown for OSFM-required biennial inspection. Startup aborted due to pinhole leak on boiler feed water bypass line.	6/26/2023 15:36	6/26/2023 19:51	4.25	6/26/2023 16:00	6/26/2023 20:00	4	392.2	573.4	9.3	25.73608	6,362.6	1.1711	2.3774	42.6720	424.8426	0.9803
430B-1	Aux Boiler	Restart after repairs to pinhole leak on boiler feed water bypass line, discovered during previous startup attempt.	6/28/2023 6:41	6/28/2023 17:54	11.22	6/28/2023 7:00	6/28/2023 14:00	5	458.8	599.1	12.8	30.03433	7,421.8	1.6103	2.3774	42.6720	418.3549	1.1260
430B-24	South Boiler	This startup was following a planned shutdown on 6/24/2019 to inspect the firebox and make additional refractory repairs and adjustments. Relit boiler and restarted per standard procedures. Temperature was gradually ramped to several hold points to avoid damaging the newly-installed refractory; each hold point was maintained for ~12 hours for refractory dry-out and cure. Steam began flowing to header 7/4/2019 13:21 during final hold point. Final hold was complete 7/5/2019 01:00 and boiler was available for normal operation.to meet refinery steam demand.	7/3/2019 2:32	7/5/2019 1:00	46.47	7/3/2019 3:00	7/4/2019 1:00	22	766.4	691.8	14.2	20.57841	4,365.7	1.7859	1.8288	30.4800	387.6961	1.0373

Appendix D.1

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-24	South Boiler	Boiler tripped off-line. Boiler re-start began within approximately 1.5 hours. Restart and ramp-up followed standard procedures. No excess CO occurred.	8/9/2019 9:35	8/9/2019 13:20	3.75	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Boiler was tripped off-line intentionally to test flame scanners. Boiler re-start attempts began approximately 35 minutes later and followed standard procedures. The boiler was ramped back up to the steam production that existed prior to the shutdown. There was one hour of excess CO.	8/14/2019 10:09	8/14/2019 19:00	8.85	8/14/2019 10:00	8/14/2019 13:00	2	295.3	468.3	8.1	15.19381	3,206.1	1.0222	1.8288	30.4800	421.9715	0.8292
430B-24	South Boiler	Restart following planned boiler outage for required inspection.	8/8/2020 5:26	8/8/2020 16:14	10.80	8/8/2020 5:00	8/8/2020 8:00	3	617.9	826.8	17.5	31.69275	6,695.7	2.2071	1.8288	30.4800	393.5700	1.6151
430B-24	South Boiler	Restart following boiler outage to troubleshoot burner flame pattern issues and flame impingement.	3/3/2021 19:19	3/3/2021 23:52	4.55	3/3/2021 20:00	3/3/2021 21:00	1	568.4	570.9	15.5	29.36236	6,208.0	1.9518	1.8288	30.4800	397.5813	1.5127
430B-24	South Boiler	Restart following boiler trip due to fuel gas flow meter problem.	6/12/2021 20:53	6/12/2021 21:51	0.97	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler shutdown to replace fuel gas flow meter	6/13/2021 15:33	6/13/2021 19:03	3.50	6/13/2021 17:00	6/13/2021 19:00	2	690.2	661.1	11.6	18.31728	3,870.6	1.4582	1.8288	30.4800	429.3803	1.0186
430B-24	South Boiler	Restart following boiler shutdow for required inspection	6/10/2022 15:54	6/10/2022 18:03	2.15	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler trip due to SIS trip on high fuel gas pressure	8/3/2022 21:05	8/3/2022 23:56	2.85	8/3/2022 21:00	8/4/2022 0:00	2	1,081.7	745.3	22.8	29.56429	7,128.6	2.8695	1.8288	30.4800	422.6186	1.8464
430B-24	South Boiler	Restart following boiler trip due to loss of fuel gas flow indication.	12/6/2022 19:06	12/6/2022 20:25	1.32	12/6/2022 19:00	12/6/2022 21:00	2	931.1	553.4	21.0	16.28618	4,018.9	2.6398	1.8288	30.4800	423.5123	1.0432

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-24	South Boiler	Restart of the South Boiler following a boiler trip on high firebox pressure when the 43P-2627 Economizer Outlet Pressure froze up.	12/19/2022 8:46	12/19/2022 10:46	2.00	12/19/2022 9:00	12/19/2022 10:00	1	386.8	935.7	15.7	74.85348	16,901.1	1.9824	1.8288	30.4800	411.7343	4.2650
430B-24	South Boiler	Restart following fg flow meter repair	1/3/2023 21:38	1/4/2023 8:23	10.75	1/3/2023 22:00	1/4/2023 1:00	3	1,347.4	644.6	31.9	25.48517	6,288.4	4.0239	1.8288	30.4800	412.2857	1.5890
430B-24	South Boiler	Shutdown to investigate odd flame pattern caused by steam leak.	6/5/2023 8:00	6/5/2023 8:25	0.42	6/5/2023 8:00	6/5/2023 9:00	1	262.1	663.2	16.1	53.17907	12,845.2	2.0256	1.8288	30.4800	399.1078	3.1421
430B-24	South Boiler	Restart following shutdown to investigate odd flame pattern caused by steam leak. Standard startup procedures were followed.	6/9/2023 15:27	6/9/2023 16:48	1.35	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following trip possibly due to failed HVAC in substation.	8/2/2023 17:47	8/2/2023 21:32	3.75	8/2/2023 18:00	8/2/2023 20:00	2	995.8	646.0	24.8	22.13305	5,453.5	3.1256	1.8288	30.4800	408.9568	1.3669
430B-24	South Boiler	Restart following short planned shutdown for maintenance (burner cleaning).	10/27/2023 14:05	10/28/2023 0:09	10.07	10/27/2023 14:00	10/27/2023 15:00	1	472.8	709.1	12.7	33.29813	7,964.0	1.5982	1.8288	30.4800	383.8233	1.8735
430B-24	South Boiler	Restart following biennial OSFM-required inspection	6/12/2024 19:27	6/13/2024 13:40	18.22	6/12/2024 19:00	6/13/2024 10:00	13	1,384.8	690.8	29.2	22.93017	5,656.6	3.6836	1.8288	30.4800	396.6311	1.3751
431B-25	North Boiler	Following a planned boiler shutdown (43.8 hrs) to install additional firebox test ports, relit boiler and restarted per standard procedures. Steam began flowing to header 1/19/2019 20:26, and normal operation to meet refinery steam demand achieved at 1/9/2019 20:44	1/9/2019 10:59	1/9/2019 22:44	11.75	1/9/2019 19:00	1/9/2019 21:00	2	563.2	597.1	6.32	12.0672	2,604.7	0.7958	1.8288	30.4800	391.4530	0.6249

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Following an unplanned boiler trip (fuel gas control valve issues), the boiler was restarted per standard procedures. During initial restart, boiler continued to intermittently trip. Successfully lit the boiler off and maintained firing at a low load (~20%) while fuel gas control valve issues were resolved. After fuel gas control issues resolved, increased rate to a normal operating level for steam demand (~50%). Startup deemed complete when this level was reached. Excess emissionsnted during the shutdown (1 hr) and subsequent restart (1 hr)	2/7/2019 18:42	2/8/2019 12:32	17.83	2/7/2019 18:00	2/8/2019 0:00	2	681.7	1,224.2	65.3	97.11627	20,719.7	8.2302	1.8288	30.4800	402.0170	5.1052

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Following a planned shutdown to make fire-box and limited refractory adjustments, relit boiler and restarted per standard procedures. Gradually ramped up temperature to avoid damaging the new refractory. Steam began flowing to header 2/15/2019 23:13 and normal operation to meet refinery steam demand achieved at 2/16/2019 05:23.	2/15/2019 13:41	2/16/2019 5:23	15.70	2/15/2019 15:00	2/16/2019 0:00	8	767.0	748.8	17.8	34.10859	7,403.5	2.2405	1.8288	30.4800	393.2126	1.7842
431B-25	North Boiler	Following a planned shutdown on 3/19/2019 to inspect firebox and make additional repairs and adjustments. Relit boiler and restarted per standard procedures. Gradually ramped up temperature to avoid damaging the new refractory. Steam began flowing to header 3/23/2019 13:55 and normal operation to meet refinery steam demand achieved at 3/23//2019 15:30.	3/23/2019 13:26	3/23/2019 15:30	2.07	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	This startup was following a planned shutdown on 7/15/2019 to inspect the firebox and make additional refractory repairs and adjustments. Relit boiler on 7/24/2019 and restarted per standard procedures. Temperature was gradually ramped to several hold points to avoid damaging the newly-installed refractory; each hold point was maintained for ~12 hours for refractory dry-out and cure. Steam began flowing to header 7/25/2019 14:38 during final hold point. Final hold was complete 7/26/2019 02:41 and boiler was available for normal operation.to meet refinery steam demand. Boiler ramped up to achieve minimum flue gas temperature for SCR operation. Normal operation achieved at 7/26/2019 03:56 temperature for	7/24/2019 7:22	7/26/2019 3:56	44.57	7/24/2019 11:00	7/25/20019 10:00	23	767.0	796.4	20.8	29.41076	6,365.5	2.6157	1.8288	30.4800	401.3762	1.5659
431B-25	North Boiler	Boiler was shut down to perform maintenance work on the flame scanners. Startup followed standard procedures	10/2/2019 14:03	10/2/2019 16:58	2.92	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	3/9/2020 12:05	3/9/2020 13:58	1.88	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	3/24/2020 1:13	3/24/2020 1:38	0.42	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	5/22/2020 5:19	5/22/2020 5:52	0.55	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart attempt following an unplanned boiler trip due to fuel gas control issues	5/25/2020 15:35	5/25/2020 15:50	0.25	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Successful restart following unplanned boiler trip due to fuel gas control issues.	5/25/2020 15:57	5/25/2020 17:25	1.47	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following planned boiler outage for required inspection.	7/28/2020 15:19	7/29/2020 2:36	11.28	7/28/2020 16:00	7/28/2020 22:00	6	764.6	701.3	19.0	27.26109	5,865.3	2.3944	1.8288	30.4800	425.4917	1.5295
431B-25	North Boiler	Restart following boiler trip due to failed fuel gas valve positioner	6/26/2021 3:55	6/26/2021 13:41	9.77	6/26/2021 6:00	6/26/2021 10:00	4	695.8	662.3	10.1	15.94951	3,430.3	1.2757	1.8288	30.4800	480.3508	1.0099
431B-25	North Boiler	Restart following boiler shutdown for required inspection	6/18/2022 12:59	6/18/2022 17:30	4.52	6/18/2022 14:00	6/18/2022 15:00	1	489.1	226.2	8.5	27.12834	6,371.3	1.0746	1.8288	30.4800	383.7137	1.4984
431B-25	North Boiler	Restart of the North Boiler following a boiler trip due to a low pressure "spike" in fuel gas pressure when the rate was incresed to near maximum after the South Boiler had tripped (see that boiler's startup record).	12/19/2022 9:42	12/19/2022 16:55	7.22	12/19/2022 10:00	12/19/2022 11:00	1	684.3	99.4	11.8	16.59225	4,067.4	1.4815	1.8288	30.4800	345.2213	0.8606
431B-25	North Boiler	The North Boiler (431B-25) was taken down (planned) to resolve Boiler Feed Water controller issues and upgrade the NOx/CO CEMS.	5/26/2023 10:54	5/26/2023 13:25	2.52	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following unplanned boiler trip. Boiler tripped while preparing to troubleshoot a bad flame scanner	1/15/2024 12:22	1/15/2024 16:07	3.75	1/15/2024 12:00	1/15/2024 13:00	1	326.3	NA	3.6	25.1254	6,113.9	0.4578	1.8288	30.4800	376.3539	1.4103

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Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on a 1-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 1-hr. avg. basis	End of Excess emissions on 1-hr. avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 1-hr. avg. basis	[CO]50% EA-max peak [CO] ppmvd @ 50% EA, 1-hr avg.	Firebox Temp at [CO]50% EA-max deg. F	CO emission rate at [CO]50% EA-max lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Restart following biennial OSFM-required inspection	7/3/2024 14:45	7/3/2024 17:41	2.93	NA	NA	0	153.1	NA	7.8	14.28581	3,491.2	0.9781	1.8288	30.4800	383.4848	0.4855

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
109B-62	U109 H2 Plant Reformer Htr.	Unit shutdown to repair 09E-66 steam generator	6/24/2019 18:47	6/25/2019 10:17	15.50	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Unit startup	7/4/2019 11:29	7/6/2019 1:32	38.05	7/4/2019 20:00	7/5/2019 19:00	23	1,600.7	658.8	21.15	12.21	4,400.0	2.6643	1.8593	45.7200	377.7482	0.7648
109B-62	U109 H2 Plant Reformer Htr.	Unit startup (after unit trip due to loss of compressor motor)	6/18/2020 15:53	6/18/2020 16:48	0.92	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Unit startup (after PSA skid trip due to loose air bonnet valve)	12/24/2020 3:47	12/24/2020 13:42	9.92	12/24/2020 4:00	12/24/2020 12:00	8	708.8	1,356.7	39.46	40.58	15,498.2	4.9718	1.8593	45.7200	415.5685	2.6940
109B-62	U109 H2 Plant Reformer Htr.	PSA shutdown for 09E-72 repairs	5/18/2022 6:48	5/19/2022 14:58	32.17	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA startup	6/3/2022 5:10	6/4/2022 20:39	39.48	6/3/2022 12:00	6/3/2022 16:00	4	903.0	991.4	10.74	12.52	4,574.5	1.3531	1.8593	45.7200	398.0070	0.7952
109B-62	U109 H2 Plant Reformer Htr.	Shutdown unit to replace unit's process logic control system.	9/25/2023 8:47	9/25/2023 23:13	14.43	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/12/2023 4:00	10/15/2023 9:42	77.70	10/13/2023 9:00	10/13/2023 23:00	13	1,307.7	583.7	18.09	14.56	4,992.3	2.2791	1.8593	45.7200	357.5295	0.8678

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/15/2023 15:00	10/15/2023 20:40	5.67	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/16/2023 16:20	10/16/2023 23:14	6.90	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/17/2023 7:54	10/24/2023 15:40	175.77	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	Startup after replacing unit's process logic control system	10/31/2023 8:59	11/16/2023 19:25	394.43	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/1/2024 14:22	2/1/2024 17:38	3.27	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/8/2024 11:02	2/8/2024 17:36	6.57	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
109B-62	U109 H2 Plant Reformer Htr.	PSA Skid trip - shutdown/startup	2/9/2024 14:43	2/9/2024 14:47	0.07	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8593	45.7200	NA	NA
111B-1A	Crude Atm. Htr. 1A	Initial startup of heater following 2012 Turarnound. Cut short after ~23 hours.	6/5/2012 21:47	6/6/2012 20:41	22.90	6/6/2012 18:00	6/6/2012 21:00	3	375.7	399.1	12.36	35.52	12,461.4	1.5570	2.4079	74.6760	473.7650	1.2915
111B-1A	Crude Atm. Htr. 1A	Full startup of heater following 2012 Turnaround and initial lining out of unit.	6/10/2012 2:51	6/11/2012 8:14	29.38	6/11/2012 3:00	6/11/2012 13:00	10	490.3	1,069.0	94.20	205.96	70,856.7	11.8694	2.4079	74.6760	503.4686	7.3435

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
111B-1A	Crude Atm. Htr. 1A	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 10:00	10/14/2017 18:59	32.98	10/14/2017 9:00	10/14/2017 19:00	10	543.8	678.2	29.45	100.22	29,160.1	3.7109	2.4079	74.6760	448.7423	3.0221
111B-1A	Crude Atm. Htr. 1A	Restart following an unplanned boiler trip due to fuel gas control issues	8/23/2022 0:07	8/23/2022 12:40	12.55	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-1A	Crude Atm. Htr. 1A	Successful restart following unplanned boiler trip due to fuel gas control issues.	8/27/2022 2:01	8/27/2022 18:10	16.15	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-1B	Crude Atm. Htr. 1B	Initial startup of heater following 2012 Turarnound. Cut short after ~23 hours.	6/5/2012 21:16	6/6/2012 20:51	23.58	6/6/2012 17:00	6/6/2012 21:00	4	540.2	378.0	16.52	32.85	10,988.4	2.0814	2.4079	74.6760	465.3933	1.1388
111B-1B	Crude Atm. Htr. 1B	Full startup of heater following 2012 Turnaround and initial lining out of unit.	6/10/2012 2:46	6/12/2012 0:51	46.08	6/11/2012 4:00	6/11/2012 15:00	11	345.8	1,050.0	65.23	200.69	67,184.1	8.2188	2.4079	74.6760	521.3848	6.9628
111B-1B	Crude Atm. Htr. 1B	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 10:52	10/14/2017 15:02	28.17	10/14/2017 9:00	10/14/2017 18:00:00	10	556.2	678.2	29.45	80.27	23,276.7	3.7109	2.4079	74.6760	448.7423	2.4124
111B-1B	Crude Atm. Htr. 1B	Restart following an unplanned boiler trip due to fuel gas control issues	8/22/2022 23:57	8/23/2022 12:40	12.72	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-1B	Crude Atm. Htr. 1B	Restart attempt following an unplanned boiler trip due to fuel gas control issues	8/27/2022 1:57	8/28/2022 6:47	28.83	NA	NA	0	NA	NA	NA	NA	NA	NA	2.4079	74.6760	NA	NA
111B-2	Crude Vacuum Htr.	Initial heater startup following 2012 Turnaround. Cut short after 7.5 hrs.	6/6/2012 13:06	6/6/2012 20:37	7.52	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	NA	NA
111B-2	Crude Vacuum Htr.	Second heater startup attempt following 2012 Turnaround. Cut short after 10.5 hrs.	6/8/2012 8:11	6/8/2012 18:30	10.32	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	NA	NA
111B-2	Crude Vacuum Htr.	Full heater startup following 2012 Turnaround and initial lining out of vacuum section.	6/12/2012 1:51	6/13/2012 3:09	25.30	6/12/2012 20:00	6/13/2012 5:00	9	371.6	1,003.6	23.35	70.13	25,405.2	2.9416	1.7678	70.1040	497.0949	4.8847

Appendix D.2
Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
111B-2	Crude Vacuum Htr.	Full startup of heater following 2017 Turnaround and initial lining out of unit.	10/13/2017 6:51	10/14/2017 23:22	40.52	10/13/2017 14:00	10/15/2017 3:00	16	359.0	1,138.5	26.71	86.52	29,936.4	3.3650	1.7678	70.1040	531.5159	5.7560
111B-2	Crude Vacuum Htr.	Restart after shutdown to address a hot spot and irregular flame	8/21/2022 10:14	8/22/2022 2:31	16.28	8/21/2022 19:00	8/22/2022 4:00	8	249.9	594.2	3.37	12.19	3,602.0	0.4240	1.7678	70.1040	415.0181	0.6926
111B-2	Crude Vacuum Htr.	Restart following an unplanned boiler trip due to fuel gas control issues	8/24/2022 15:01	8/24/2022 21:47	6.77	NA	NA	0	NA	NA	NA	NA	NA	NA	1.7678	70.1040	NA	NA
111B-2	Crude Vacuum Htr.	Restart (successful) following an unplanned boiler trip due to fuel gas control issues	8/27/2022 13:46	8/30/2022 4:43	62.95	8/28/09:00	8/30/2022 6:00	45	907.8	924.4	57.66	69.54	28,407.4	7.2654	1.7678	70.1040	543.6056	5.4620
430B-1	Aux Boiler	Restart following shutdown due to steam drum low-low level indication malfunction	4/4/2019 17:26	4/5/2019 2:03	8.62	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart following biennial OSFM-required inspection	6/12/2019 18:05	6/13/2019 14:48	20.72	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after shutdown to address a hot spot and irregular flame	10/25/2019 9:03	10/25/2019 20:45	11.70	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after boiler trip on low steam drum level	11/10/2020 18:18	11/10/2020 20:13	1.92	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after required OSFM boiler inspection	6/21/2021 14:58	6/22/2021 14:01	23.05	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after an unplanned boiler trip	8/19/2021 15:25	8/19/2021 16:39	1.23	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after boiler trip due to fuel gase vent chopper valve solenoid failure	4/4/2023 12:03	4/4/2023 20:14	8.18	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Shutdown for OSFM-required biennial inspection.	6/12/2023 5:47	6/12/2023 8:18	2.52	NA	NA	0	NA	NA	NA	NA	NA	NA	2.3774	42.6720	NA	NA
430B-1	Aux Boiler	Restart after boiler shutdown for OSFM-required biennial inspection. Startup aborted due to pinhole leak on boiler feed water bypass line.	6/26/2023 15:36	6/26/2023 19:51	4.25	6/26/2023 18:00	6/26/2027 0:00	6	379.0	343.5	0.3	12.50	4,109.9	0.0440	2.3774	42.6720	389.9267	0.4369

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-1	Aux Boiler	Restart after repairs to pinhole leak on boiler feed water bypass line, discovered during previous startup attempt.	6/28/2023 6:41	6/28/2023 17:54	11.22	6/28/2023 9:00	6/28/2023 16:00	7	307.7	373.3	4.7	15.34	5,206.9	0.5878	2.3774	42.6720	370.8922	0.5536
430B-24	South Boiler	This startup was following a planned shutdown on 6/24/2019 to inspect the firebox and make additional refractory repairs and adjustments. Relit boiler and restarted per standard procedures. Temperature was gradually ramped to several hold points to avoid damaging the newly-installed refractory; each hold point was maintained for ~12 hours for refractory dry-out and cure. Steam began flowing to header 7/4/2019 13:21 during final hold point. Final hold was complete 7/5/2019 01:00 and boiler was available for normal operation.to meet refinery steam demand.	7/3/2019 2:32	7/5/2019 1:00	46.47	7/3/2019 6:00	7/4/2019 7:00	25	766.4	703.3	14.4	20.90	5,858.2	1.8109	1.8288	30.4800	387.9369	1.0525
430B-24	South Boiler	Boiler tripped off-line. Boiler re-start began within approximately 1.5 hours. Restart and ramp-up followed standard procedures. No excess CO occurred.	8/9/2019 9:35	8/9/2019 13:20	3.75	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-24	South Boiler	Boiler was tripped off-line intentionally to test flame scanners. Boiler re-start attempts began approximatly 35 minutes later and followed standard procedures. The boiler was ramped back up to the steam production that existed prior to the shutdown. There was one hour of excess CO.	8/14/2019 10:09	8/14/2019 19:00	8.85	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following planned boiler outage for required inspection.	8/8/2020 5:26	8/8/2020 16:14	10.80	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler outage to troubleshoot burner flame pattern issues and flame impingement.	3/3/2021 19:19	3/3/2021 23:52	4.55	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler trip due to fuel gas flow meter problem.	6/12/2021 20:53	6/12/2021 21:51	0.97	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler shutdown to replace fuel gas flow meter	6/13/2021 15:33	6/13/2021 19:03	3.50	6/13/2021 22:00	6/13/2021 23:00	1	200.3	979.0	3.5	77.33	21,600.0	0.4393	1.8288	30.4800	412.8504	3.8808
430B-24	South Boiler	Restart following boiler shutdow for required inspection	6/10/2022 15:54	6/10/2022 18:03	2.15	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following boiler trip due to SIS trip on high fuel gas pressure	8/3/2022 21:05	8/3/2022 23:56	2.85	8/3/2022 21:00	8/4/2022 6:00	7	244.4	991.5	3.2	80.39	25,458.0	0.4094	1.8288	30.4800	417.6305	4.5740
430B-24	South Boiler	Restart following boiler trip due to loss of fuel gas flow indication.	12/6/2022 19:06	12/6/2022 20:25	1.32	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart of the South Boiler following a boiler trip on high firebox pressure when the 43P-2627 Economizer Outlet Pressure froze up.	12/19/2022 8:46	12/19/2022 10:46	2.00	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following fg flow meter repair	1/3/2023 21:38	1/4/2023 8:23	10.75	1/3/2023 23:00	1/4/2023 7:00	8	316.9	363.8	14.8	24.05	7,520.3	1.8697	1.8288	30.4800	374.9250	1.3512
430B-24	South Boiler	Shutdown to investigate odd flame pattern caused by steam leak.	6/5/2023 8:00	6/5/2023 8:25	0.42	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
430B-24	South Boiler	Restart following shutdown to investigate odd flame pattern caused by steam leak. Standard startup procedures were followed.	6/9/2023 15:27	6/9/2023 16:48	1.35	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following trip possibly due to failed HVAC in substation.	8/2/2023 17:47	8/2/2023 21:32	3.75	8/2/2023 19:00	8/3/2023 2:00	7	222.4	1,208.3	6.2	120.23	34,686.8	0.7871	1.8288	30.4800	413.6027	6.2321
430B-24	South Boiler	Restart following short planned shutdown for maintenance (burner cleaning).	10/27/2023 14:05	10/28/2023 0:09	10.07	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
430B-24	South Boiler	Restart following biennial OSFM-required inspection	6/12/2024 19:27	6/13/2024 13:40	18.22	6/12/2024 21:00	6/13/2024 16:00	17	1,000.3	519.2	24.0	24.46	8,147.4	3.0258	1.8288	30.4800	396.5388	1.4638
431B-25	North Boiler	Following a planned boiler shutdown (43.8 hrs) to install additional firebox test ports, relit boiler and restarted per standard procedures. Steam began flowing to header 1/19/2019 20:26, and normal operation to meet refinery steam demand achieved at 1/9/2019 20:44	1/9/2019 10:59	1/9/2019 22:44	11.75	01/09/2019 21:00	01/10/2019 00:00	3	231.8	710.9	2.4	113.33	31,692.5	0.3048	1.8288	30.4800	385.2256	5.6941

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Following an unplanned boiler trip (fuel gas control valve issues), the boiler was restarted per standard procedures. During initial restart, boiler continued to intermittently trip. Successfully lit the boiler off and maintained firing at a low load (~20%) while fuel gas control valve issues were resolved. After fuel gas control issues resolved, increased rate to a normal operating level for steam demand (~50%). Startup deemed complete when this level was reached. Excess emissionsnted during the shutdown (1 hr) and subsequent restart (1 hr)	2/7/2019 18:42	2/8/2019 12:32	17.83	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Following a planned shutdown to make fire-box and limited refractory adjustments, relit boiler and restarted per standard procedures. Gradually ramped up temperature to avoid damaging the new refractory. Steam began flowing to header 2/15/2019 23:13 and normal operation to meet refinery steam demand achieved at 2/16/2019 05:23.	2/15/2019 13:41	2/16/2019 5:23	15.70	02/15/2019 19:00	02/16/2019 06:00	11	630.1	647.4	16.7	26.39	7,626.2	2.1098	1.8288	30.4800	390.3790	1.3702

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Following a planned shutdown on 3/19/2019 to inspect firebox and make additional repairs and adjustments. Relit boiler and restarted per standard procedures. Gradually ramped up temperature to avoid damaging the new refractory. Steam began flowing to header 3/23/2019 13:55 and normal operation to meet refinery steam demand achieved at 3/23//2019 15:30.	3/23/2019 13:26	3/23/2019 15:30	2.07	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	This startup was following a planned shutdown on 7/15/2019 to inspect the firebox and make additional refractory repairs and adjustments. Relit boiler on 7/24/2019 and restarted per standard procedures. Temperature was gradually ramped to several hold points to avoid damaging the newly-installed refractory; each hold point was maintained for ~12 hours for refractory dry-out and cure. Steam began flowing to header 7/25/2019 14:38 during final hold point. Final hold was complete 7/26/2019 02:41 and boiler was available for normal operation.to meet refinery steam demand. Boiler ramped up to achieve minimum flue gas temperature for SCR operation. Normal operation achieved at 7/26/2019 03:56 temperature for	7/24/2019 7:22	7/26/2019 3:56	44.57	07/24/2019 13:00	07/25/2019 15:00	26	729.9	796.4	17.2	25.66	7,811.4	2.1727	1.8288	30.4800	413.0284	1.4035
431B-25	North Boiler	Boiler was shut down to perform maintenance work on the flame scanners. Startup followed standard procedures	10/2/2019 14:03	10/2/2019 16:58	2.92	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	3/9/2020 12:05	3/9/2020 13:58	1.88	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA

Appendix D.2

Startup Event Information for Lemont Refinery Fuel Combustion Emission Sources Equipped with CO CEMS, Events Evaluated on an 8-hr. Average Basis

Emission Unit		Event Information				Excess Emissions Information								Dispersion modeling inputs for [CO]50% EA-max case				
Emission Unit ID	Unit Description	Brief Description	Start	Practical End	Practical Event duration (hrs.)	Start of Excess Emissions on 8-hr avg. basis	End of Excess emissions on 8-hr avg. basis	No. hrs. in excess of 200 ppmv @ 50% EA on 8-hr. avg. basis	[CO] _{50% EA-max} peak [CO] ppmvd @ 50% EA, 8-hr avg.	Firebox Temp at [CO] _{50% EA-max} deg. F	CO emission rate at [CO] _{50% EA-max} lb./hr.	Firing Rate (MMBtu/hr)	wet acfm	Emission Rate g/s	D (m)	H (m)	T (K)	Vel (m/s)
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	3/24/2020 1:13	3/24/2020 1:38	0.42	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following an unplanned boiler trip due to fuel gas control issues	5/22/2020 5:19	5/22/2020 5:52	0.55	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart attempt following an unplanned boiler trip due to fuel gas control issues	5/25/2020 15:35	5/25/2020 15:50	0.25	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Successful restart following unplanned boiler trip due to fuel gas control issues.	5/25/2020 15:57	5/25/2020 17:25	1.47	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following planned boiler outage for required inspection.	7/28/2020 15:19	7/29/2020 2:36	11.28	07/28/2020 20:00	07/29/2020 03:00	7	564.0	607.6	10.1	17.02	5,151.5	1.2694	1.8288	30.4800	412.5838	0.9256
431B-25	North Boiler	Restart following boiler trip due to failed fuel gas valve positioner	6/26/2021 3:55	6/26/2021 13:41	9.77	06/26/2021 09:00	06/26/2021 15:00	6	376.2	533.2	2.1	28.09	7,770.1	0.2696	1.8288	30.4800	377.1521	1.3960
431B-25	North Boiler	Restart following boiler shutdown for required inspection	6/18/2022 12:59	6/18/2022 17:30	4.52	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart of the North Boiler following a boiler trip due to a low pressure "spike" in fuel gas pressure when the rate was increased to near maximum after the South Boiler had tripped (see that boiler's startup record).	12/19/2022 9:42	12/19/2022 16:55	7.22	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	The North Boiler (431B-25) was taken down (planned) to resolve Boiler Feed Water controller issues and upgrade the NOx/CO CEMS.	5/26/2023 10:54	5/26/2023 13:25	2.52	NA	NA	0	NA	NA	NA	NA	NA	NA	1.8288	30.4800	NA	NA
431B-25	North Boiler	Restart following unplanned boiler trip. Boiler tripped while preparing to troubleshoot a bad flame scanner	1/15/2024 12:22	1/15/2024 16:07	3.75	NA	NA	0	NA	NA	NA	NA	7,849.2	0.4578	1.8288	30.4800	376.3539	1.4103
431B-25	North Boiler	Restart following biennial OSFM-required inspection	7/3/2024 14:45	7/3/2024 17:41	2.93	NA	NA	0	153.1	NA	7.8	14.29	4,567.0	0.9781	1.8288	30.4800	383.4848	0.4855

Appendix E

Lemont Refinery Fuel Combustion Emission Source Startup CO Dispersion Modeling Stack Parameter Input Basis

- E.1 Potential Dispersion Modeling Inputs: 1-hr. avg.
- E.2 Potential Dispersion Modeling Inputs: 8-hr. avg.

Appendix E.1
Potential Dispersion Modeling Inputs: 1-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Maximum Event (max [CO] at 50% Excess Air)												
109B-62	181.35	12/24/2020 4:00	14,606.60	304.0517	22.8500	1.8593	45.7200	424.2898	2.5390	41:39:25.65	88:02:48.42	127.63% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario.
111B-1A	129.85	6/11/2012 6:00	75,427.92	483.8926	16.3610	2.4079	74.6760	524.2015	7.8172	41:38:48.53	88:03:16.44	82.44% of Avg. + 2 Std. Devs.
111B-1B	73.85	6/11/2012 5:00	51,441.60	231.8042	9.3050	2.4079	74.6760	384.1524	5.3313	41:38:49.1	88:03:17	76.13% of Avg. + 2 Std. Devs.
111B-2	60.78	8/29/2022 8:00	27,589.64	516.6241	7.4417	1.7678	70.1040	542.3856	5.3047	41:38:49.94	88:03:16.74	69.02% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario.
430B-1	52.66	10/25/2019 14:00	48,018.34	279.4707	6.6352	2.3774	42.6720	410.6337	5.1050	41:38:45.44	88:03:14.98	76.92% of Avg. + 2 Std. Devs.
430B-24	42.37	6/12/2024 21:00	7,653.34	254.266	5.3380	1.8288	30.4800	396.6311	1.3751	41:39:30.97	88:02:44.13	129.83% of Avg. + 2 Std. Devs.
431B-25	65.32	2/7/2019 19:00	28,414.33	263.9605	8.2302	1.8288	30.4800	402.0170	5.1052	41:38:40.09	88:03:13.08	115.47% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario. (Max ER)
111B-1A/B	For modeling simultaneous startup of 111B-1A and 111B-1B, see above.											
Artificial Worst-case Scenario Statistical Values												
Max (109B-62)	181.35	12/24/2020 4:00	20,094.74	347.8615	22.8500	1.86	45.72	448.6286	3.4930	41:39:25.65	88:02:48.42	
Max (111B-1A)	129.85	6/11/2012 6:00	75,427.92	483.8926	16.3610	2.41	74.68	524.2015	7.8172	41:38:48.53	88:03:16.44	
Max (111B-1B)	73.85	6/11/2012 5:00	51,441.60	436.6099	9.3050	2.41	74.68	497.9333	5.3313	41:38:49.1	88:03:17	
Max (111B-2)	60.78	8/29/2022 8:00	39,384.03	523.6685	7.4417	1.77	70.10	546.2992	7.5725	41:38:49.94	88:03:16.74	
Max (430B-1)	52.66	10/25/2019 14:00	48,018.34	305.0466	6.6352	2.38	42.67	424.8426	5.1050	41:38:45.44	88:03:14.98	
Max (430B-24)	42.37	6/12/2024 21:00	23,737.94	313.2146	5.3380	1.83	30.48	429.3803	4.2650	41:39:30.97	88:02:44.13	
Max (431B-25)	65.32	2/7/2019 19:00	28,414.33	404.9614	8.2302	1.83	30.48	480.3508	5.1052	41:38:40.09	88:03:13.08	
Min. (109B-62)	3.11	6/3/2022 10:00	4,023.35	173.1279	0.3924	1.86	45.72	351.5544	0.6994	41:39:25.65	88:02:48.42	
Min. (111B-1A)	19.24	6/6/2012 19:00	12,616.01	338.1429	2.4245	2.41	74.68	443.2294	1.3075	41:38:48.53	88:03:16.44	
Min. (111B-1B)	26.98	6/6/2012 19:00	14,535.62	231.8042	3.3996	2.41	74.68	384.1524	1.5064	41:38:49.1	88:03:17	
Min. (111B-2)	7.94	8/21/2022 14:00	23,709.71	157.6466	0.9686	1.77	70.10	342.9536	4.5587	41:38:49.94	88:03:16.74	
Min. (430B-1)	9.29	6/26/2023 18:00	9,220.83	231.8042	1.1711	2.38	42.67	384.1524	0.9803	41:38:45.44	88:03:14.98	
Min. (430B-24)	8.11	8/14/2019 10:00	4,614.99	231.212	1.0222	1.83	30.48	383.8233	0.8292	41:39:30.97	88:02:44.13	
Min. (431B-25)	6.32	1/9/2019 19:00	3,478.19	161.7284	0.4578	1.83	30.48	345.2213	0.6249	41:38:40.09	88:03:13.08	
Average (109B-62)	34.13		8,413.94	284.6108	4.2429	1.86	45.72	413.4893	1.4626	41:39:25.65	88:02:48.42	
Average (111B-1A)	61.23		35,146.33	395.7635	7.6883	2.41	74.68	475.2408	3.6425	41:38:48.53	88:03:16.44	
Average (111B-1B)	50.13		28,444.83	338.3952	6.3166	2.41	74.68	443.3696	2.9480	41:38:49.1	88:03:17	
Average (111B-2)	38.34		31,665.04	376.2943	4.7693	1.77	70.10	464.4246	6.0883	41:38:49.94	88:03:16.74	
Average (430B-1)	27.63		22,811.50	277.4226	3.1025	2.38	42.67	409.4959	2.4251	41:38:45.44	88:03:14.98	
Average (430B-24)	19.75		9,639.11	272.6349	2.3364	1.83	30.48	406.8361	1.7318	41:39:30.97	88:02:44.13	
Average (431B-25)	18.40		9,021.83	257.2115	2.1544	1.83	30.48	398.2675	1.6209	41:38:40.09	88:03:13.08	
Std. Dev. (109B-62)	53.98		5,299.54	54.63037	6.8035	0.00	0.00	30.3502	0.9212	41:39:25.65	88:02:48.42	

Appendix E.1
Potential Dispersion Modeling Inputs: 1-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Std. Dev. (111B-1A)	48.14		27,885.95	65.84465	6.0816	0.00	0.00	36.58036	2.8900	41:38:48.53	88:03:16.44	
Std. Dev. (111B-1B)	23.44		20,061.17	102.6595	2.9534	0.00	0.00	57.03303	2.0791	41:38:49.1	88:03:17	
Std. Dev. (111B-2)	24.86		7,258.79	165.1853	3.0818	0.00	0.00	91.76962	1.3957	41:38:49.94	88:03:16.74	
Std. Dev. (430B-1)	20.41		17,979.42	32.15898	2.4798	0.00	0.00	17.8661	1.9114	41:38:45.44	88:03:14.98	
Std. Dev. (430B-24)	6.44		5,546.38	27.30542	0.8218	0.00	0.00	15.16968	0.9965	41:39:30.97	88:02:44.13	
Std. Dev. (431B-25)	19.09		7,873.67	69.4873	2.4023	0.00	0.00	38.60406	1.4146	41:38:40.09	88:03:13.08	
Avg. + 2 SD (109B-62)	142.09		19,013.01	393.8716	17.8499	1.86	45.72	474.1898	3.3050	41:39:25.65	88:02:48.42	
Avg. + 2 SD (111B-1A)	157.51		90,918.24	527.4528	19.8516	2.41	74.68	548.4015	9.4226	41:38:48.53	88:03:16.44	
Avg. + 2 SD (111B-1B)	97.01		68,567.17	543.7141	12.2233	2.41	74.68	557.4356	7.1062	41:38:49.1	88:03:17	
Avg. + 2 SD (111B-2)	88.07		46,182.63	706.6649	10.9328	1.77	70.10	647.9638	8.8797	41:38:49.94	88:03:16.74	
Avg. + 2 SD (430B-1)	68.46		58,770.33	341.7406	8.0622	2.38	42.67	445.2281	6.2480	41:38:45.44	88:03:14.98	
Avg. + 2 SD (430B-24)	32.63		20,731.86	327.2458	3.9800	1.83	30.48	437.1754	3.7249	41:39:30.97	88:02:44.13	
Avg. + 2 SD (431B-25)	56.57		24,769.17	396.1861	6.9591	1.83	30.48	475.4756	4.4502	41:38:40.09	88:03:13.08	
Avg. - 2 SD (109B-62)	0.00		-2,185.14	175.3501	0.0000	1.86	45.72	352.7889	-0.3798	41:39:25.65	88:02:48.42	
Avg. - 2 SD (111B-1A)	0.00		-20,625.58	264.0742	0.0000	2.41	74.68	402.0801	-2.1376	41:38:48.53	88:03:16.44	
Avg. - 2 SD (111B-1B)	3.25		-11,677.52	133.0763	0.4098	2.41	74.68	329.3035	-1.2102	41:38:49.1	88:03:17	
Avg. - 2 SD (111B-2)	0.00		17,147.46	45.92367	0.0000	1.77	70.10	280.8854	3.2970	41:38:49.94	88:03:16.74	
Avg. - 2 SD (430B-1)	0.00		-13,147.34	213.1046	0.0000	2.38	42.67	373.7637	-1.3977	41:38:45.44	88:03:14.98	
Avg. - 2 SD (430B-24)	6.88		-1,453.64	218.0241	0.6929	1.83	30.48	376.4967	-0.2612	41:39:30.97	88:02:44.13	
Avg. - 2 SD (431B-25)	0.00		-6,725.51	118.2369	0.0000	1.83	30.48	321.0594	-1.2084	41:38:40.09	88:03:13.08	

Appendix E.1
Potential Dispersion Modeling Inputs: 1-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Artificial Statistical Worst Case Scenarios												
109B-62	181.3519		14,606.60	173.1279	22.8500	1.8593	45.7200	351.5544	2.5390	41:39:25.65	88:02:48.42	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Min Event T (Min < Avg. - 2 SD stack T) Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max ER Event < Avg. + 2 SD) H _{Statistical Worst-Case} = Act. for 109B-62 D _{Statistical Worst-Case} = Act. for 109B-62 V _{Statistical Worst-Case} = Max ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Max event (109B-62)		109B-62 Max. Emis. Rate Event	Min. Event (109B-62)	Max event (109B-62)	Act.	Act.	Min. Event (109B-62)	109B-62 Max. Emis. Rate Event	Act.	Act.	
111B-1A	157.5146		75,427.92	264.0742	19.8516	2.4079	74.6760	402.0801	7.8172	41:38:48.53	88:03:16.44	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-1A D _{Statistical Worst-Case} = Act. for 111B-1A V _{Statistical Worst-Case} = Max. ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Avg. + 2 SD (111B-1A)		111B-1A Max. Emis. Rate Event	Avg. - 2 SD (111B-1A)	Max Event (111B-1A)	Act.	Act.	Avg. - 2 SD (111B-1A)	111B-1A Max. Emis. Rate Event	Act.	Act.	
111B-1B	97.0118		51,441.60	133.0763	12.2233	2.4079	74.6760	329.3035	5.3313	41:38:49.1	88:03:17	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-1B D _{Statistical Worst-Case} = Act. for 111B-1B V _{Statistical Worst-Case} = Max. ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)

Appendix E.1
Potential Dispersion Modeling Inputs: 1-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
	Avg. + 2 SD (111B- 1B)		111B-1B Max. Emis. Rate Event	Avg. - 2 SD (111B-1B)	Max Event (111B-1B)	Act.	Act.	Avg. - 2 SD (111B-1B)	111B-1B Max. Emis. Rate Event	Act.	Act.	
111B-2	88.0742		27,589.64	45.92367	10.9328	1.7678	70.1040	280.8854	5.3047	41:38:49.94	88:03:16.74	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. Event flow rate (Max. ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-2 D _{Statistical Worst-Case} = Act. for 111B-2 V _{Statistical Worst-Case} = Max. ER Event velocity = $Q_{\text{Max ER}}/(\pi (D_{\text{Act}}/2)^2)$
Statistical worst-case basis	Avg. + 2 SD (111B- 2)		111B-2 Max. Emis. Rate Event	Avg. - 2 SD (111B-2)	Max Event (111B-2)	Act.	Act.	Avg. - 2 SD (111B-2)	111B-2 Max. Emis. Rate Event	Act.	Act.	
430B-1	68.4607		48,018.34	213.1046	8.6259	2.3774	42.6720	373.7637	5.1050	41:38:45.44	88:03:14.98	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Avg. + 2 SD (Avg. + 2 SD > Max) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max. ER Event < Avg. + 2 SD) H _{Statistical Worst-Case} = Act. for 430B-1 D _{Statistical Worst-Case} = Act. for 430B-1 V _{Statistical Worst-Case} = Max ER Event velocity = $Q_{\text{Max. ER}}/(\pi (D_{\text{Act}}/2)^2)$
Statistical worst-case basis	Avg. + 2 SD (430B- 1)		430B-1 Max. Emis. Rate Event	Avg. - 2 SD (430B-1)	Avg. + 2 SD (430B-1)	Act.	Act.	Avg. - 2 SD (430B-1)	430B-1 Max. Emis. Rate Event	Act.	Act.	

Appendix E.1
Potential Dispersion Modeling Inputs: 1-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
430B-24	42.3657		7,653.34	218.0241	5.3380	1.8288	30.4800	376.4967	0.8292	41:39:30.97	88:02:44.13	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max. ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 430B-24 D _{Statistical Worst-Case} = Act. for 430B-24 V _{Statistical Worst-Case} = Max ER Event velocity = $Q_{\text{Max. ER}}/(\pi (D_{\text{Act}}/2)^2)$
	Max Event (430B-24)		430B-24 Max. Emis. Rate Event	Avg. - 2 SD (430B-24)	Max Event (430B-24)	Act.	Act.	Avg. - 2 SD (430B-24)	430B-24 Max. Emis. Rate Event	Act.	Act.	
431B-25	65.3201		24,769.17	118.2369	8.2302	1.8288	30.4800	321.0594	0.6249	41:38:40.09	88:03:13.08	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Avg. + 2 SD (Avg. + 2 SD < Max. Event flow rate) H _{Statistical Worst-Case} = Act. for 431B-25 D _{Statistical Worst-Case} = Act. for 431B-25 V _{Statistical Worst-Case} = Avg. + 2 SD velocity = $Q_{A+2SD}/(\pi (D_{\text{Act}}/2)^2)$
Statistical worst-case basis	Max Event (431B-25)		Avg. + 2 SD (431B-25)	Avg. - 2 SD (431B-25)	Max Event (431B-25)	Act.	Act.	Avg. - 2 SD (431B-25)	Avg. + 2 SD (431B-25)	Act.	Act.	
111B-1A/B	For modeling simultaneous startup of 111B-1A and 111B-1B, see above.											

Appendix E.2
Potential Dispersion Modeling Inputs: 8-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Maximum Event (max [CO] at 50% Excess Air)												
109B-62	39.46	12/24/2020 8:00	15,498.20	288.3533	4.9718	1.8593	45.7200	415.5685	2.6940	41:39:25.65	88:02:48.42	84.09% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario.
111B-1A	94.20	6/11/2012 7:00	70,856.71	446.5735	11.8694	2.4079	74.6760	503.4686	7.3435	41:38:48.53	88:03:16.44	71.54% of Avg. + 2 Std. Devs.
111B-1B	65.97	6/11/2012 11:00	67,184.09	478.8226	8.2188	2.4079	74.6760	521.3848	6.9628	41:38:49.1	88:03:17	74.45% of Avg. + 2 Std. Devs.
111B-2	57.66	8/29/2022 13:00	28,407.40	518.8201	7.2654	1.7678	70.1040	543.6056	5.4620	41:38:49.94	88:03:16.74	79.22% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario.
430B-1	8.26	6/28/2023 10:00	5,206.91	207.9359	0.5878	2.3774	42.6720	370.8922	0.5536	41:38:45.44	88:03:14.98	53.32% of Avg. + 2 Std. Devs.
430B-24	24.32	6/13/2024 9:00	8,147.43	254.0999	3.0258	1.8288	30.4800	396.5388	1.4638	41:39:30.97	88:02:44.13	105.1% of Avg. + 2 Std. Devs.
431B-25	17.40	2/15/2019 23:00	7,626.18	243.0122	2.1098	1.8288	30.4800	390.3790	1.3702	41:38:40.09	88:03:13.08	70.74% of Avg. + 2 Std. Devs. Consider this a near worst-case scenario. (Max ER)
111B-1A/B	For modeling simultaneous startup of 111B-1A and 111B-1B, see above.											
Artificial Worst-case Scenario Statistical Values												
Max (109B-62)	39.46	12/24/2020 8:00	15,498.20	288.3533	4.9718	1.86	45.72	415.5685	2.6940	41:39:25.65	88:02:48.42	
Max (111B-1A)	94.20	6/11/2012 7:00	70,856.71	446.5735	11.8694	2.41	74.68	503.4686	7.3435	41:38:48.53	88:03:16.44	
Max (111B-1B)	65.97	6/11/2012 11:00	67,184.09	478.8226	8.2188	2.41	74.68	521.3848	6.9628	41:38:49.1	88:03:17	
Max (111B-2)	57.66	8/29/2022 13:00	29,936.43	518.8201	7.2654	1.77	70.10	543.6056	5.7560	41:38:49.94	88:03:16.74	
Max (430B-1)	8.26	6/28/2023 10:00	5,206.91	242.1981	0.5878	2.38	42.67	389.9267	0.5536	41:38:45.44	88:03:14.98	
Max (430B-24)	24.32	6/13/2024 9:00	34,686.82	292.0648	3.0258	1.83	30.48	417.6305	6.2321	41:39:30.97	88:02:44.13	
Max (431B-25)	17.40	2/15/2019 23:00	31,692.55	283.7812	2.1727	1.83	30.48	413.0284	5.6941	41:38:40.09	88:03:13.08	
Min. (109B-62)	10.74	6/3/2022 12:00	4,400.05	183.8831	1.3531	1.86	45.72	357.5295	0.7648	41:39:25.65	88:02:48.42	
Min. (111B-1A)	12.36	6/6/2012 20:00	12,461.44	348.0661	1.5570	2.41	74.68	448.7423	1.2915	41:38:48.53	88:03:16.44	
Min. (111B-1B)	16.52	6/6/2012 20:00	10,988.38	348.0661	2.0814	2.41	74.68	448.7423	1.1388	41:38:49.1	88:03:17	
Min. (111B-2)	3.37	8/21/2022 21:00	3,602.00	287.3627	0.4240	1.77	70.10	415.0181	0.6926	41:38:49.94	88:03:16.74	
Min. (430B-1)	0.35	6/26/2023 23:00	4,109.94	207.9359	0.0440	2.38	42.67	370.8922	0.4369	41:38:45.44	88:03:14.98	
Min. (430B-24)	3.25	8/4/2022 4:00	5,858.22	215.1951	0.4094	1.83	30.48	374.9250	1.0525	41:39:30.97	88:02:44.13	
Min. (431B-25)	2.14	6/26/2021 9:00	4,566.99	219.2039	0.2696	1.83	30.48	376.3539	0.8205	41:38:40.09	88:03:13.08	
Average (109B-62)	22.54		7,366.27	237.3139	2.8171	1.86	45.72	387.2133	1.2804	41:39:25.65	88:02:48.42	
Average (111B-1A)	45.34		37,492.74	395.9156	5.7124	2.41	74.68	475.3253	3.8857	41:38:48.53	88:03:16.44	
Average (111B-1B)	37.31		33,816.39	401.6422	4.6703	2.41	74.68	478.5068	3.5047	41:38:49.1	88:03:17	
Average (111B-2)	27.94		21,837.75	434.5855	3.4990	1.77	70.10	496.8086	4.1988	41:38:49.94	88:03:16.74	
Average (430B-1)	4.30		4,658.42	225.067	0.3159	2.38	42.67	380.4095	0.4952	41:38:45.44	88:03:14.98	
Average (430B-24)	11.21		17,211.79	261.3753	1.3904	1.83	30.48	400.5807	3.0924	41:39:30.97	88:02:44.13	
Average (431B-25)	9.53		10,352.57	248.8862	1.0803	1.83	30.48	391.1725	1.8600	41:38:40.09	88:03:13.08	
Std. Dev. (109B-62)	12.19		5,426.98	45.1944	1.5383	0.00	0.00	25.108	0.9433	41:39:25.65	88:02:48.42	

Appendix E.2
Potential Dispersion Modeling Inputs: 8-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Std. Dev. (111B-1A)	43.17		30,076.19	49.31372	5.4398	0.00	0.00	27.39651	3.1170	41:38:48.53	88:03:16.44	
Std. Dev. (111B-1B)	25.65		29,543.25	68.49957	3.1792	0.00	0.00	38.05532	3.0618	41:38:49.1	88:03:17	
Std. Dev. (111B-2)	22.43		12,302.01	104.3602	2.8266	0.00	0.00	57.9779	2.3653	41:38:49.94	88:03:16.74	
Std. Dev. (430B-1)	5.59		775.68	24.22702	0.3846	0.00	0.00	13.45946	0.0825	41:38:45.44	88:03:14.98	
Std. Dev. (430B-24)	5.96		12,237.53	33.98172	0.7250	0.00	0.00	18.87873	2.1987	41:39:30.97	88:02:44.13	
Std. Dev. (431B-25)	7.53		11,059.66	29.40375	0.9277	0.00	0.00	16.33542	1.9871	41:38:40.09	88:03:13.08	
Avg. + 2 SD (109B-62)	46.92		18,220.23	327.7027	5.8936	1.86	45.72	437.4293	3.1671	41:39:25.65	88:02:48.42	
Avg. + 2 SD (111B-1A)	131.68		97,645.11	494.543	16.5920	2.41	74.68	530.1183	10.1198	41:38:48.53	88:03:16.44	
Avg. + 2 SD (111B-1B)	88.61		92,902.88	538.6414	11.0287	2.41	74.68	554.6174	9.6283	41:38:49.1	88:03:17	
Avg. + 2 SD (111B-2)	72.79		46,441.77	643.306	9.1523	1.77	70.10	612.7644	8.9295	41:38:49.94	88:03:16.74	
Avg. + 2 SD (430B-1)	15.49		6,209.78	273.5211	1.0850	2.38	42.67	407.3284	0.6602	41:38:45.44	88:03:14.98	
Avg. + 2 SD (430B-24)	23.14		41,686.86	329.3387	2.8404	1.83	30.48	438.3382	7.4898	41:39:30.97	88:02:44.13	
Avg. + 2 SD (431B-25)	24.59		32,471.88	307.6937	2.9357	1.83	30.48	423.8434	5.8342	41:38:40.09	88:03:13.08	
Avg. - 2 SD (109B-62)	0.00		-3,487.70	146.9251	0.0000	1.86	45.72	336.9973	-0.6063	41:39:25.65	88:02:48.42	
Avg. - 2 SD (111B-1A)	0.00		-22,659.64	297.2881	0.0000	2.41	74.68	420.5323	-2.3484	41:38:48.53	88:03:16.44	
Avg. - 2 SD (111B-1B)	0.00		-25,270.11	264.6431	0.0000	2.41	74.68	402.3962	-2.6189	41:38:49.1	88:03:17	
Avg. - 2 SD (111B-2)	0.00		-2,766.26	225.8651	0.0000	1.77	70.10	380.8528	-0.5319	41:38:49.94	88:03:16.74	
Avg. - 2 SD (430B-1)	0.00		3,107.07	176.613	0.0000	2.38	42.67	353.4905	0.3303	41:38:45.44	88:03:14.98	
Avg. - 2 SD (430B-24)	0.00		-7,263.28	193.4119	0.0000	1.83	30.48	362.8233	-1.3050	41:39:30.97	88:02:44.13	
Avg. - 2 SD (431B-25)	0.00		-11,766.74	190.0786	0.0000	1.83	30.48	358.5017	-2.1141	41:38:40.09	88:03:13.08	

Appendix E.2
Potential Dispersion Modeling Inputs: 8-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Artificial Statistical Worst Case Scenarios												
109B-62	46.9224		15,498.20	146.9251	5.8936	1.8593	45.7200	336.9973	2.6940	41:39:25.65	88:02:48.42	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Min Event T (avg. - 2 SD stack T) Q _{Statistical Worst-Case} = Max ER Event flow rate (Max ER Event < Avg + 2 SD < 0) H _{Statistical Worst-Case} = Act. for 109B-62 D _{Statistical Worst-Case} = Act. for 109B-62 V _{Statistical Worst-Case} = Max. ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Avg. + 2 SD (109B-62)		109B-62 Max. Emis. Rate Event	Avg. - 2 SD (109B-62)	Avg. + 2 SD (109B-62)	Act.	Act.	Avg. - 2 SD (109B-62)	109B-62 Max. Emis. Rate Event	Act.	Act.	
111B-1A	131.6845		70,856.71	297.2881	16.5920	2.4079	74.6760	420.5323	7.3435	41:38:48.53	88:03:16.44	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-1A D _{Statistical Worst-Case} = Act. for 111B-1A V _{Statistical Worst-Case} = Max. ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Avg. + 2 SD (111B-1A)		111B-1A Max. Emis. Rate Event	Avg. - 2 SD (111B-1A)	Avg. + 2 SD (111B-1A)	Act.	Act.	Avg. - 2 SD (111B-1A)	111B-1A Max. Emis. Rate Event	Act.	Act.	
111B-1B	88.6064		67,184.09	264.6431	11.0287	2.4079	74.6760	402.3962	6.9628	41:38:49.1	88:03:17	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max ER Event flow rate (Max ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-1B D _{Statistical Worst-Case} = Act. for 111B-1B V _{Statistical Worst-Case} = Max ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)

Appendix E.2
Potential Dispersion Modeling Inputs: 8-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
Statistical worst-case basis	Avg. + 2 SD (111B- 1B)		111B-1B Max. Emis. Rate Event	Avg. - 2 SD (111B-1B)	Avg. + 2 SD (111B-1B)	Act.	Act.	Avg. - 2 SD (111B-1B)	111B-1B Max. Emis. Rate Event	Act.	Act.	
111B-2	72.7918		28,407.40	225.8651	9.1523	1.7678	70.1040	380.8528	5.4620	41:38:49.94	88:03:16.74	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Max. ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 111B-2 D _{Statistical Worst-Case} = Act. for 111B-2 V _{Statistical Worst-Case} = Min Event velocity = Q _{Min.} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Avg. + 2 SD (111B- 2)		111B-2 Max. Emis. Rate Event	Avg. - 2 SD (111B-2)	Avg. + 2 SD (111B-2)	Act.	Act.	Avg. - 2 SD (111B-2)	111B-2 Max. Emis. Rate Event	Act.	Act.	
430B-1	15.4906		5,206.91	176.613	1.0850	2.3774	42.6720	353.4905	0.5536	41:38:45.44	88:03:14.98	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Avg. + 2 St. Dev. (Avg. + 2 SD > Max ER Event) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. Event flow rate (Max ER Event < Avg + 2 SD) H _{Statistical Worst-Case} = Act. for 430B-1 D _{Statistical Worst-Case} = Act. for 430B-1 V _{Statistical Worst-Case} = Max. ER Event velocity = Q _{Max. ER} /(π (D _{Act} /2) ²)
Statistical worst-case basis	Avg. + 2 SD (430B- 1)		430B-1 Max. Emis. Rate Event	Avg. - 2 SD (430B-1)	Avg. + 2 SD (430B-1)	Act.	Act.	Avg. - 2 SD (430B-1)	430B-1 Max. Emis. Rate Event	Act.	Act.	

Appendix E.2
Potential Dispersion Modeling Inputs: 8-hr avg.

Source	Max lbs./hr.	Date/Time of Max	Max ER case		Modeling Inputs							Note
			acfm	T (°F)	CO emission rate (g/s)	D (m)	H (m)	T (°K)	V (m/s)	Lat	Long	
430B-24	24.3177		8,147.43	193.4119	3.0258	1.8288	30.4800	362.8233	1.4638	41:39:30.97	88:02:44.13	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Max Event ER (Max > Avg. + 2 SD) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER Event flow rate (Avg - 2 SD < 0) H _{Statistical Worst-Case} = Act. for 430B-24 D _{Statistical Worst-Case} = Act. for 430B-24 V _{Statistical Worst-Case} = Max. ER Event velocity = $Q_{\text{Max. ER}} / (\pi (D_{\text{Act}}/2)^2)$
Statistical worst-case basis	Max Event (430B-24)		430B-24 Max. Emis. Rate Event	Avg. - 2 SD (430B-24)	Max Event (430B-24)	Act.	Act.	Avg. - 2 SD (430B-24)	Min. Event (430B-24)	Act.	Act.	
431B-25	24.5938		7,626.18	190.0786	2.9357	1.8288	30.4800	358.5017	1.3702	41:38:40.09	88:03:13.08	Statistical Worst-case stack parameters: ER _{Statistical Worst-Case} = Avg. + 2 Std. Dev. ER (Avg. + 2 SD > Max.) T _{Statistical Worst-Case} = Avg. - 2 SD stack T Q _{Statistical Worst-Case} = Max. ER event flow rate (Avg - 2 SD < 0) H _{Statistical Worst-Case} = Act. for 431B-25 D _{Statistical Worst-Case} = Act. for 431B-25 V _{Statistical Worst-Case} = Max. ER Event velocity = $Q_{\text{Max. ER}} / (\pi (D_{\text{Act}}/2)^2)$
Statistical worst-case basis	Avg. + 2 SD (431B-25)		431B-25 Max. Emis. Rate Event	Avg. - 2 SD (431B-25)	Avg. + 2 SD (431B-25)	Act.	Act.	Avg. - 2 SD (431B-25)	Min. Event (431B-25)	Act.	Act.	
111B-1A/B	For modeling simultaneous startup of 111B-1A and 111B-1B, see above.											

Appendix F

Lemont Refinery Fuel Combustion Emission Source Startup CO Dispersion Modeling Report

BOILERS AND HEATERS STARTUP MODELING REPORT



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1. BACKGROUND

CITGO Petroleum Corporation, Inc. (CITGO) is presenting this modeling report in response to the Illinois Environmental Protection Agency's (Illinois EPA) request to model startup conditions for boilers and heaters at CITGO's site in Lemont, Illinois (Lemont Facility). This report describes the modeling procedures that were used to evaluate whether the startup conditions of these units cause or contribute to exceedances of the Significant Impact Levels (SILs) and National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide (CO) 1-hour and 8-hour.

Trinity Consultants (Trinity) has conducted the modeling analyses in a manner that conforms to the applicable rules and requirements for dispersion modeling, including the following guidance documents:

- ▶ USEPA: *Guideline on Air Quality Models*, 40 CFR Part 51 - Appendix W (Revised, January 17, 2017).
- ▶ USEPA: *AERMOD Implementation Guide* (Revised, June 2022).

The remainder of this modeling report is organized as follows:

- ▶ Section 2 discusses modeling methodology;
- ▶ Section 3 discusses modeling requirements;
- ▶ Section 4 provides a brief description of the facility; and
- ▶ Section 5 provides the model results.

2. MODELING METHODOLOGY

2.1 UTM Coordinate System

The model, the locations of emission sources, structures, and receptors were represented in Universal Transverse Mercator (UTM) NAD83, Zone 16N.

2.2 Model Selection

Trinity conducted air dispersion modeling analyses using version 23132 of the AERMOD modeling system to estimate maximum ground-level concentrations associated with the facility. AERMOD is a refined, steady-state, multiple-source, Gaussian dispersion model and was promulgated in December 2005 as the preferred model for use by industrial sources in this type of air quality analysis.

The following modeling programs were utilized for the model run:

- ▶ AERMOD 23132
- ▶ BPIP PRIME 04274
- ▶ AERMAP 18081

2.3 Meteorological Data

Model-ready meteorological data was provided by Cari Rutherford of Illinois EPA on December 5, 2023. The data covered the years 2018-2022. Surface data was taken from O'Hare International Airport in Chicago, IL while upper air data was taken from the National Weather Service Forecast Office in Davenport, IA.

2.4 Treatment of Terrain

AERMAP (v18081) is the terrain pre-processor that is used to import terrain elevations for selected model objects and to generate the receptor hill height scale data that are used by AERMOD to drive advanced terrain processing algorithms. Trinity utilized 1/3-arcsecond National Elevation Dataset (NED) data available from the United States Geological Survey (USGS) to interpolate surveyed elevations onto user-specified receptor grids, buildings, and sources in the absence of more accurate site-specific (i.e., site surveys, GPS analyses, etc.) elevation data.

2.5 Receptor Grids

In the air dispersion modeling analysis, ground-level concentrations were calculated within five Cartesian receptor grids.¹ The grids are defined as follows:

- ▶ Fence Line Receptors²: A grid consisting of evenly spaced receptors 50 m apart placed along the facility's ambient air boundary
- ▶ 50-meter Cartesian Grid: A grid containing 50-meter space receptors extending approximately 1 km from the fenceline

¹ Receptor grid was created following Table 10 of Minnesota Pollution Control Agency (MPCA) Air Dispersion Modeling Practices, September 2022.

² Fenceline receptors were set up according to Illinois EPA's guidance document "The Art and Science of the PSD Air Quality Analysis The Modeling Perspective", July 2021.

- ▶ 100-meter Cartesian Grid: A grid containing 100-meter spaced receptors extending from 1 km to 2 km from the fenceline, exclusive of the receptors in the previous grids
- ▶ 250-meter Cartesian Grid: A grid containing 250-meter spaced receptors extending from 2 km to 5 km from the fenceline, exclusive of the receptors in the previous grids
- ▶ 500-meter Cartesian Grid: A grid containing 500-meter spaced receptors extending from 5 km to 10 km from the fenceline, exclusive of the receptors in the previous grids
- ▶ 1,000-meter Cartesian Grid: A grid containing 1,000-meter spaced receptors extending from 10 km to 50km from the fenceline, exclusive of the receptors in the previous grids.

Figure 1 in Appendix A displays the receptor grid layout.

2.6 Background Concentrations

The background concentrations used to model the cumulative CO impacts for the 1-hour and 8-hour standards were obtained using EPA's Interactive Map of Air Quality Monitors, and the Lansing, Illinois monitor (AQS Site ID 17-031-0119) was used for this project. The Lansing monitor is located adjacent to a heavily trafficked interstate roadway, I-80/94. Due to its proximity to this roadway, it is likely that the Lansing monitor measures extensive levels of vehicle emissions. The closest expressway to the Lemont Facility is two miles away (I-355) and is not as heavily trafficked as I-80/94. The concentrations observed at the Lansing monitor are considered conservative for the Lemont Facility because of the lower levels of expected vehicle emissions at the Lemont Facility. The average ppm concentration values from 2021 to 2023 were added to the modeling results to determine the cumulative impacts.

Table 2-1 Background Concentrations

Pollutant	Averaging Period	Concentration ($\mu\text{g}/\text{m}^3$)
CO	1-Hour	2,329.4050
	8-Hour	1,412.9178

2.7 Building Downwash

AERMOD incorporates the Plume Rise Modeling Enhancements (PRIME) downwash algorithms and the direction-specific building downwash dimensions used as inputs are determined by the Building Profile Input Program, PRIME version (BPIP PRIME), version 04274. BPIP PRIME is designed to incorporate the concepts and procedures expressed in the GEP Technical Support document, the Building Downwash Guidance document, and other related documents, while incorporating the PRIME enhancements.

The heights, locations, and dimensions of buildings located on site were obtained from facility plot plans provided by CITGO.

Figure 2 in Appendix A displays the modeled buildings, which are shown in dark blue.

3. MODELING REQUIREMENTS

The objective of this analysis is to illustrate that the startup conditions of the Aux Boiler (430B1), South Boiler (430B24), North Boiler (431B25), U109 H2 Plant Reformer Heater (109B62), Crude Atmospheric Heater (111B1A), Crude Atmospheric Heater (111B1B), and the Crude Vacuum Heater (111B2) operating at the Lemont Facility do not cause or contribute to an exceedance of the SILs and/or NAAQS for CO.

Trinity, on behalf of CITGO, has conducted air dispersion modeling in accordance with the Illinois EPA's modeling guidance.

3.1 Significance Analysis

The significance analysis is conducted to determine whether the emissions associated with the startup conditions of the seven sources cause a significant impact on the area surrounding the facility. "Significant" impacts are defined by ambient concentration thresholds commonly referred to as the SILs. Table 1 includes the SIL and NAAQS for CO.

Table 3-1 SILs and NAAQS for CO

Pollutant	Averaging Period	SIL ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
CO	8-Hour	500	10,000
	1-Hour	2,000	40,000

3.2 NAAQS Analysis

The primary NAAQS are the maximum concentration ceilings, measured in terms of total concentration of a pollutant in the atmosphere, which define the "levels of air quality that the U.S. EPA judges are necessary, with an adequate margin of safety, to protect the public health." Secondary NAAQS define the levels that "protect the public welfare from any known or anticipated adverse effects of a pollutant." The NAAQS are shown in Table 1 for CO. The objective of the NAAQS Analysis is to demonstrate through air quality modeling that emissions associated with the startup conditions of the seven sources do not contribute to or cause an exceedance of the NAAQS at any ambient location.

This modeling analysis will be used to demonstrate compliance with the standards included in Table 1.

4. MODELING EMISSIONS INVENTORY

4.1 Modeled Sources

Table 4-1 below includes an inventory of all point sources included in the model.

Table 4-1. Modeled Point Source Inventory

Model ID	Description	Source Type
430B1	Aux Boiler	Point
430B24	South Boiler	Point
431B25	North Boiler	Point
109B62	U109 H2 Plant Reformer Heater	Point
111B1A	Crude Atmospheric Heater 1A	Point
111B1B	Crude Atmospheric Heater 1B	Point
111B2	Crude Vacuum Heater	Point

4.2 Modeled Stack Parameters

Two different scenarios were modeled for the sake of this analysis to illustrate that the startup conditions of the seven sources do not exceed the SILs and NAAQS standards on an individual basis. The first scenario modeled the statistical worst-case (SWC) parameters for each emission unit. These parameters were based upon a statistically based maximum emission rate (greater of max emission rate or average + 2 standard deviations), minimum velocity (the lesser of velocity at maximum emission rate or average + 2 standard deviations), and a minimum temperature (the lesser of temperature at maximum emission rate or average + 2 standard deviations). The second scenario modeled a maximum emission (ME) rate for the sources. The parameters for the ME scenario were based on actual startup events. Tables 4-2 and 4-3 below show the parameters for each source included in each scenario's model.

Table 4-2 Statistical Worst-Case (SWC) Point Source Stack Parameters

Model ID	Description	Stack Height (m)	Stack Temperature (K)	Stack Velocity^a (m/s)	Stack Diameter (m)	CO Emission Rate (g/s)
Averaging Period: 1-HR						
430B1	Aux Boiler	42.6720	373.7637	5.1050	2.3774	8.6259
430B24	South Boiler	30.4800	376.4967	0.8292	1.8288	5.3380
431B25	North Boiler	30.4800	321.0594	0.6249	1.8288	8.2302
109B62	U109 H2 Plant Reformer Heater	45.7200	351.5544	2.5390	1.8593	22.8500
111B1A	Crude Atmospheric Heater 1A	74.6760	402.0801	7.8172	2.4079	19.8516
111B1B	Crude Atmospheric Heater 1B	74.6760	329.3035	5.3313	2.4079	12.2233
111B2	Crude Vacuum Heater	70.1040	280.8854	5.3047	1.7678	10.9328
Averaging Period: 8-HR						
430B1	Aux Boiler	42.6720	353.4905	0.5536	2.3774	1.0850
430B24	South Boiler	30.4800	362.8233	1.4638	1.8288	3.0258
431B25	North Boiler	30.4800	358.5017	1.3702	1.8288	2.9357
109B62	U109 H2 Plant Reformer Heater	45.7200	336.9973	2.6940	1.8593	5.8936
111B1A	Crude Atmospheric Heater 1A	74.6760	420.5323	7.3435	2.4079	16.5920
111B1B	Crude Atmospheric Heater 1B	74.6760	402.3962	6.9628	2.4079	11.0287
111B2	Crude Vacuum Heater	70.1040	380.8528	5.4620	1.7678	9.1523

a. Stack Velocity calculated based on Stack Diameter and Stack Airflow.

Table 4-3 Maximum Emissions (ME) Event Point Source Stack Parameters

Model ID	Description	Stack Height (m)	Stack Temperature (K)	Stack Velocity^a (m/s)	Stack Diameter (m)	CO Emission Rate (g/s)
Averaging Period: 1-HR						
430B1	Aux Boiler	42.6720	410.6337	5.1050	2.3774	6.6352
430B24	South Boiler	30.4800	396.6311	1.3751	1.8288	3.6836
431B25	North Boiler	30.4800	402.0170	5.1052	1.8288	8.2302
109B62	U109 H2 Plant Reformer Heater	45.7200	424.2898	2.5390	1.8593	22.8500
111B1A	Crude Atmospheric Heater 1A	74.6760	524.2015	7.8172	2.4079	16.361
111B1B	Crude Atmospheric Heater 1B	74.6760	384.1524	5.3313	2.4079	9.3050
111B2	Crude Vacuum Heater	70.1040	542.3856	5.3047	1.7678	7.4417
Averaging Period: 8-HR						
430B1	Aux Boiler	42.6720	370.8922	0.5536	2.3774	0.5878
430B24	South Boiler	30.4800	396.5388	1.4638	1.8288	3.0258
431B25	North Boiler	30.4800	390.3790	1.3702	1.8288	2.1098
109B62	U109 H2 Plant Reformer Heater	45.7200	415.5685	2.6940	1.8593	4.9718
111B1A	Crude Atmospheric Heater 1A	74.6760	503.4686	7.3435	2.4079	11.8694
111B1B	Crude Atmospheric Heater 1B	74.6760	521.3848	6.9628	2.4079	8.2188
111B2	Crude Vacuum Heater	70.1040	543.6056	5.4620	1.7678	7.2654

a. Stack Velocity calculated based on Stack Diameter and Stack Airflow.

5. MODEL RESULTS

5.1 SIL

Tables 5-1 and 5-2 summarize the modeled SIL results. The first high for the 1-hour and 8-hour averaging periods for each point source was compared with the corresponding 1-hour and 8-hour CO SIL. As shown in the tables, CITGO demonstrates each startup activity is in compliance with CO's respective SIL standards, which means that the source does not cause a significant impact on the area surrounding the facility. The maximum impacts occur near the facility's fence line and drop off rapidly with distance from there. Figures 5-4 through 5-7 in Appendix A show the rapid drop off of concentrations for the 109B62 Heater.

5.2 NAAQS

Tables 5-3 and 5-4 summarize the modeled NAAQS results. The second high for the 1-hour and 8-hour averaging periods for each point source was compared with the corresponding 1-hour and 8-hour CO NAAQS. As shown in the tables, CITGO demonstrates each startup activity is in compliance with CO's respective NAAQS standards.

Table 5-1 SWC SIL Results

Source Group ID	Description	SIL Modeled Impact (µg/m³)	SIL (µg/m³)	Below the SIL?
Averaging Period: 1-HR				
430B1	Aux Boiler	65.5327	2,000	Yes
430B24	South Boiler	536.5509		Yes
431B25	North Boiler	1322.8731		Yes
109B62	U109 H2 Plant Reformer Heater	719.0931		Yes
111B1A	Crude Atmospheric Heater 1A	99.3342		Yes
111B1B	Crude Atmospheric Heater 1B	75.9195		Yes
111B1 ^a	Crude Atmospheric Heaters	573.3868		Yes
111B2	Crude Vacuum Heater	173.3528		Yes
Averaging Period: 8-HR				
430B1	Aux Boiler	15.3090	500	Yes
430B24	South Boiler	67.4219		Yes
431B25	North Boiler	65.2031		Yes
109B62	U109 H2 Plant Reformer Heater	60.7821		Yes
111B1A	Crude Atmospheric Heater 1A	25.6438		Yes
111B1B	Crude Atmospheric Heater 1B	17.6948		Yes
111B1 ^a	Crude Atmospheric Heaters	23.9863		Yes
111B2	Crude Vacuum Heater	43.2858		Yes

a. The 111B1 source group represents atmospheric heaters 111B1A and 111B1B running simultaneously.

Table 5-2 ME SIL Results

Source Group ID	Description	SIL Modeled Impact (µg/m³)	SIL (µg/m³)	Below the SIL?
Averaging Period: 1-HR				
430B1	Aux Boiler	42.3685	2,000	Yes
430B24	South Boiler	278.2073		Yes
431B25	North Boiler	100.5987		Yes
109B62	U109 H2 Plant Reformer Heater	329.5521		Yes
111B1A	Crude Atmospheric Heater 1A	73.4720		Yes
111B1B	Crude Atmospheric Heater 1B	51.5422		Yes
111B1³	Crude Atmospheric Heaters	124.0542		Yes
111B2	Crude Vacuum Heater	41.2531		Yes
Averaging Period: 8-HR				
430B1	Aux Boiler	7.2087	500	Yes
430B24	South Boiler	69.2934		Yes
431B25	North Boiler	35.9404		Yes
109B62	U109 H2 Plant Reformer Heater	30.4303		Yes
111B1A	Crude Atmospheric Heater 1A	16.4788		Yes
111B1B	Crude Atmospheric Heater 1B	11.3698		Yes
111B1	Crude Atmospheric Heaters	27.7433		Yes
111B2	Crude Vacuum Heater	14.9213		Yes

- a. The 111B1 source group represents atmospheric heaters 111B1A and 111B1B running simultaneously.

³ The 111B1 source group represents atmospheric heaters 111B1A and 111B1B running simultaneously.

Table 5-3 SWC NAAQS Results

Source Group ID	Description	NAAQS Modeled Impact (µg/m³)	Background Concentration (µg/m³)	Modeled Impact w/ Background (µg/m³)	NAAQS (µg/m³)	Below the NAAQS?
Averaging Period: 1-HR						
430B1	Aux Boiler	64.7408	2,329.4050	2,394.1458	40,000	Yes
430B24	South Boiler	519.4058		2,848.8108		Yes
431B25	North Boiler	1,108.4166		3,437.8216		Yes
109B62	U109 H2 Plant Reformer Heater	707.5143		3,036.9193		Yes
111B1A	Crude Atmospheric Heater 1A	55.2887		2,384.6937		Yes
111B1B	Crude Atmospheric Heater 1B	62.8922		2,392.2972		Yes
111B1 ^a	Crude Atmospheric Heaters	511.7909		2,841.1959		Yes
111B2	Crude Vacuum Heater	107.9176		2,437.3226		Yes
Averaging Period: 8-HR						
430B1	Aux Boiler	11.5775	1,412.9178	1,424.4953	10,000	Yes
430B24	South Boiler	62.7449		1,475.6627		Yes
431B25	North Boiler	40.4952		1,453.4130		Yes
109B62	U109 H2 Plant Reformer Heater	54.7180		1,467.6358		Yes
111B1A	Crude Atmospheric Heater 1A	22.9988		1,435.9166		Yes
111B1B	Crude Atmospheric Heater 1B	16.1719		1,429.0897		Yes
111B1 ^a	Crude Atmospheric Heaters	21.0160		1,433.9338		Yes
111B2	Crude Vacuum Heater	39.2040		1,452.1218		Yes

a. The 111B1 source group represents atmospheric heaters 111B1A and 111B1B running simultaneously.

Table 5-4 ME NAAQS Results

Source Group ID	Description	NAAQS Modeled Impact (µg/m³)	Background Concentration (µg/m³)	Modeled Impact w/ Background (µg/m³)	NAAQS (µg/m³)	Below the NAAQS?
Averaging Period: 1-HR						
430B1	Aux Boiler	39.6118	2,329.4050	2,369.0168	40,000	Yes
430B24	South Boiler	278.0235		2,607.4285		Yes
431B25	North Boiler	97.8782		2,427.2832		Yes
109B62	U109 H2 Plant Reformer Heater	328.3526		2,657.7575		Yes
111B1A	Crude Atmospheric Heater 1A	36.6909		2,366.0958		Yes
111B1B	Crude Atmospheric Heater 1B	32.9210		2,362.3260		Yes
111B1 ^a	Crude Atmospheric Heaters	66.9108		2,396.3157		Yes
111B2	Crude Vacuum Heater	29.1033		2,358.5083		Yes
Averaging Period: 8-HR						
430B1	Aux Boiler	5.9860	1,412.9178	1,418.9038	10,000	Yes
430B24	South Boiler	58.2322		1,471.1500		Yes
431B25	North Boiler	27.0592		1,439.9770		Yes
109B62	U109 H2 Plant Reformer Heater	30.0066		1,442.9244		Yes
111B1A	Crude Atmospheric Heater 1A	14.5295		1,427.4472		Yes
111B1B	Crude Atmospheric Heater 1B	10.2475		1,423.1653		Yes
111B1 ^a	Crude Atmospheric Heaters	24.7696		1,437.6873		Yes
111B2	Crude Vacuum Heater	13.2020		1,426.1198		Yes

a. The 111B1 source group represents atmospheric heaters 111B1A and 111B1B running simultaneously.

APPENDIX A. FIGURES

Figure 5-1. Receptor Grid

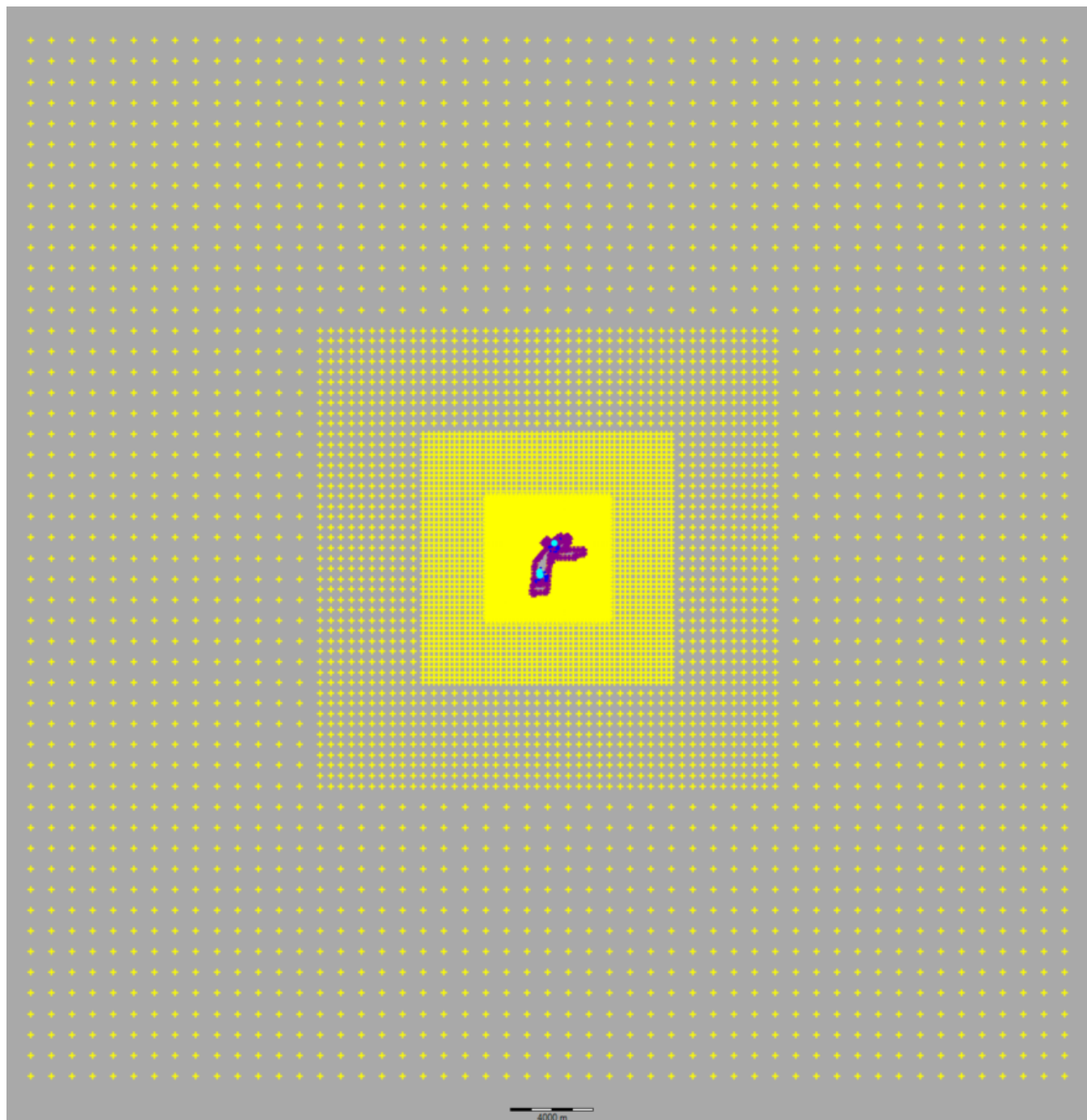


Figure 5-2. Boundary Receptor Grid



Figure 5-3 Point Source Locations

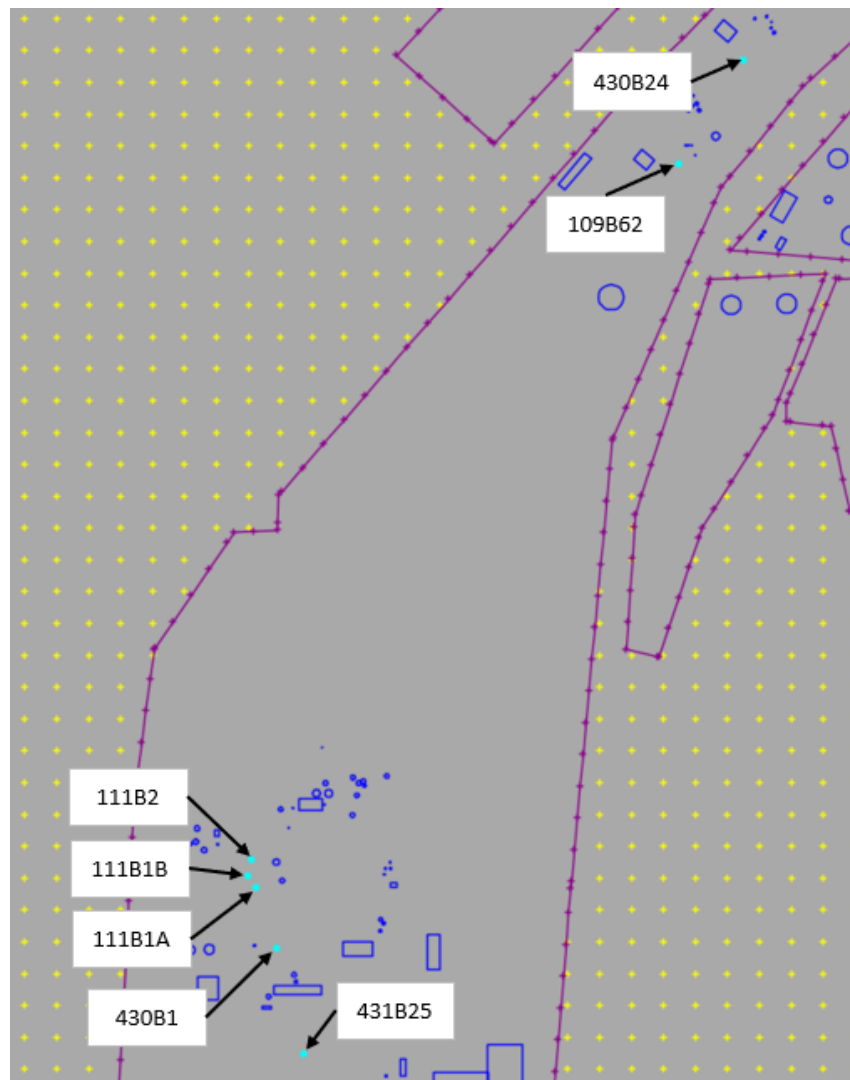


Figure 5-4 109B62 SWC 8-Hr 1st High Impacts

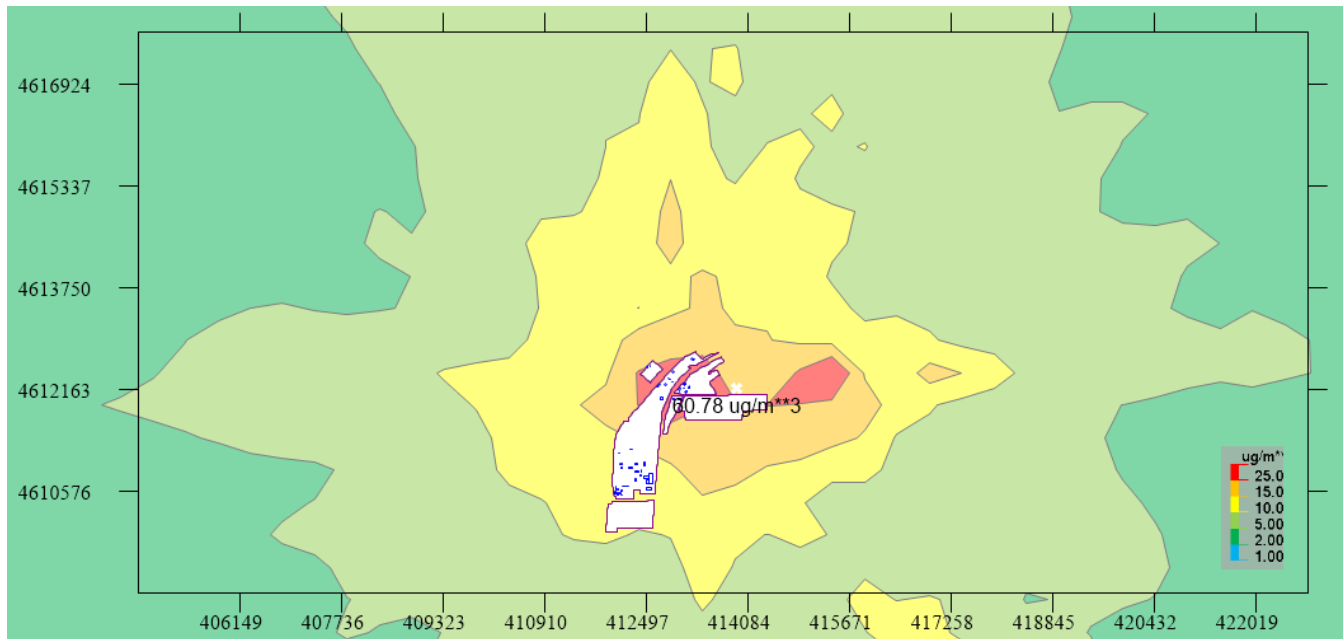


Figure 5-5 109B62 SWC 1-Hr 1st High Impacts

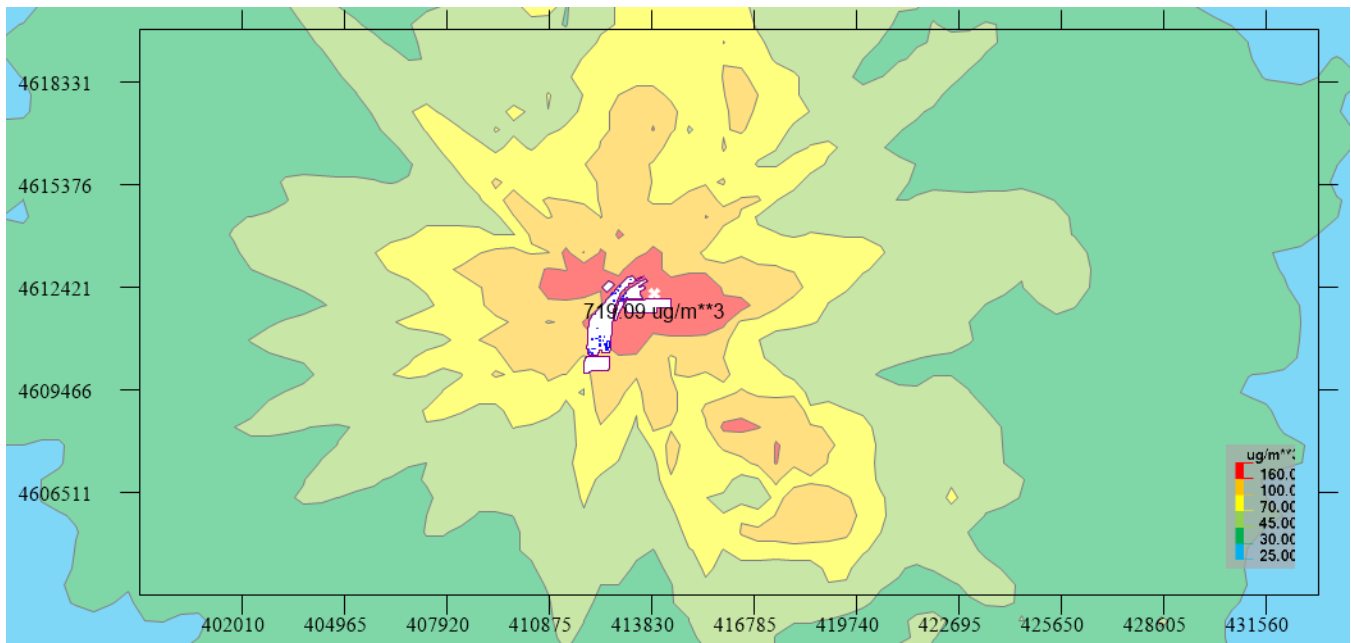


Figure 5-6 109B62 ME 8-Hr 1st High Impacts

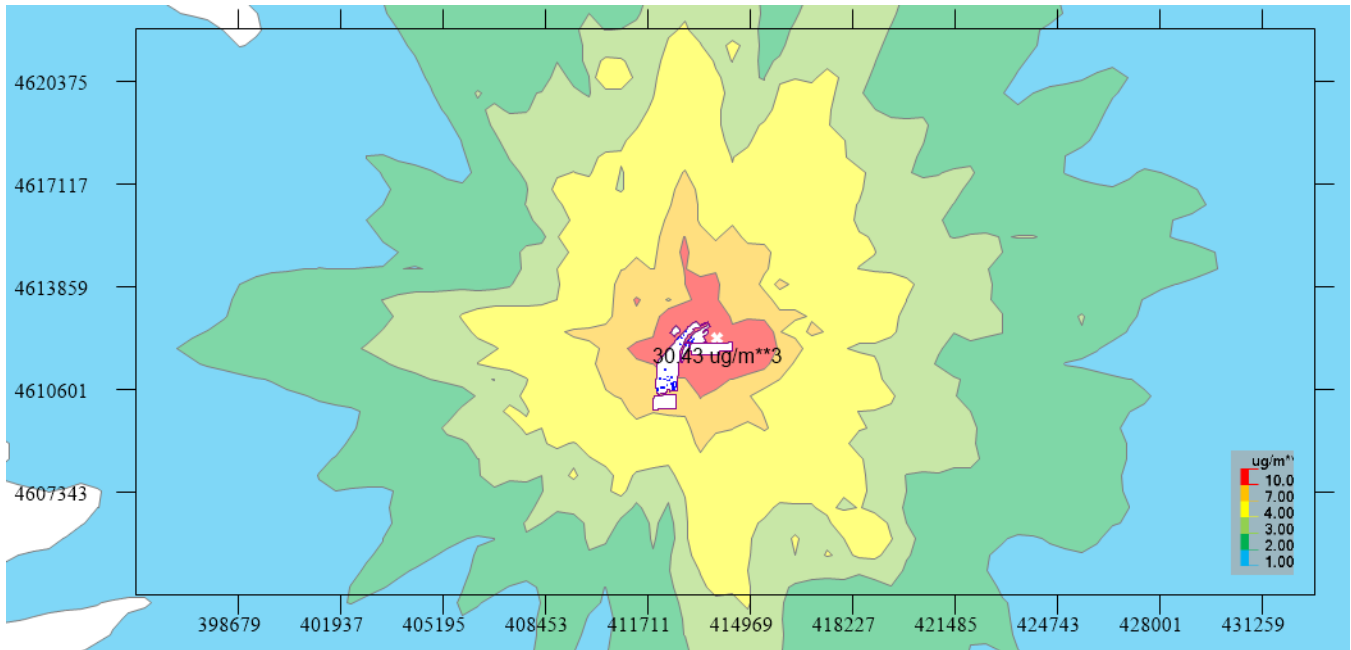
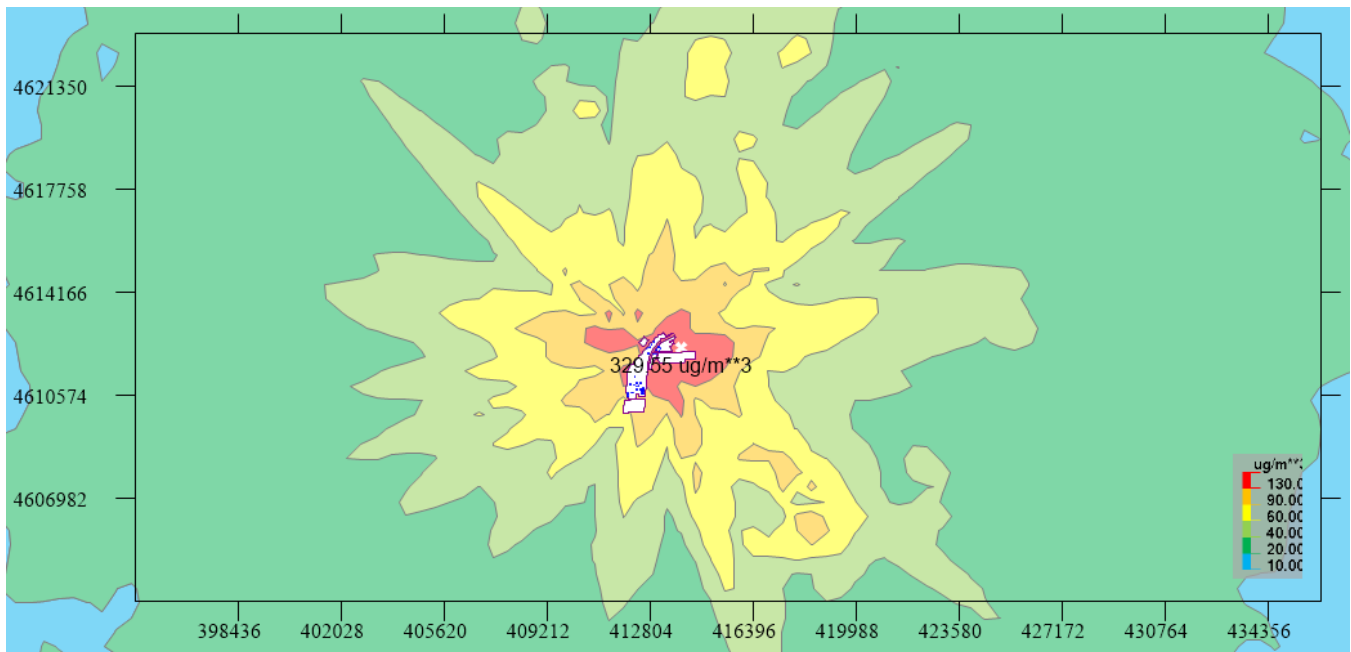


Figure 5-7 109B62 ME 1-Hr 1st High Impacts

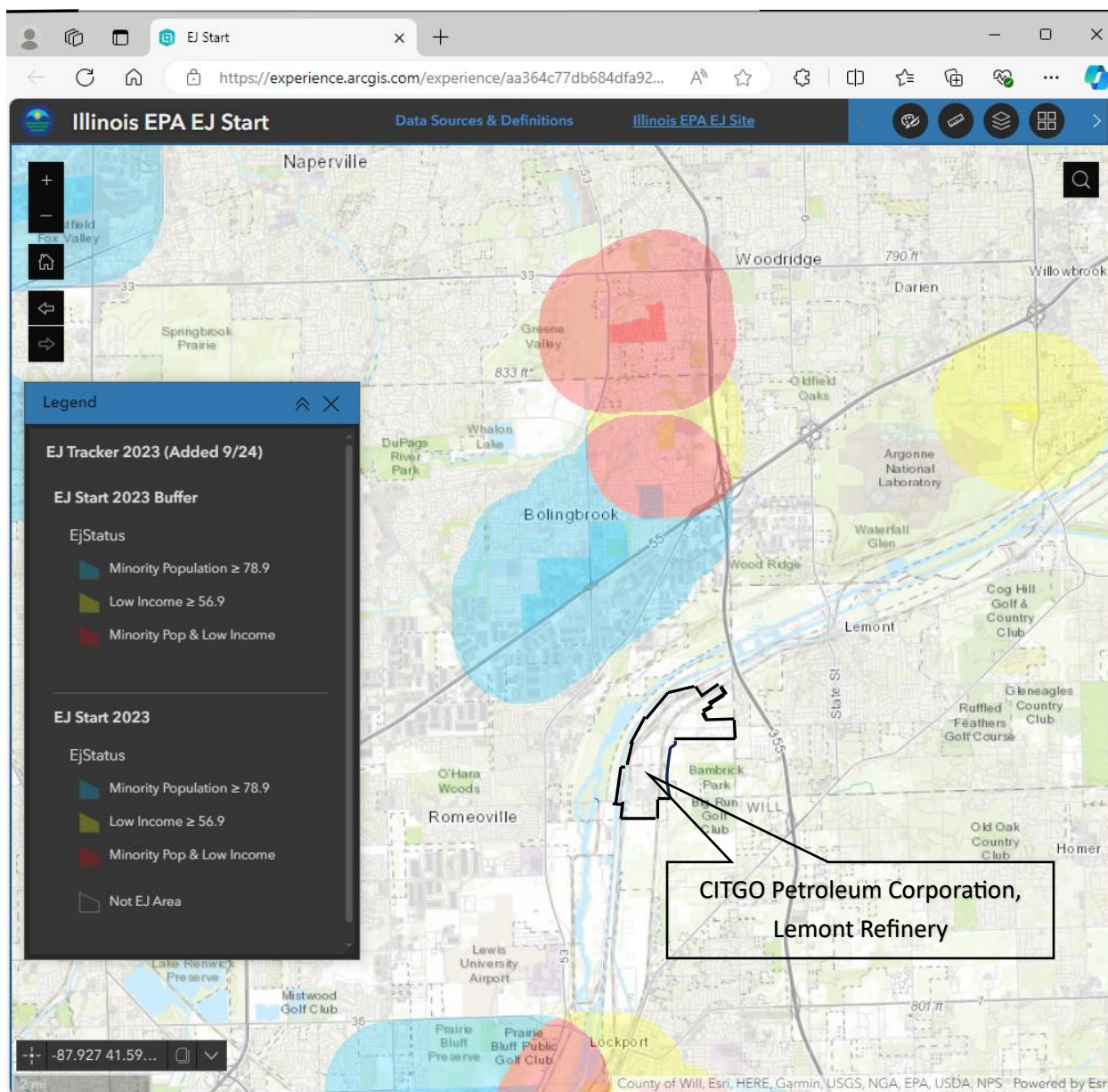


APPENDIX B. MODEL FILES

Appendix G

EJ Start Output for Areas Near Lemont Refinery

Lemont Refinery EJ Status on IEPA's EJ Start



CITGO Lemont Refinery property boundary is superimposed on EJ Start image.

CITGO Lemont Refinery is in an area that is considered "Not EJ Area"

Lemont Refinery located in Block ID 171978802021 of IEPA's EJ Start.

Block 171978802021 EJ Status = 0, per EJ Start

Block ID: 171978802021	
Zoom to	
Block ID	171978802021
State	Illinois
County	Will County
Block Population	1,189
Minority Pop	168
Minority %	14
Low Income Pop	181
Low Income %	15
Linguistic Isolation Pop	0
Linguistic Isolation %	0
Minority Status	0
Income Status	0
EJ Status	0

Appendix H

Footnoted References (Other Than Board References)

Footnote	General Description	Source	Location of Reference Material
1	40 CFR 63 Subpart DDDDD, Table 3 Row 5 Item b, and Row 6	U.S. EPA	Exhibit 4 to the Petition
2	CO Autoignition Temperature	Engineering ToolBox website	TSD Appendix H, Subsection H.1
3	Explanatory footnote. No citation provided.		
4	"EJ Start" Geographic Information System (GIS) mapping tool	IEPA	Appendix G of this TSD
5	PCB R2023-018 - IPCB Notice of Adopted Rules	IPCB	*
6	PCB R2023-018(A) Opinion and Order of the Board	IPCB	*
7	<i>State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction</i> , 80 Fed. Reg. 33840 et seq. (Jun 12, 2015), pages 33840, 33842, 33844, 33851, 33913, 33914.	U.S. EPA	Exhibit 2 to the Petition
8			
9			
10			
11			
12			
13			
14			
15			
16			
17	Excerpts of <i>Combustion Optimization Manual for Operators of Oil- and Gas-Fired Boilers</i> , including Section 2.	U.S. EPA	TSD Appendix H, Subsection H.2
18	Explanatory footnote. No citation provided.		
19	See footnote 2		
20	See footnote 1		
21	40 CFR 63.7555(d)(9)-(12)	U.S. EPA	Exhibit 4 to the Petition
22	40 CFR 63.7500(a)(1)	U.S. EPA	
	40 CFR 63 Subpart DDDDD, Tables 1-2, 11-15	U.S. EPA	
23	See footnote 1		
	See footnote 22 (40 CFR 63.7500(a)(1))		
24	Excerpts of <i>NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters</i> , 78 Fed. Reg. 7138 (Jan. 31, 2013), including pages 7138 and 7156.	U.S. EPA	TSD Appendix H, Subsection H.3
	<i>NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters</i> , 80 Fed. Reg. 72806 (Nov. 20, 2015)	U.S. EPA	Exhibit 6 to the Petition

* Board action. Copy of reference not required.



Fuels and Chemicals - Autoignition Temperatures

Autoignition points for fuels and chemicals like butane, coke, hydrogen, petroleum and more.

ADVERTISEMENT



The *Autoignition Temperature* - or

"the minimum temperature required to ignite a gas or vapor in air without a spark or flame being present"

are indicated for common fuels and chemicals below:

Fuels and Chemicals - Autoignition Temperatures

Acetaldehyde	175 347
Acetic acid	427 801
Acetone, propanone	465 869
Acentonitrile	220 428
Acetylene	305 581
Acrolein	220 428
Acronitrile	481 898
Allylamine	374 705
Aniline	615 1139
Anthracite - glow point	600 1112
Benzaldehyde	400 700



Product	Temperature (°C) (°F)
Bituminous coal - glow point	454 849
Butadiene	420 788
Butanal	218 424
Butane	405 761
1-Butanol	343 649
Butyl acetate	421 790
Butyl alcohol	345 653
Butyl methyl ketone	423 793
Carbon	700 1292
Carbon disulfide, CS ₂	90 194
Carbon monoxide	609 1128
Charcoal	349 660
Coal-tar oil	580
Product	Autoignition Temperature (°C)
Cyclohexane	240 473
Cyclohexanol	300 572
Cyclohexanone	420 788
Cyclopropane	498 928
Dichloromethane	600 1112
Diethylamine	312 594
Diethyl ether	180 356
Diethanolamine	662 1224
Diethylamine	662 1224
Diesel, Jet A-1	210 410
Diisobutyl ketone	396 745
Diisopropyl ether	443 829
Dimethyl sulfate	188 370
Dimethyl sulfide	206 403
Dimethyl sulfoxide	215 419
Dodecane, dihexyl	203 397



Ethylene, ethene	450 842
Ethylamine	385 725
Ethyl acetate	410 770
Ethyl Alcohol (Ethanol)	363 685
Ethylene oxide	570 1058
Formaldehyde	424 795
Fuel Oil No.1	210 410
Fuel Oil No.2	256 493
Fuel Oil No.4	262 504
Furfural	316 601
Furfural alcohol	491 916
Heavy hydrocarbons	750 1382
Heptane	204
Product	Autoignition Temperature (°C)
Hexadecane, cetane	292 396
Hydrogen	500 932
Gas oil	336 637
Gasoline, Petrol	246 - 280 475 - 536
Glycerol	370 698
Gun Cotton	221 430
Kerosene (paraffin)	210 410
Isobutane	462 864
Isobutene	465 869
Isobutyl alcohol	426 799
Isooctane	447 837
Isopentane	420 788
Isoprene	395 743
Isopropyl alcohol	399 750
Isophorone	460 860
Isohexane	264 507



Light gas	600 1112
Light hydrocarbons	650 1202
Lignite - glow point	526 979
Magnesium	473 883
Methane (Natural Gas)	580 1076
Methanol (Methyl Alcohol)	464 867
Methylamine	430 806
Methyl acetate	455 851
Methyl ethyl ketone	516 961
Naphtha	230 446
Neoheaxane	425 797
Neopentane	450 842
Nitrobenzene	480
Product	Autoignition Temperature (°C)
n-Butane	400 761
n-Heptane	215 419
n-Hexane	225 437
n-Octane	220 428
n-Pentane	260 500
n-Pentene	298 568
Oak Wood - dry	482 900
Paper	218 - 246 424 - 475
Paraldehyde	238 460
Peat	227 441
Petroleum	400 752
Petroleum ether	288 550
Pine Wood - dry	427 801
Phosphorus, amorphous	260 500
Phosphorus, transparent	49 120
Phosphorus, white	34 93.2



Propane	455 851
Propyl acetate	450 842
Propylamine	318 604
Propylene (Propene)	458 856
Pyridine	482 900
p-Xylene	530 986
Rifle (Gun) Powder	288 550
Tetrahydrofuran	321 610
Triethylamine	249 480
Triethylborane	-20 -4
Toluene	480 896
Semi anthracite coal	400 752
Semi bituminous coal - glow point	527
Product	Autoignition Temperature (°C)
Styrene	455 914
Sulphur	243 469
Tetrahydrofuran	321 610
Toluene	530 986
Trichloroethylene	420 788
Wood	300 572
o-Xylene	463 865
m-Xylene	527 981
p-Xylene	528 982

The **flammable (explosive) range** is the range of a gas or vapor concentration that will burn or explode if an ignition source is introduced. Limiting concentrations are commonly called the *lower explosive or flammable limit* (LEL/LFL) and the *upper explosive or flammable limit* (UEL/UFL).

Below the explosive or flammable limit the mixture is too lean to burn. Above the upper explosive or flammable limit the mixture is too rich to burn. The *Auto-Ignition Temperature* is not the same as **Flash Point** - The Flash Point indicates how easy a chemical may burn.

ADVERTISEMENT



EPA-340/1-83-023

Combustion Efficiency Optimization Manual for Operators of Oil- and Gas-Fired Boilers

by

PEDCo Environmental, Inc.
11499 Chester Road
Cincinnati, Ohio 45246

Contract No. 68-01-6310
Task Order No. 54

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Prepared For

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Stationary Source Compliance Division
Washington, D.C. 20460

September 1983
P-140

DISCLAIMER

This report was prepared by PEDCo Environmental, Inc., Cincinnati, Ohio, under Contract No. 68-01-6310, Task Order No. 54. It has been reviewed by the Stationary Source Compliance Division of the Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the U.S. Environmental Protection Agency. Mention of trade names or commercial products is not intended to constitute endorsement or recommendation for use.

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SECTION 2

THE COMBUSTION PROCESS

A boiler converts available fuel energy to usable energy in the form of steam. The boiler operator's job is to operate the boiler safely and efficiently to optimize the combustion and heat extraction processes and to minimize the emission of air contaminants. An understanding of basic factors that affect combustion is essential to safe, efficient boiler operation. This section is a simplified discussion of the combustion process and the effects of various combustion parameters on the boiler operation.

2.1 THE COMBUSTION PROCESS AND COMBUSTION CHEMISTRY

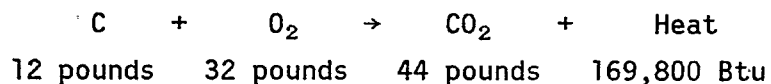
The oxidation of an element or compound is generally accompanied by a release of heat energy. If oxidation occurs slowly, as in the tarnishing or rusting of metals, heat is generated so slowly that it is lost to the surroundings. On the other hand, combustion is a rapid oxidation process that releases energy that can be harnessed to do useful work.

By volume, air consists of 21 percent oxygen, 78 percent nitrogen, and trace amounts of other gases such as argon and carbon dioxide. By weight, air is 23.2 percent oxygen and 75.5 percent nitrogen; approximately 4.32 pounds of air are required to supply one pound of oxygen for combustion.

Most common fuels consist primarily of compounds that contain carbon and hydrogen. These fuels react rapidly and readily with oxygen to produce heat. Essentially, the hydrogen and carbon contents of the fuel determine its heating value. In the English system the unit of heat measurement is the British Thermal Unit (Btu), defined as the heat energy required to raise the temperature of one pound of water from 59 to 60 degrees Fahrenheit at standard barometric pressure.

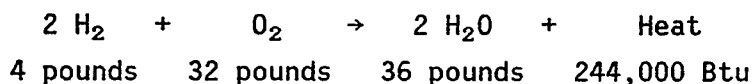
2.1.1 Combustion Chemistry

Oxygen combines with the fuel hydrogen and carbon in fixed proportions by weight in accordance with the laws of chemistry. For example the combustion of carbon in oxygen produces carbon dioxide and heat as follows:



This equation shows that complete combustion of one pound of carbon requires 2.67 pounds of oxygen (about 11.5 pounds of air); the reaction will also produce 3.67 pounds of carbon dioxide and 14,150 Btu's.

The equation for the combustion of hydrogen in oxygen is:



One pound of hydrogen requires 8 pounds of oxygen (34.6 pounds of air) and produces 9 pounds of water and 61,000 Btu.

In the combustion of hydrogen-bearing fuels not all of the liberated heat is recoverable. Since the combustion temperature is relatively high, the water forms as a vapor, and latent heat energy is lost in the flue gas if this vapor is not condensed to recover the vaporization energy. Thus, any fuel that contains hydrogen has a higher heating value (HHV) and a lower heating value (LHV) that differ by this energy of vaporization. For hydrogen combustion the HHV is 61,000 Btu per pound of hydrogen; the LHV is 51,500 Btu per pound of hydrogen. (For carbon the HHV and the LHV are the same since no water is formed.) The HHV's for some common fuels are:

Bituminous (soft) coal	14,000 Btu/pound
Anthracite (hard) coal	12,700 Btu/pound
Number 2 oil	19,000 Btu/pound
Number 6 oil	18,100 Btu/pound
Natural gas	22,800 Btu/pound
	(1000 Btu/cubic foot)

2.2 REQUIREMENTS FOR COMPLETE COMBUSTION

Four conditions affect the degree of combustion that will occur: fuel/air ratio, turbulence, temperature, and time. The last three are commonly called the three T's of combustion.

2.2.1 Fuel/Air Ratio

The theoretical air requirement to burn any fuel completely can be calculated via combustion equations. This theoretical (stoichiometric) calculation indicates the amount of air necessary to burn a fuel under ideal conditions, leaving no unburned fuel and no uncombined oxygen. If an excess of fuel is provided, not all fuel will be burned; combustion efficiency and heat output will be reduced, and incomplete combustion will result in unburned fuel and lost energy. For example, the incomplete combustion of carbon produces carbon monoxide (CO) - an explosive and toxic gas. The reaction ($2\text{C} + \text{O}_2 \rightarrow 2\text{CO}$) releases only 30 percent (4350 Btu per pound of carbon) of the available heat in the carbon, and the remaining 70 percent is lost. Incomplete combustion will be accompanied by pollutant emissions (carbon monoxide, smoke, soot, unburned fuel), wasted energy, and potential health and explosion hazards.

If too little fuel is provided the fuel/air mixture is lean (fuel-deficient); boiler efficiency will be reduced because heat will be absorbed by unused air that is discharged from the stack.

Excess Air--

In actual practice more than the stoichiometric amount of air is required to ensure complete combustion. Excess air is necessary for several reasons. One reason is that the mixing of fuel and air is not perfect; therefore, some fuel fails to make contact with oxygen. Also the presence of nitrogen (air is 78 percent nitrogen) tends to inhibit fuel-oxygen contact. To overcome these interferences excess air must be supplied with the fuel.

Excess air is a primary boiler operating variable and a major factor in safe, efficient boiler operation. The required quantity of excess air for a particular boiler depends on factors such as fuel type, fuel composition, boiler design, firing rate, burner design, and burner adjustment. Since the proper fuel/air ratio is a key to efficient boiler operation, the boiler operator should strive to operate with only enough excess air to minimize smoke, carbon monoxide, and unburned fuel.

2.2.2 Turbulence

The proper fuel/air ratio does not ensure complete combustion unless the air and fuel are thoroughly mixed so that every fuel particle comes into

contact with sufficient oxygen to burn it. Turbulence in the combustion zone prevents rich and lean gases from stratifying, mixes the fuel with the air, and promotes complete combustion.

2.2.3 Temperature

In addition to air and fuel, temperature must be adequate for combustion. Each combustible substance has a specific ignition temperature and will not burn until the fuel reaches that ignition temperature. Heat, usually from a pilot flame, is required initially to raise the fuel temperature to its ignition temperature, the temperature at which more heat is released by combustion than is required to sustain ignition. Once ignition has occurred the excess heat ignites surrounding fuel, and combustion continues until one of the three requirements for combustion (heat, oxygen, or fuel) is absent or inadequate. For example if the fuel is not all burned by the time the flame impinges on a cooler surface (boiler tubes, shell or setting), the flame may be cooled below the ignition temperature. Combustion will cease, and some fuel may fail to burn.

2.2.4 Time

Combustion is not instantaneous; time is required to vaporize liquid fuel (or to drive off volatiles from solid fuel), to mix combustibles with air, to raise the fuel to its ignition temperature, and to burn the fuels completely before they cool below ignition temperature. The required residence time for combustible material in the boiler is tied closely to the boiler size, shape, and design. There must be enough space in the boiler's high temperature zone so that combustion is complete before flame cooling occurs.

The three T's of combustion go hand in hand, and each affects the other. Turbulence speeds up liquid fuel vaporization, fuel/air mixing, and contact. Higher temperatures increase combustion rates, promote thermal turbulence and mixing, and decrease the combustion time required.

TECHNICAL REPORT DATA

(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Combustion Efficiency Optimization Manual for Operators of Oil- and Gas-Fired Boilers		5. REPORT DATE September 1983
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		14. SPONSORING AGENCY CODE
15. SUPPLEMENTARY NOTES		
16. ABSTRACT This manual provides general guidance to operators of oil- and gas-fired boilers to increase boiler efficiency, improve fuel consumption, and to reduce pollutant emissions. Boiler operating principles and suggestions to improve boiler performance are discussed. Combustion is explained in simple terms. Various heat losses are described, and suggestions are given on means to minimize or eliminate heat losses. The manual describes boiler adjustments for peak operating efficiency, optimum fuel consumption, and reduced pollutant emissions. Efficiency, fuel consumption, and emissions are all sensitive to many of the same boiler operating parameters. This manual describes feasible operating techniques and combustion adjustments to achieve clean, safe, and efficient boiler operation.		
17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Boiler Operation Combustion Efficiency		
18. DISTRIBUTION STATEMENT Unlimited	19. SECURITY CLASS (This Report) Unclassified	21. NO. OF PAGES 71
	20. SECURITY CLASS (This page) Unclassified	22. PRICE

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 63**

[EPA-HQ-OAR-2002-0058; FRL-9676-8]

RIN 2060-AR13

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule; notice of final action on reconsideration.

SUMMARY: In this action the EPA is taking final action on its reconsideration of certain issues in the emission standards for the control of hazardous air pollutants from new and existing industrial, commercial, and institutional boilers and process heaters at major sources of hazardous air pollutants, which were issued under section 112 of the Clean Air Act. As part of this action, the EPA is making technical corrections to the final rule to clarify definitions, references, applicability and compliance issues raised by petitioners and other stakeholders affected by this rule. On March 21, 2011, the EPA promulgated national emission standards for this source category. On that same day, the EPA also published a notice announcing its intent to reconsider certain provisions of the final rule. Following these actions, the Administrator received several petitions for reconsideration. After consideration of the petitions received, on December 23, 2011, the EPA proposed revisions to certain provisions of the March 21, 2011, final rule, and requested public comment on several provisions of the final rule. The EPA is now taking final action on the proposed reconsideration.

DATES: The May 18, 2011 (76 FR28661), delay of the effective date revising subpart DDDDD at 76 FR 15451 (March 21, 2011) is lifted January 31, 2013. The amendments in this rule to 40 CFR part 63, subpart DDDDD are effective as of April 1, 2013.

ADDRESSES: The EPA established a single docket under Docket ID No. EPA-HQ-OAR-2002-0058 for this action. All documents in the docket are listed on the <http://www.regulations.gov> Web site. Although listed in the index, some information is not publicly available, e.g., confidential business information 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 <http://www.regulations.gov> or in hard copy at the EPA's Docket Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Mr. Jim Eddinger, Energy Strategies Group, Sector Policies and Programs Division, (D243-01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541-5426; Fax number (919) 541-5450; Email address: eddinger.jim@epa.gov.

SUPPLEMENTARY INFORMATION:**Executive Summary***Purpose of This Regulatory Action*

The EPA is taking final action on its proposed reconsideration of certain provisions of its March 21, 2011, final rule that established standards for new and existing industrial, commercial, and institutional boilers and process heaters at major sources of hazardous air pollutants. Section 112(d) of the CAA requires the EPA to regulate HAP from major stationary sources based on the performance of MACT. Section 112(h) of the CAA allows the EPA to establish work practice standards in lieu of numerical emission limits only in cases where the agency determines that it is not feasible to prescribe or enforce an emission standard, including circumstances in which the agency determines that the application of measurement methodology is not practicable due to technological and economic limitations. The EPA is revising certain MACT standards established in March 2011 for boilers and process heaters, including standards for CO—as a surrogate for organic HAP; HCl—as a surrogate for acid gas HAP; Hg; TSM or filterable PM—as a surrogate for non-Hg metallic HAP; and dioxin/furan.

This final rule amends certain provisions of the final rule issued by the EPA on March 21, 2011. The EPA delayed the effective date of the 2011 rule in a May 18, 2011, notice, but that delay notice was vacated by the U.S. District Court for the District of Columbia on January 9, 2012, and the

March 2011 final rule was, therefore, in effect until publication of this action.

Summary of Major Reconsideration Provisions

In general, this final rule requires facilities classified as major sources of HAP with affected boilers or process heaters to reduce emissions of harmful toxic air emissions from these combustion sources. This will improve air quality and protect public health in communities where these facilities are located.

Recognizing the diversity of this source category and the multiple sectors of the economy this final rule effects, the EPA is revising certain subcategories for boilers and process heaters in this action that were established in the March 2011 final rule, based on the design of the combustion equipment. These revisions result in 19 subcategories for the boilers and process heaters source category. Numerical emission limits are established for most of the subcategories for five pollutants, CO, HCl, Hg, and PM or TSM. The review of existing data and consideration of new data have resulted in changes to some of the emission limits contained in the March 2011 final rule. Overall, for both new and existing affected units, about 30 percent of the emission limits are more stringent, half are less stringent, and 20 percent unchanged as compared to the March 2011 final rule. Also, based on its review and analysis of new data submissions, the EPA is establishing an alternative emission standard for CO, based on CEMS data for several subcategories with CO CEMS data available. This alternative standard is based on a 30-day rolling average for subcategories for which sufficient CEMS data were available for more than a 30-day period, or a 10-day rolling average for subcategories for which CEMS data were available for less than a 30-day period, and provides additional compliance flexibility to sources. All of the subcategories are subject to periodic tune-up work practices for dioxin/furan emissions.

The compliance dates for the rule are January 31, 2016, for existing sources and, January 31, 2013, or upon startup, whichever is later, for new sources. New sources are defined as sources that began operation on or after June 4, 2010.

Costs and Benefits

The final rule affects 1,700 existing major source facilities with an estimated 14,136 boilers and process heaters and the EPA projects an additional 1,844 new boilers and process heaters to be subject to this final rule over the next 3

TABLE 5—SUMMARY OF TOTAL CAPITAL AND ANNUAL COSTS FOR NEW AND EXISTING SOURCES FOR THE FINAL AMENDED RULE—Continued

Source	Subcategory	Estimated/ projected number of affected units	Capital costs (10 ⁶ \$)	Testing and monitoring annualized costs (10 ⁶ \$/yr)	Annualized cost (10 ⁶ \$/yr) (considering fuel savings)
Energy Assessment	Gas 2 (other) units	129	138	2.3	58
	ALL	1,700 (Facilities).	N/A	N/A	28
New Units	Coal units	0	0	0	0
	Biomass units	82	381	5.6	^a 99
	Liquid units	0	0	0	0
	Gas 1 (NG/RG) units	1,762	11	0	^a 5.1
	Gas 2 (other) units	0	0	0	0

^a Total annualized costs for new units do not account for fuel savings since no fuel savings are estimated in the first year for new units.

Potential control device cost savings and increased recordkeeping and reporting costs associated with the emissions averaging provisions in the final rule are not accounted for in either the capital or annualized cost estimates.

A discussion of the methodology used to estimate cost impacts is presented in “Revised (August 2012) Methodology for Estimating Cost and Emission Impacts for Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP—Major Source” in the docket.

E. What are the economic impacts?

The EPA analyzed the economic impacts of this final amended rule using the methodology that was discussed in the March 2011 final rule RIA and in the preamble to the March 2011 final rule. See FR 76 15651. The market impact results are very similar to the results presented in the March 2011 final rule and the RIA. The agency’s economic model suggests the average national price increases for industrial sectors are less than 0.01 percent, while average annual domestic production may fall by less than 0.01 percent.

Because of higher domestic prices, imports slightly rise. The results for sales tests for small businesses were somewhat reduced than those calculated for the March 2011 final rule. For the sales tests using small

companies identified in the Combustion Survey, the mean cost to receipts dropped from 4 percent in the RIA to 3 percent for this final amended rule and the median was 0.2 percent for the RIA and also 0.2 percent for this final amended rule. The number of parent companies with sales tests exceeding 3 percent dropped from 8 in the RIA to 5 for this final amended rule. There was no change in the results for small public entities. Median cost is still about \$1.1 million and representative small major public entities would have cost-to-revenue ratios above 10 percent. The change in employment estimates between the RIA and the final amended rule is minimal. In the RIA for the March 2011 final rule, we estimated employment changes ranging between –3,100 to +6,500 employees, with a central estimate of +1,700. For this final amended rule we estimate employment changes ranging between –2,600 to +5,400 employees, with a central estimate of +1,400. These estimated annual employment changes compared to the baseline employment, and are for the time period for which the annualized cost applies (2015 to 2029).

F. What are the benefits of this final rule?

We calculated health benefits using the methodology described in the RIA

prepared for the March 21, 2011 final rule. We incorporated the revised emission reductions estimated for this reconsideration final rule into the analysis. We were unable to estimate the benefits from reducing exposure to HAP and ozone, ecosystem impairment and visibility impairment, including reducing 180,000 tons of carbon monoxide, 39,000 tons of HCl, 500 tons of HF, 2,500 tons of other metals and 3,100 to 5,300 pounds of mercury. Please refer to the full description of the unquantified benefits as well as technical details of the analysis and its limitations and uncertainties in the final Boiler RIA (March 2011). These monetized benefits are approximately 23 percent higher than the March 2011 final rule benefits due to the increase in SO₂ emission reductions associated with the additional units affected by the rule and the revised HCl limit. We estimate the total monetized benefits of this final regulatory action to be \$27 billion to \$67 billion at a 3 percent discount rate and \$25 to \$61 billion at a 7 percent discount rate. All estimates are for the implementation year (2015) in 2008\$. A summary of the monetized benefits estimates at discount rates of 3 percent and 7 percent is provided in Table 6 of this preamble. A summary of the avoided health incidences is provided in Table 7 of this preamble.

TABLE 6—SUMMARY OF THE MONETIZED BENEFITS ESTIMATES FOR THE FINAL BOILER MACT
[millions of 2008\$]^{a b}

Pollutant	Emissions reductions (tons)	Total monetized benefits (at 3% discount rate)	Total monetized benefits (at 7% discount rate)
PM_{2.5}-related benefits			
Direct PM _{2.5}	14,139	\$1,200 to \$2,900	\$1,100 to \$2,700
SO ₂	572,000	\$26,000 to \$64,000	\$24,000 to \$61,000

33840

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-HQ-OAR-2012-0322; FRL-9924-05-OAR]

RIN 2060-AR68

State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final action.

SUMMARY: The Environmental Protection Agency (EPA) is taking final action on a petition for rulemaking filed by the Sierra Club (Petitioner) that concerns how provisions in EPA-approved state implementation plans (SIPs) treat excess emissions during periods of startup, shutdown or malfunction (SSM). Further, the EPA is clarifying, restating and revising its guidance concerning its interpretation of the Clean Air Act (CAA or Act) requirements with respect to treatment in SIPs of excess emissions

that occur during periods of SSM. The EPA evaluated existing SIP provisions in a number of states for consistency with the EPA's interpretation of the CAA and in light of recent court decisions addressing this issue. The EPA is issuing a finding that certain SIP provisions in 36 states (applicable in 45 statewide and local jurisdictions) are substantially inadequate to meet CAA requirements and thus is issuing a "SIP call" for each of those 36 states. Further, the EPA is establishing a due date for states subject to this SIP call action to submit corrective SIP revisions. Finally, this final action embodies the EPA's updated SSM Policy as it applies to SIP provisions. The SSM Policy provides guidance to states for compliance with CAA requirements for SIP provisions applicable to excess emissions during SSM events.

DATES: This final action shall become applicable on May 22, 2015. The deadline for each affected state to submit its corrective SIP revision is November 22, 2016.

ADDRESSES: The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2012-0322. All documents in the docket are listed in the <http://www.regulations.gov> index. 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, will be publicly available only in hard copy. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the U.S. Environmental Protection Agency, EPA Docket Center, William Jefferson Clinton West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Office of Air and Radiation Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Ms. Lisa Sutton, U.S. EPA, Office of Air Quality Planning and Standards, State and Local Programs Group (C539-01), Research Triangle Park, NC 27711, telephone number (919) 541-3450, email address: sutton.lisa@epa.gov.

SUPPLEMENTARY INFORMATION: For information related to a specific SIP, please contact the appropriate EPA Regional Office:

EPA Regional Office	Contact for Regional Office (person, mailing address, telephone number)	State
I	Alison Simcox, Environmental Scientist, EPA Region 1, 5 Post Office Square, Suite 100, Boston, MA 02109-3912, (617) 918-1684.	Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island and Vermont.
II	Karl Mangels, Chief, Air Planning Section, EPA Region 2, 290 Broadway, 25th Floor, New York, NY 10007-1866, (212) 637-4078.	New Jersey, New York, Puerto Rico and Virgin Islands.
III	Amy Johansen, EPA Region 3, 1650 Arch Street, Philadelphia, PA 19103-2029, (215) 814-2156.	District of Columbia, Delaware, Maryland, Pennsylvania, Virginia and West Virginia.
IV	Joel Huey, EPA Region 4, Atlanta Federal Center, 61 Forsyth Street SW., Atlanta, GA 30303-8960, (404) 562-9104.	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee.
V	Mary Portanova, Air and Radiation Division (AR-18J), EPA Region 5, 77 West Jackson Boulevard, Chicago, IL 60604-3507, (312) 353-5954.	Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.
VI	Alan Shar (6PD-L), EPA Region 6, Fountain Place 12th Floor, Suite 1200, 1445 Ross Avenue, Dallas, TX 75202-2733, (214) 665-6691.	Arkansas, Louisiana, New Mexico, Oklahoma and Texas.
VII	Lachala Kemp, EPA Region 7, Air Planning and Development Branch, 11201 Renner Boulevard, Lenexa, KS 66219-9601, (913) 551-7214. Alternate contact is Ward Burns, (913) 551-7960.	Iowa, Kansas, Missouri and Nebraska.
VIII	Adam Clark, Air Quality Planning Unit (8P-AR) Air Program, EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, (303) 312-7104.	Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.
IX	Andrew Steckel, EPA Region 9, Air Division, 75 Hawthorne Street (AIR-4), San Francisco, CA 94105-3901, (415) 947-4115.	Arizona, California, Hawaii, Nevada and the Pacific Islands.
X	Dave Bray, Office of Air, Waste and Toxics (AWT-150), EPA Region 10, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101-3140, (206) 553-4253.	Alaska, Idaho, Oregon, and Washington.

I. General Information

A. Does this action apply to me?

Entities potentially affected by this action include states, U.S. territories, local authorities and eligible tribes that are currently administering, or may in the future administer, EPA-approved implementation plans ("air agencies").¹ The EPA's action on the petition for rulemaking filed by the Sierra Club with the EPA Administrator on June 30, 2011 (the Petition), is potentially of interest to all such entities because the EPA is addressing issues related to basic CAA requirements for SIPs. The particular issues addressed in this rulemaking are the same issues that the Petition identified, which relate specifically to section 110 of the CAA. Pursuant to section 110, through what is generally referred to as the "SIP program," the states and the EPA together provide for implementation, maintenance and enforcement of the national ambient air quality standards (NAAQS). While recognizing similarity to (and in some instances overlap with) issues concerning other air programs, e.g., concerning SSM provisions in the EPA's regulatory programs for New Source Performance Standards (NSPS) pursuant to section 111 and National Emission Standards for Hazardous Air Pollutants (NESHAP) pursuant to section 112, the EPA notes that the issues addressed in this rulemaking are specific to SSM provisions in the SIP program. Through this rulemaking, the EPA is both clarifying and applying its interpretation of the CAA with respect to SIP provisions applicable to excess emissions during SSM events in general. In addition, the EPA is issuing findings that some of the specific SIP provisions in some of the states identified in the Petition and some SIP provisions in additional states are substantially

¹ The EPA respects the unique relationship between the U.S. government and tribal authorities and acknowledges that tribal concerns are not interchangeable with state concerns. Under the CAA and EPA regulations, a tribe may, but is not required to, apply for eligibility to have a tribal implementation plan (TIP). For convenience, the EPA refers to "air agencies" in this rulemaking collectively when meaning to refer in general to states, the District of Columbia, U.S. territories, local air permitting authorities and eligible tribes that are currently administering, or may in the future administer, EPA-approved implementation plans. This final action does not include action on any provisions in any TIP. The EPA therefore refers to "state" or "states" rather than "air agency" or "air agencies" when meaning to refer to the District of Columbia and/or one, some, or all of the states at issue in this rulemaking. The EPA also uses "state" or "states" rather than "air agency" or "air agencies" when quoting or paraphrasing the CAA or other document that uses that term even when the original referenced passage may have applicability to tribes as well.

inadequate to meet CAA requirements, pursuant to CAA section 110(k)(5), and thus those states (named in section II.C of this document) are directly affected by this rulemaking. For example, where a state's existing SIP includes an affirmative defense provision that would purport to alter the jurisdiction of the federal courts to assess monetary penalties for violations of CAA requirements, then the EPA is determining that the SIP provision is substantially inadequate because the provision is inconsistent with fundamental requirements of the CAA. This action may also be of interest to the public and to owners and operators of industrial facilities that are subject to emission limitations in SIPs, because it will require changes to certain state rules applicable to excess emissions during SSM events. This action embodies the EPA's updated SSM Policy concerning CAA requirements for SIP provisions relevant to excess emissions during SSM events.

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 document will also be available on the World Wide Web. Following signature by the EPA Administrator, a copy of this document will be posted on the EPA's Web site, under "State Implementation Plans to Address Emissions During Startup, Shutdown and Malfunction," at <http://www.epa.gov/air/urbanair/sipstatus>. The EPA's initial proposed response to the Petition in the February 2013 proposal, the EPA's revised proposed response to the Petition in the September 2014 supplemental notice of proposed rulemaking (SNPR) and the EPA's Response to Comments document may be found in the docket for this action.

C. How is the preamble organized?

The information presented in this preamble is organized as follows:

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 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

- G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
- H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use
- I. National Technology Transfer and Advancement Act (NTTAA)
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D. What is the meaning of key terms used in this document?

For the purpose of this document, the following definitions apply unless the context indicates otherwise:

The terms *Act* or *CAA* or *the statute* mean or refer to the Clean Air Act.

The term *affirmative defense* means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding. The term *affirmative defense provision* means more specifically a state law provision in a SIP that specifies particular criteria or preconditions that, if met, would purport to preclude a court from imposing monetary penalties or other forms of relief for violations of SIP requirements in accordance with CAA section 113 or CAA section 304.

The term *Agency* means or refers to the EPA. When not capitalized, this term refers to an agency in general and not specifically to the EPA.

The terms *air agency* and *air agencies* mean or refer to states, the District of Columbia, U.S. territories, local air permitting authorities with delegated authority from the state and tribal authorities with appropriate CAA jurisdiction.

The term *alternative emission limitation* means, in this document, an emission limitation in a SIP that applies to a source during some but not all periods of normal operation (e.g., applies only during a specifically defined mode of operation such as startup or shutdown). An alternative emission limitation is a component of a continuously applicable SIP emission limitation, and it may take the form of a control measure such as a design, equipment, work practice or operational standard (whether or not numerical). This definition of the term is independent of the statutory use of the term "alternative means of emission limitation" in sections 111(h)(3) and 112(h)(3), which pertain to the conditions under which the EPA may pursuant to sections 111 and 112 promulgate emission limitations, or components of emission limitations, that are not necessarily in numeric format.

The term *automatic exemption* means a generally applicable provision in a SIP that would provide that if certain conditions

existed during a period of excess emissions, then those exceedances would not be considered violations of the applicable emission limitations.

The term *director's discretion provision* means, in general, a regulatory provision that authorizes a state regulatory official unilaterally to grant exemptions or variances from otherwise applicable emission limitations or control measures, or to excuse noncompliance with otherwise applicable emission limitations or control measures, which would be binding on the EPA and the public.

The term *EPA* refers to the United States Environmental Protection Agency.

The term *emission limitation* means, in the context of a SIP, a legally binding restriction on emissions from a source or source category, such as a numerical emission limitation, a numerical emission limitation with higher or lower levels applicable during specific modes of source operation, a specific technological control measure requirement, a work practice standard, or a combination of these things as components of a comprehensive and continuous emission limitation in a SIP provision. In this respect, the term *emission limitation* is defined as in section 302(k) of the CAA. By definition, an emission limitation can take various forms or a combination of forms, but in order to be permissible in a SIP it must be applicable to the source continuously, *i.e.*, cannot include periods during which emissions from the source are legally or functionally exempt from regulation. Regardless of its form, a fully approvable SIP emission limitation must also meet all substantive requirements of the CAA applicable to such a SIP provision, *e.g.*, the statutory requirement of section 172(c)(1) for imposition of reasonably available control measures and reasonably available control technology (RACT and RACT) on sources located in designated nonattainment areas.

The term *excess emissions* means the emissions of air pollutants from a source that exceed any applicable SIP emission limitation. In particular, this term includes those emissions above the otherwise applicable SIP emission limitation that occur during startup, shutdown, malfunction or other modes of source operation, *i.e.*, emissions that would be considered violations of the applicable emission limitation but for an impermissible automatic or discretionary exemption from such emission limitation.

The term *February 2013 proposal* means the notice of proposed rulemaking that the EPA signed on February 12, 2013, and published in the **Federal Register** on February 22, 2013. The February 2013 proposal comprises the EPA's initial proposed response to the Petition. The EPA subsequently issued the September 2014 SNPR that updated and revised the EPA's February 2013 proposal with respect to affirmative defense provisions in SIPs.

The term *malfunction* means a sudden and unavoidable breakdown of process or control equipment.

The term *NAAQs* means national ambient air quality standard or standards. These are the national primary and secondary ambient

air quality standards that the EPA establishes under CAA section 109 for criteria pollutants for purposes of protecting public health and welfare.

The term *Petition* refers to the petition for rulemaking titled, "Petition to Find Inadequate and Correct Several State Implementation Plans under Section 110 of the Clean Air Act Due to Startup, Shutdown, Malfunction, and/or Maintenance Provisions," filed by the Sierra Club with the EPA Administrator on June 30, 2011.

The term *Petitioner* refers to the Sierra Club.

The term *practically enforceable* means, in the context of a SIP emission limitation, that the limitation is enforceable as a practical matter (e.g., contains appropriate averaging times, compliance verification procedures and recordkeeping requirements). The term uses "practically" as it means "in a practical manner" and not as it means "almost" or "nearly." In this document, the EPA uses the term "practically enforceable" as interchangeable with the term "practicably enforceable."

The term *shutdown* means, generally, the cessation of operation of a source for any reason. In this document, the EPA uses this term in the generic sense. In individual SIP provisions it may be appropriate to include a specifically tailored definition of this term to address a particular source category for a particular purpose.

The term *SIP* means or refers to a State Implementation Plan. Generally, the SIP is the collection of state statutes and regulations approved by the EPA pursuant to CAA section 110 that together provide for implementation, maintenance and enforcement of a national ambient air quality standard (or any revision thereof) promulgated under section 109 for any air pollutant in each air quality control region (or portion thereof) within a state. In some parts of this document, statements about SIPs in general would also apply to tribal implementation plans in general even though not explicitly noted.

The term *SNPR* means the supplemental notice of proposed rulemaking that the EPA signed and posted on the Agency Web site on September 5, 2014, and published in the **Federal Register** on September 17, 2014. Supplementing the February 2013 proposal, the SNPR comprises the EPA's revised proposed response to the Petition with respect to affirmative defense provisions in SIPs.

The term *SSM* refers to startup, shutdown or malfunction at a source. It does not include periods of maintenance at such a source. An SSM event is a period of startup, shutdown or malfunction during which there may be exceedances of the applicable emission limitations and thus excess emissions.

The term *SSM Policy* refers to the cumulative guidance that the EPA has issued as of any given date concerning its interpretation of CAA requirements with respect to treatment of excess emissions during periods of startup, shutdown and malfunction at a source in SIP provisions. The most comprehensive statement of the EPA's SSM Policy prior to this final action

is embodied in a 1999 guidance document discussed in more detail in this final action. That specific guidance document is referred to as the *1999 SSM Guidance*. The final action described in this document embodies the EPA's updated SSM Policy for SIP provisions relevant to excess emissions during SSM events. In section XI of this document, the EPA provides a statement of the Agency's SSM SIP Policy as of 2015.

The term *startup* means, generally, the setting in operation of a source for any reason. In this document, the EPA uses this term in the generic sense. In an individual SIP provision it may be appropriate to include a specifically tailored definition of this term to address a particular source category for a particular purpose.

II. Overview of Final Action and Its Consequences

A. Summary

The EPA is in this document taking final action on a petition for rulemaking that the Sierra Club filed with the EPA Administrator on June 30, 2011. The Petition concerns how air agency rules in EPA-approved SIPs treat excess emissions during periods of SSM of industrial source process or emission control equipment. Many of these rules were added to SIPs and approved by the EPA in the years shortly after the 1970 amendments to the CAA, which for the first time provided for the system of clean air plans that were to be prepared by air agencies and approved by the EPA. At that time, it was widely believed that emission limitations set at levels representing good control of emissions during periods of so-called "normal" operation (which, until no later than 1982, was meant by the EPA to refer to periods of operation other than during startup, shutdown, maintenance or malfunction) could in some cases not be met with the same emission control strategies during periods of startup, shutdown, maintenance or malfunction.² Accordingly, it was common for state plans to include provisions for special, more lenient treatment of excess emissions during such periods of startup, shutdown, maintenance or

malfunction. Many of these provisions took the form of absolute or conditional statements that excess emissions from a source, when they occur during startup, shutdown, malfunction or otherwise outside of the source's so-called "normal" operations, were not to be considered violations of the air agency rules; i.e., these emissions were considered exempt from legal control.

Excess emission provisions for startup, shutdown, maintenance and malfunctions were often included as part of the original SIPs that the EPA approved in 1971 and 1972. In the early 1970s, because the EPA was inundated with proposed SIPs and had limited experience in processing them, not enough attention was given to the adequacy, enforceability and consistency of these provisions. Consequently, many SIPs were approved with broad and loosely defined provisions to control excess emissions. Starting in 1977, however, the EPA discerned and articulated to air agencies that exemptions for excess emissions during such periods were inconsistent with certain requirements of the CAA.³ The EPA also realized that such provisions allow opportunities for sources to emit pollutants during such periods repeatedly and in quantities that could cause unacceptable air pollution in nearby communities with no legal pathway within the existing EPA-approved SIP for air agencies, the EPA, the public or the courts to require the sources to make reasonable efforts to reduce these emissions. The EPA has attempted to be more careful after 1977 not to approve SIP submissions that contain illegal SSM provisions and has issued several guidance memoranda to advise states on how to avoid impermissible provisions⁴ as they expand and revise their SIPs. The EPA has also found several SIPs to be deficient because of problematic SSM provisions and called upon the affected states to amend their SIPs. However, in light of the other high-priority work facing both air agencies and the EPA,

² Since at least 1982, however, the EPA has used the term "normal" in the SSM Policy in the ordinary sense of the word to distinguish between predictable modes of source operation such as startup and shutdown and genuine "malfunctions," which are by definition supposed to be unpredictable and unforeseen events and which could not have been precluded by proper source design, maintenance and operation. See, e.g., 1982 SSM Guidance, Attachment at 2, in which the EPA states, "[s]tart-up and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the design and implementation of the operating procedure for the process and control equipment." The 1982 SSM Guidance is in the rulemaking docket at EPA-HQ-OAR-2012-0322-0005.

³ In 1977, the EPA took actions related to specific sources located in Utah and Idaho in which the EPA expressed its views regarding issues such as automatic exemptions from applicable emission limitations. See Memorandum, "Statutory, Regulatory, and Policy Context for this Rulemaking," at n.2, February 4, 2013, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0029.

⁴ The term "impermissible provision" as used throughout this document is generally intended to refer to a SIP provision that the EPA now believes to be inconsistent with requirements of the CAA. As described later in this document (see section VIII.A), the EPA is proposing to find a SIP "substantially inadequate" to meet CAA requirements where the EPA determines that the SIP includes an impermissible provision.

the EPA had not until the February 2013 proposal initiated a broader effort to require a larger number of states to remove impermissible provisions from their SIPs and to adopt other, approvable approaches for addressing excess emissions when appropriate. Public interest in the issue of SSM provisions in SIPs is evidently high, on the basis of the large number of public submissions made to the rulemaking docket in response to the February 2013 proposal (representing approximately 69,000 unique commenters) and the SNPR (over 20,000 commenters, some of whom had also made submissions in response to the earlier proposal). The EPA has attempted to further count commenters according to general categories (state and local governments, industry commenters, public interest groups and individual commenters), as described in section V.D.1 of this document. Public interest groups, including the Petitioner, have sued the EPA in several state-specific cases concerning SIP issues, and they have been urging the EPA to give greater priority generally to addressing the issue of SSM provisions in SIPs. In one of these SIP cases, the EPA entered into a settlement agreement requiring it to respond to the Petition from the Sierra Club. A copy of the settlement agreement is provided in the docket for this rulemaking.⁵

The EPA emphasizes that there are other approaches that would be consistent with CAA requirements for SIP provisions that states can use to address emissions during SSM events. While automatic exemptions and director's discretion exemptions from otherwise applicable emission limitations are not consistent with the CAA, SIPs may include criteria and procedures for the use of enforcement discretion by air agency personnel. Similarly, SIPs may, rather than exempt emissions during SSM events, include emission limitations that subject those emissions to alternative numerical limitations or other technological control requirements or work practice requirements during startup and shutdown events, so long as those components of the emission limitations meet applicable CAA requirements. In this action, the EPA is again articulating

its interpretation of the CAA in the SSM Policy that reflects these principles and is applying this interpretation to issue a SIP call for specific existing provisions in the SIPs of 36 states. In some cases, the EPA's review involved a close reading of the provision in the SIP and its context to discern whether it was in fact an exemption, a statement regarding exercise of enforcement discretion by the air agency or an affirmative defense. Each state will ultimately decide how to address the SIP inadequacies identified by the EPA in this final action. The EPA acknowledges that for some states, this rulemaking entailed the EPA's evaluation of SIP provisions that may date back several decades. Aware of that fact, the EPA is committed to working closely with each of the affected states to develop approvable SIP submissions consistent with the guidance articulated in the updated SSM Policy in this final action. Section IX of this document presents the EPA's analysis of each specific SIP provision at issue in this action. The EPA's review also involved interpretation of several relevant sections of the CAA. While the EPA has already developed and has been implementing the SSM Policy that is based on its interpretation of the CAA for SIP provisions, this action provides the EPA an opportunity to update the SSM Policy and its basis in the CAA through notice and comment. To that end, section XI of this document contains a restatement of the EPA's SSM Policy for SIP provisions as revised and updated for 2015. Also, supplementary to the February 2013 proposal, the EPA provided a background memorandum to summarize the legal and administrative context for this action which is available in the docket for this rulemaking.⁶ This final document is intended to clarify how states can resolve the identified deficiencies in their SIPs as well as to provide all air agencies guidance as they develop SIPs in the future.

In summary, the EPA is agreeing with the Petitioner that many of the identified SIP provisions are not permissible under the CAA. However, in some cases the EPA is instead concluding that an identified SIP provision is actually consistent with CAA requirements. In addition, the EPA notes, this final action does not include

a final finding of substantial inadequacy and SIP call for specific SIP provisions included in the February 2013 proposal for several air agencies, because of SIP revisions made subsequent to that proposal. The state of Kentucky has already submitted, and the EPA has approved, SIP revisions that corrected the problematic provisions applicable in the Jefferson County (Louisville, Kentucky) area.⁷ The state of Wyoming has already submitted, and the EPA has approved, SIP revisions that corrected the problematic provisions applicable statewide.⁸ The state of North Dakota has likewise already submitted, and the EPA has approved, SIP revisions that corrected a portion of the problematic provisions applicable statewide.⁹

Of the 41 states for which SIP provisions were identified by the Petition or identified independently by the Agency in the SNPR, the EPA is issuing a SIP call for 36 states. The EPA is aware of other SSM-related SIP provisions that were not identified in the Petition but that may be inconsistent with the EPA's interpretation of the CAA. For SIP provisions that have potential defects other than an impermissible affirmative defense, the EPA elected to focus on the provisions specifically raised in the Petition. The EPA may address these other provisions later in a separate notice-and-comment action. States are encouraged to consider the updated SSM Policy laid out in this final action in reviewing their own SIP provisions. With respect to affirmative defense provisions, however, the EPA elected to identify some additional provisions not included in the Petition. This is necessary to minimize potential confusion relating to other recent rulemakings and court decisions that pertain generally to affirmative defense provisions. Therefore, in order to give updated and comprehensive guidance with respect to affirmative defense provisions, the EPA has also addressed additional affirmative defense provisions in 17 states in the SNPR and in this final action. See section V.D.3 of this document for further explanation as to which SSM-related SIP provisions the

⁵ See Settlement Agreement executed November 30, 2011, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0039, to address a lawsuit filed by Sierra Club and WildEarth Guardians in the United States District Court for the Northern District of California: *Sierra Club et al. v. Jackson*, No. 3:10-cv-04060-CRB (N.D. Cal.). A subsequent Modification to the Settlement Agreement specifies a deadline of May 22, 2015, for signature on the final action to respond to the Petition.

⁶ See Memorandum, "Statutory, Regulatory, and Policy Context for this Rulemaking," February 4, 2013, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0029. The EPA notes that with respect to the legal basis for affirmative defense provisions in SIPs, the Agency has revised its views as a result of a court decision, as explained in more detail in the SNPR. Thus, the portions of that background memorandum that concern affirmative defense provisions are no longer germane to this action.

⁷ See "Approval and Promulgation of Implementation Plans; Kentucky; Approval of Revisions to the Jefferson County Portion of the Kentucky SIP; Emissions During Startups, Shutdowns, and Malfunctions," 79 FR 33101 (June 10, 2014).

⁸ See "Approval and Promulgation of Implementation Plans; Wyoming; Revisions to the Air Quality Standards and Regulations," 79 FR 62859 (October 21, 2014).

⁹ See "Approval and Promulgation of Implementation Plans; North Dakota; Revisions to the Air Pollution Control Rules," 79 FR 63045 (October 22, 2014).

EPA reviewed for consistency with CAA requirements as part of this rulemaking.

B. What the Petitioner Requested

The Petition includes three interrelated requests concerning the treatment in SIPs of excess emissions by sources during periods of SSM.

First, the Petitioner argued that SIP provisions providing an affirmative defense for monetary penalties for excess emissions in judicial proceedings are contrary to the CAA. Thus, the Petitioner advocated that the EPA should rescind its interpretation of the CAA expressed in the SSM Policy that allows appropriately drawn affirmative defense provisions in SIPs. The Petitioner made no distinction between affirmative defenses for excess emissions related to malfunction and those related to startup or shutdown. Further, the Petitioner requested that the EPA issue a SIP call requiring states to eliminate all such affirmative defense provisions in existing SIPs. As explained later in this final document, the EPA has decided to fully grant this request. Although the EPA initially proposed to grant in part and to deny in part this request in the February 2013 proposal, a subsequent court decision concerning the legal basis for affirmative defense provisions under the CAA caused the Agency to reexamine this question. As a result, the EPA issued the SNPR to present its revised interpretation of the CAA with respect to this issue and to propose action on the Petition and on specific existing affirmative defense provisions in the SIPs of 17 states consistent with the reasoning of that court decision. In this final action, the EPA is revising its SSM Policy with respect to affirmative defenses for violations of SIP requirements. The EPA believes that SIP provisions that function to alter the jurisdiction of the federal courts under CAA section 113 and section 304 to determine liability and to impose remedies are inconsistent with fundamental legal requirements of the CAA, especially with respect to the enforcement regime explicitly created by statute.

Second, the Petitioner argued that many existing SIPs contain impermissible provisions, including automatic exemptions from applicable emission limitations during SSM events, director's discretion provisions that in particular provide discretionary exemptions from applicable emission limitations during SSM events, enforcement discretion provisions that appear to bar enforcement by the EPA or citizens for such excess emissions and inappropriate affirmative defense

provisions that are not consistent with the CAA or with the recommendations in the EPA's SSM Policy. The Petitioner identified specific provisions in SIPs of 39 states that it considered inconsistent with the CAA and explained the basis for its objections to the provisions. As explained later in this final document, the EPA agrees with the Petitioner that some of these existing SIP provisions are legally impermissible and thus finds such provisions "substantially inadequate"¹⁰ to meet CAA requirements. Among the reasons for the EPA's action is to eliminate SIP provisions that interfere with enforcement in a manner prohibited by the CAA. Simultaneously, where the EPA agrees with the Petitioner, the EPA is issuing a SIP call that directs the affected state to revise its SIP accordingly. For the remainder of the identified provisions, however, the EPA disagrees with the contentions of the Petitioner and is thus denying the Petition with respect to those provisions and taking no further action. The EPA's action issuing the SIP calls on this portion of the Petition will assure that these SIPs comply with the fundamental requirements of the CAA with respect to the treatment of excess emissions during periods of SSM. The majority of the state-specific provisions affected by this SIP call action are inconsistent with the EPA's longstanding interpretation of the CAA through multiple iterations of its SSM Policy. With respect to SIP provisions that include an affirmative defense for violations of SIP requirements, however, the EPA has revised its prior interpretation of the statute that would have allowed such provisions under certain very limited conditions. Based upon an evaluation of the relevant statutory provisions in light of more recent court decisions, the EPA is issuing a SIP call to address existing affirmative defense provisions that would operate to alter or eliminate the jurisdiction of courts to assess liability and impose remedies and that would thereby contradict explicit provisions of the CAA relating to judicial authority.

Third, the Petitioner argued that the EPA should not rely on interpretive letters from states to resolve any ambiguity, or perceived ambiguity, in state regulatory provisions in SIP submissions. The Petitioner reasoned that all regulatory provisions should be clear and unambiguous on their face and that any reliance on interpretive letters to alleviate facial ambiguity in SIP provisions can lead to later

problems with compliance and enforcement. Extrapolating from several instances in which the basis for the original approval of a SIP provision related to excess emissions during SSM events was arguably not clear, the Petitioner contended that the EPA should never use interpretive letters to resolve such ambiguities. As explained later in this proposal, the EPA acknowledges the concern of the Petitioner that provisions in SIPs should be clear and unambiguous. However, the EPA does not agree with the Petitioner that reliance on interpretive letters in a rulemaking context is never appropriate. Without the ability to rely on a state's interpretive letter that can in a timely way clarify perceived ambiguity in a provision in a SIP submission, however small that ambiguity may be, the EPA may have no recourse other than to disapprove the state's SIP submission. Thus, the EPA is denying the request that actions on SIP submissions never rely on interpretive letters. Instead, the EPA explains how proper documentation of reliance on interpretive letters in notice-and-comment rulemaking nevertheless addresses the practical concerns of the Petitioner.

C. To which air agencies does this rulemaking apply and why?

In general, the final action may be of interest to all air agencies because the EPA is clarifying, restating and revising its longstanding SSM Policy with respect to what the CAA requires concerning SIP provisions relevant to excess emissions during periods of SSM. For example, the EPA is granting the Petitioner's request that the EPA rescind its prior interpretation of the CAA that, as stated in prior guidance in the SSM Policy, allowed appropriately drawn affirmative defense provisions applicable to malfunctions. The EPA is also reiterating, clarifying or revising its prior guidance with respect to several other issues related to SIP provisions applicable to SSM events in order to ensure that future SIP submissions, not limited to those that affected states make in response to this action, are fully consistent with the CAA. For example, the EPA is reiterating and clarifying its prior guidance concerning how states may elect to replace existing exemptions for excess emissions during SSM events with properly developed alternative emission limitations that apply to the affected sources during startup, shutdown or other normal modes of source operation (*i.e.*, that apply to excess emissions during those normal modes of operation as opposed to during malfunctions). This action also

¹⁰ The term "substantially inadequate" is used in the CAA and is discussed in detail in section VIII.A of this document.

addresses the use of interpretive letters for purposes of resolving an actual or perceived ambiguity in a SIP submission during the EPA's evaluation of the SIP revision at issue.

In addition, this final action is directly relevant to the states with SIP provisions relevant to excess emissions that the EPA has determined are inconsistent with CAA requirements or with the EPA's interpretation of those requirements in the SSM Policy. In this final action, the EPA is either granting

or denying the Petition with respect to the specific existing SIP provisions in each of 39 states identified by the Petitioner as allegedly inconsistent with the CAA. The 39 states (for which the Petitioner identified SIP provisions applicable in 46 statewide and local jurisdictions and no tribal areas)¹¹ are listed in table 1, "List of States with SIP Provisions for Which the EPA Either Grants or Denies the Petition, in Whole or in Part." After evaluating the Petition, the EPA is granting the Petition with

respect to one or more provisions in 34 of the 39 states listed, and these are the states for which the action on the Petition, according to table 1, is either "Grant" or "Partially grant, partially deny." Conversely, the EPA is denying the petition with respect to all provisions that the Petitioner identified in 5 of the 39 states, and these (Idaho, Nebraska, New Hampshire, Oregon and Wyoming) are the states for which the final action on the Petition, according to table 1, is "Deny."

TABLE 1—LIST OF STATES WITH SIP PROVISIONS FOR WHICH THE EPA EITHER GRANTS OR DENIES THE PETITION, IN WHOLE OR IN PART

EPA region	State	Final action on petition
I	Maine	Grant.
	New Hampshire	Deny.
	Rhode Island	Grant.
II	New Jersey	Partially grant, partially deny.
III	Delaware	Grant.
	District of Columbia	Partially grant, partially deny.
	Virginia	Grant.
	West Virginia	Grant.
IV	Alabama	Grant.
	Florida	Grant.
	Georgia	Grant.
	Kentucky	Partially grant, partially deny.
	Mississippi	Grant.
	North Carolina	Grant.
	South Carolina	Partially grant, partially deny.
	Tennessee	Grant.
V	Illinois	Grant.
	Indiana	Grant.
	Michigan	Grant.
	Minnesota	Grant.
	Ohio	Partially grant, partially deny.
VI	Arkansas	Grant.
	Louisiana	Grant.
	New Mexico	Grant.
	Oklahoma	Grant.
VII	Iowa	Partially grant, partially deny.
	Kansas	Grant.
	Missouri	Partially grant, partially deny.
	Nebraska	Deny.
VIII	Colorado	Grant.
	Montana	Grant.
	North Dakota	Partially grant, partially deny.
	South Dakota	Grant.
	Wyoming	Deny.
IX	Arizona	Partially grant, partially deny.
X	Alaska	Grant.
	Idaho	Deny.
	Oregon	Deny.
	Washington	Grant.

For each state for which the final action on the Petition is either "Grant" or "Partially grant, partially deny," the EPA finds that certain specific provisions in each state's SIP are substantially inadequate to meet CAA requirements for the reason that these

provisions are inconsistent with the CAA with regard to how the state treats excess emissions from sources during periods of SSM. With respect to the affirmative defense provisions identified in the Petition, the EPA finds that they improperly impinge upon the statutory

jurisdiction of the courts to determine liability and impose remedies for violations of SIP emission limitations. The EPA believes that certain specific provisions in these SIPs fail to meet fundamental statutory requirements intended to attain and maintain the

¹¹ The state has the primary responsibility to implement SIP obligations, pursuant to CAA section 107(a). However, as CAA section 110(a)(2)(E) allows, a state may authorize and rely

on a local or regional government, agency or instrumentality to carry out the SIP or a portion of the SIP within its jurisdiction. As a result, some of the SIP provisions at issue in this rulemaking apply

to specific portions of a state. Thus, in certain states, submission of a corrective SIP revision may involve rulemaking in more than one jurisdiction.

NAAQS, protect prevention of significant deterioration (PSD) increments and improve visibility. Equally importantly, the EPA believes that the same provisions may undermine the ability of states, the EPA and the public to enforce emission limitations in the SIP that have been relied upon to ensure attainment or maintenance of the NAAQS or to meet other CAA requirements.

For each state for which the final action on the Petition is either “Grant” or “Partially grant, partially deny,” the EPA is also in this final action calling for a SIP revision as necessary to correct the identified deficient provisions. The SIP revisions that the states are directed to make will rectify a number of different types of defects in existing SIPs, including automatic exemptions from emission limitations, impermissible director’s discretion provisions, enforcement discretion provisions that have the effect of barring enforcement by the EPA or through a citizen suit and affirmative defense provisions that are inconsistent with CAA requirements. A corrective SIP revision addressing automatic or impermissible discretionary exemptions will ensure that excess emissions during periods of SSM are treated in accordance with CAA requirements. Similarly, a corrective SIP revision addressing ambiguity in who may enforce against violations of these emission limitations will also ensure that CAA requirements to provide for enforcement are met. A SIP revision to remove affirmative defense provisions will assure that the SIP provision does not purport to alter or eliminate the

jurisdiction of federal courts to assess liability or to impose remedies consistent with the statutory authority provided in CAA section 113 and section 304. The particular provisions for which the EPA is requiring SIP revisions are summarized in section IX of this document. Many of these provisions were added to the respective SIPs many years ago and have not been the subject of action by the state or the EPA since.

For each of the states for which the EPA is denying or is partially denying the Petition, the EPA finds that the particular provisions identified by the Petitioner are not substantially inadequate to meet the requirements pursuant to CAA section 110(k)(5), because the provisions: (i) Are, as they were described in the Petition and as they appear in the existing SIP, consistent with the requirements of the CAA; or (ii) are, as they appear in the existing SIP after having been revised subsequent to the date of the Petition, consistent with the requirements of the CAA; or (iii) have, subsequent to the date of the Petition, been removed from the SIP. Thus, in this final action, the EPA is taking no action to issue a SIP call with respect to those states for those particular SIP provisions.

In addition to evaluating specific SIP provisions identified in the Petition, the EPA has independently evaluated additional affirmative defense provisions in the SIPs of six states (applicable in nine statewide and local jurisdictions).¹² As explained in the SNPR, the EPA determined that this approach was necessary in order to take into consideration recent judicial

decisions concerning affirmative defense provisions and CAA requirements. As the result of this evaluation, the EPA finds that specific affirmative defense provisions in 17 states (applicable in 23 statewide and local jurisdictions) are substantially inadequate to meet CAA requirements for the reason that these provisions impinge upon the statutory jurisdiction of the federal courts to determine liability and impose remedies for violations of SIP emission limitations.¹³ By improperly impinging upon the jurisdiction of the federal courts, the EPA believes, these provisions fail to meet fundamental statutory requirements intended to attain and maintain the NAAQS, protect PSD increments and improve visibility. As with the affirmative defense provisions identified in the Petition, the EPA believes that these provisions may undermine the ability of states, the EPA and the public to enforce emission limitations in the SIP that have been relied upon to ensure attainment or maintenance of the NAAQS or to meet other CAA requirements.

In this final action, the EPA is issuing a SIP call to each of 36 states (for provisions applicable in 45 statewide and local jurisdictions) with respect to these provisions. The 36 states are listed in table 2, “List of All States With SIP Provisions Subject to SIP Call.” The EPA emphasizes that this SIP call action pertains to the specific SIP provisions identified and discussed in section IX of this document. The actions required of individual states in response to this SIP call action are discussed in more detail in section IX of this action.

TABLE 2—LIST OF ALL STATES WITH SIP PROVISIONS SUBJECT TO SIP CALL

EPA region	State	Area
I	Maine	State.
	Rhode Island	State.
II	New Jersey	State.
III	Delaware	State.
	District of Columbia	State.
	Virginia	State.
	West Virginia	State.
IV	Alabama	State.
	Florida	State.
	Georgia	State.
	Kentucky	State.

¹² The six states in which the EPA independently evaluated affirmative defense provisions are: California; South Carolina, New Mexico, Texas, Washington and West Virginia. The EPA evaluated the New Mexico SIP with respect to provisions applicable to the state and Albuquerque-Bernalillo County. The EPA evaluated the Washington SIP with respect to provisions applicable to the state, the Energy Facility Site Evaluation Council and the Southwest Clean Air Agency.

¹³ The 17 states for which the EPA finds that specific affirmative defense provisions are substantially inadequate to meet CAA requirements are counted as follows: The EPA evaluated affirmative defense provisions identified by the Petitioner for 14 states: Alaska; Arizona; Arkansas; Colorado; District of Columbia; Georgia; Illinois; Indiana; Kentucky; Michigan; Mississippi; New Mexico; Virginia; and Washington. The EPA evaluated affirmative defense provisions that it independently identified among two states identified by the Petitioner: South Carolina; and

West Virginia. Further, the EPA independently identified and evaluated affirmative defense provisions in two states that were not included in the Petition: California; and Texas. In the final action, the EPA is finding one or more affirmative defense provisions to be substantially inadequate in all but one of the 18 states for which the EPA evaluated affirmative defense provisions; for one state, Kentucky, the affirmative defense provision, which was applicable in Jefferson County, was corrected prior to the EPA’s issuing its SNPR.

TABLE 2—LIST OF ALL STATES WITH SIP PROVISIONS SUBJECT TO SIP CALL—Continued

EPA region	State	Area
V	Mississippi	State.
	North Carolina	State and Forsyth County.
	South Carolina	State.
	Tennessee	State, Knox County and Shelby County.
	Illinois	State.
VI	Indiana	State.
	Michigan	State.
	Minnesota	State.
	Ohio	State.
	Arkansas	State.
VII	Louisiana	State.
	New Mexico	State and Albuquerque-Bernalillo County.
	Oklahoma	State.
	Texas	State.
	Iowa	State.
VIII	Kansas	State.
	Missouri	State.
	Colorado	State.
	Montana	State.
	North Dakota	State.
IX	South Dakota	State.
	Arizona	State and Maricopa County.
	California	Eastern Kern APCD, Imperial County APCD and San Joaquin Valley Unified APCD.
X	Alaska	State.
	Washington	State, Energy Facility Site Evaluation Council and Southwest Clean Air Agency.

D. What are the next steps for states that are receiving a finding of substantial inadequacy and a SIP call?

The EPA is finalizing a finding of substantial inadequacy and issuing a SIP call for the states listed in table 2 (see section II.C of this document). The EPA is also establishing a deadline by which these states must make a SIP submission to rectify the specifically identified deficiencies in their respective SIPs. Pursuant to CAA section 110(k)(5), the EPA has authority to set a SIP submission deadline that is up to 18 months from the date of the final finding of substantial inadequacy. After considering comment on this issue, the EPA is in this final action establishing a deadline of November 22, 2016, by which each affected state is to respond to the SIP call. The deadline falls 18 months from the date of signature and dissemination of this final finding of substantial inadequacy. Thereafter, the EPA will review the adequacy of that new SIP submission in accordance with the CAA requirements of sections 110(a), 110(k)(3), 110(l) and 193, including the EPA's interpretation of the CAA reflected in the SSM Policy as clarified and updated through this rulemaking. The EPA believes that states should be provided the maximum time allowable under CAA section 110(k)(5) in order to have sufficient time to make appropriate SIP revisions following their own SIP development process. Such a schedule will allow for

the necessary SIP development process to correct the deficiencies yet still achieve the necessary SIP improvements as expeditiously as practicable consistent with the maximum time allowed by statute.

E. What are potential impacts on affected states and sources?

The issuance of a SIP call requires an affected state to take action to revise its SIP. That action by the state may, in turn, affect sources as described later in this document. The states that are receiving a SIP call in this final action will in general have options as to exactly how to revise their SIPs. In response to a SIP call, a state retains broad discretion concerning how to revise its SIP, so long as that revision is consistent with the requirements of the CAA. Some provisions that are affected by this SIP call, for example an automatic exemption provision, have to be removed entirely and an affected source could no longer depend on the exemption to avoid all liability for excess emissions during SSM events. Some other provisions, for example a problematic enforcement discretion provision, could either be removed entirely from the SIP or retained if revised appropriately to apply only to state enforcement personnel, in accordance with the EPA's interpretation of the CAA as described in the EPA's SSM Policy. The EPA notes that if a state removes a SIP provision that pertains to the state's exercise of

enforcement discretion, this removal would not affect the ability of the state to apply its traditional enforcement discretion in its enforcement program. It would merely make the exercise of such discretion case-by-case in nature, as is the normal form of such discretion.

In addition, affected states may choose to consider reassessing particular emission limitations, for example to determine whether those emission limitations can be revised such that well-managed emissions during planned operations such as startup and shutdown would not exceed the revised emission limitation, while still protecting air quality and meeting other applicable CAA requirements. Such a revision of an emission limitation will need to be submitted as a SIP revision for the EPA's approval if the existing limitation to be changed is already included in the SIP or if the existing SIP relies on the particular existing emission limitation to meet a CAA requirement. In such instances, the EPA would review the SIP revision for consistency with all applicable CAA requirements. A state that chooses to revise particular emission limitations, in addition to removing or revising the aspect of the existing SIP provision that is inconsistent with CAA requirements, could include those revisions in the same SIP submission that addresses the SSM provisions identified in the SIP call, or it could submit them separately.

The implications for a regulated source in a given state, in terms of

whether and how it would potentially have to change its equipment or practices in order to operate with emissions that comply with the revised SIP, will depend on the nature and frequency of the source's SSM events and how the state has chosen to revise the SIP to address excess emissions during SSM events. The EPA did not conduct an analysis that would indicate, *e.g.*, how many owners or operators of sources in each affected state would likely change any procedures or processes for control of emissions from those sources during periods of SSM. The impacts of revised SIP provisions will be unique to each affected state and its particular mix of affected sources, and thus the EPA cannot predict what those impacts might be. Furthermore, the EPA does not believe the results of such analysis, had one been conducted, would significantly affect this rulemaking that pertains to whether SIP provisions comply with CAA requirements. The EPA recognizes that after all the responsive SIP revisions are in place and are being implemented by the states, some sources may need to take steps to control emissions better so as to comply with emission limitations continuously, as required by the CAA, or to increase durability of components and monitoring systems to detect and manage malfunctions promptly.

The EPA Regional Offices will work with states to help them understand their options and the potential consequences for sources as the states prepare their SIP revisions in response to this SIP call.

F. What happens if an affected state fails to meet the SIP submission deadline?

If, in the future, the EPA finds that a state that is subject to this SIP call action has failed to submit a complete SIP revision as required, or the EPA disapproves such a SIP revision, then the finding or disapproval would trigger an obligation for the EPA to impose a federal implementation plan (FIP) within 24 months after that date. That FIP obligation would be discharged without promulgation of a FIP only if the state makes and the EPA approves the called-for SIP submission. In addition, if a state fails to make the required SIP revision, or if the EPA disapproves the required SIP revision, then either event can also trigger mandatory 18-month and 24-month sanctions clocks under CAA section 179. The two sanctions that apply under CAA section 179(b) are the 2-to-1 emission offset requirement for all new and modified major sources subject to the nonattainment new source review

(NSR) program and restrictions on highway funding. More details concerning the timing and process of the SIP call, and potential consequences of the SIP call, are provided in section VIII of this document.

G. What is the status of SIP provisions affected by this SIP call action in the interim period starting when the EPA promulgates the final SIP call and ending when the EPA approves the required SIP revision?

When the EPA issues a final SIP call to a state, that action alone does not cause any automatic change in the legal status of the existing affected provision(s) in the SIP. During the time that the state takes to develop a SIP revision in response to the SIP call and the time that the EPA takes to evaluate and act upon the resulting SIP submission from the state pursuant to CAA section 110(k), the existing affected SIP provision(s) will remain in place. The EPA notes, however, that the state regulatory revisions that the state has adopted and submitted for SIP approval will most likely be already in effect at the state level during the pendency of the EPA's evaluation of and action upon the new SIP submission.

The EPA recognizes that in the interim period, there may continue to be instances of excess emissions that adversely affect attainment and maintenance of the NAAQS, interfere with PSD increments, interfere with visibility and cause other adverse consequences as a result of the impermissible provisions. The EPA is particularly concerned about the potential for serious adverse consequences for public health in this interim period during which states, the EPA and sources make necessary adjustments to rectify deficient SIP provisions and take steps to improve source compliance. However, given the need to resolve these longstanding SIP deficiencies in a careful and comprehensive fashion, the EPA believes that providing sufficient time consistent with statutory constraints for these corrections to occur will ultimately be the best course to meet the ultimate goal of eliminating the inappropriate SIP provisions and replacing them with provisions consistent with CAA requirements.

III. Statutory, Regulatory and Policy Background

The Petition raised issues related to excess emissions from sources during periods of SSM and the correct treatment of these excess emissions in SIPs. In this context, "excess emissions" are air emissions that exceed the

otherwise applicable emission limitations in a SIP, *i.e.*, emissions that would be violations of such emission limitations. The question of how to address excess emissions correctly during SSM events has posed a challenge since the inception of the SIP program in the 1970s. The primary objective of state and federal regulators is to ensure that sources of emissions are subject to appropriate emission controls as necessary in order to attain and maintain the NAAQS, protect PSD increments, improve visibility and meet other statutory requirements. Generally, this is achieved through enforceable emission limitations on sources that apply, as required by the CAA, continuously.

Several key statutory provisions of the CAA are relevant to the EPA's evaluation of the Petition. These provisions relate generally to the basic legal requirements for the content of SIPs, the authority and responsibility of air agencies to develop such SIPs and the EPA's authority and responsibility to review and approve SIP submissions in the first instance, as well as the EPA's authority to require improvements to a previously approved SIP if the EPA later determines that to be necessary for a SIP to meet CAA requirements. In addition, the Petition raised issues that pertain to enforcement of provisions in a SIP. The enforcement issues relate generally to what constitutes a violation of an emission limitation in a SIP, who may seek to enforce against a source for that violation, and whether the violator should be subject to monetary penalties as well as other forms of judicial relief for that violation.

The EPA has a longstanding interpretation of the CAA with respect to the treatment of excess emissions during periods of SSM in SIPs. This statutory interpretation has been expressed, reiterated and elaborated upon in a series of guidance documents issued in 1982, 1983, 1999 and 2001. In addition, the EPA has applied this interpretation in individual rulemaking actions in which the EPA: (i) Approved SIP submissions that were consistent with the EPA's interpretation;¹⁴ (ii) disapproved SIP submissions that were not consistent with this interpretation;¹⁵ (iii) itself promulgated regulations in FIPs that were consistent

¹⁴ See "Approval and Promulgation of Implementation Plans; Texas; Excess Emissions During Startup, Shutdown, Maintenance, and Malfunction Activities," 75 FR 68989 (November 10, 2010).

¹⁵ See "Approval and Promulgation of State Implementation Plans; Michigan," 63 FR 8573 (February 20, 1998).

with this interpretation;¹⁶ or (iv) issued a SIP call requiring a state to revise an impermissible SIP provision.¹⁷

The EPA's SSM Policy is a policy statement and thus constitutes guidance. As guidance, the SSM Policy does not bind states, the EPA or other parties, but it does reflect the EPA's interpretation of the statutory requirements of the CAA. The EPA's evaluation of any SIP provision, whether prospectively in the case of a new provision in a SIP submission or retrospectively in the case of a previously approved SIP submission, must be conducted through a notice-and-comment rulemaking in which the EPA will determine whether a given SIP provision is consistent with the requirements of the CAA and applicable regulations.¹⁸

The Petition raised issues related to excess emissions from sources during periods of SSM, and the consequences of failing to address these emissions correctly in SIPs. In broad terms, the Petitioner expressed concerns that the exemptions for excess emissions and the other types of alleged deficiencies in existing SIP provisions "undermine the emission limits in SIPs and threaten states' abilities to achieve and maintain the NAAQS, thereby threatening public health and public welfare, which includes agriculture, historic properties and natural areas."¹⁹ The Petitioner asserted that such exemptions for SSM events are "loopholes" that can allow dramatically higher amounts of emissions and that these emissions "can swamp the amount of pollutants emitted at other times."²⁰ In addition, the Petitioner argued that these automatic and discretionary exemptions, as well as other SIP provisions that interfere with the enforcement structure of the CAA, undermine the objectives of the CAA.

The EPA notes that the types of SIP deficiencies identified in the Petition are not legal technicalities. Compliance with the applicable requirements is intended to achieve the air quality protection and improvement purposes and objectives of the CAA. The EPA believes that the results of automatic and discretionary exemptions in SIP provisions, and of other provisions that

interfere with effective enforcement of SIPs, are real-world consequences that adversely affect public health.

Commenters on the February 2013 proposal provided illustrative examples of impacts that these types of SIP provisions have on the communities located near sources that rely on automatic or discretionary exemptions for excess emissions during SSM events, rather than by designing, operating and maintaining their sources to meet the applicable emission limitations.²¹ These comments also illustrated the ways in which such exemptions, incorrect enforcement discretion provisions and affirmative defense provisions have interfered with the enforcement structure of the CAA by raising inappropriate impediments to enforcement by states, the EPA or citizens.

The EPA's memorandum providing a detailed discussion of the statutory, regulatory and policy background for this action can be found in the docket for this rulemaking.²²

IV. Final Action in Response To Request To Rescind the EPA Policy Interpreting the CAA To Allow Affirmative Defense Provisions

A. What the Petitioner Requested

The Petitioner's first request was for the EPA to rescind its SSM Policy element interpreting the CAA to allow affirmative defense provisions in SIPs for excess emissions during SSM events.²³ Related to this request, the Petitioner also asked the EPA: (i) To find that SIPs containing an affirmative defense to monetary penalties for excess emissions during SSM events are substantially inadequate because they do not comply with the CAA; and (ii) to issue a SIP call pursuant to CAA section 110(k)(5) to require each such state to revise its SIP.²⁴ Alternatively, if the EPA denies these two related requests, the Petitioner asked the EPA: (i) To require states with SIPs that contain such affirmative defense

provisions to revise them so that they are consistent with the EPA's 1999 SSM Guidance for excess emissions during SSM events; and (ii) to issue a SIP call pursuant to CAA section 110(k)(5) to states with provisions inconsistent with the EPA's interpretation of the CAA.²⁵

The Petitioner requested that the EPA rescind its SSM Policy element interpreting the CAA to allow SIPs to include affirmative defenses for violations due to excess emissions during any type of SSM events because the Petitioner contended there is no legal basis for the Agency's interpretation. Specifically, the Petitioner cited to two statutory grounds, CAA sections 113(b) and 113(e), related to the type of judicial relief available in an enforcement proceeding and to the factors relevant to the scope and availability of such relief, that the Petitioner claimed would bar the approval of any type of affirmative defense provision in SIPs. The Petitioner drew no distinction between affirmative defense provisions for malfunctions versus affirmative defense provisions for startup and shutdown or other normal modes of operation; in the Petitioner's view all are equally inconsistent with CAA requirements.

In the Petitioner's view, the CAA "unambiguously grants jurisdiction to the district courts to determine penalties that should be assessed in an enforcement action involving the violation of an emissions limit."²⁶ The Petitioner first argued that in any judicial enforcement action in a district court, CAA section 113(b) provides that "such court shall have jurisdiction to restrain such violation, to require compliance, to assess such penalty, . . . and to award any other appropriate relief." The Petitioner reasoned that the EPA's SSM Policy is therefore fundamentally inconsistent with the CAA because it purports to remove the discretion and authority of the district courts to assess monetary penalties for violations if a source is shielded from monetary penalties under an affirmative defense provision in the approved SIP.²⁷ The Petitioner concluded that the EPA's interpretation of the CAA in the SSM Policy element allowing any affirmative defenses is impermissible "because the inclusion of an affirmative defense provision in a SIP limits the courts' discretion—granted by Congress—to assess penalties for Clean Air Act violations."²⁸

¹⁶ See "Federal Implementation Plan for the Billings/Laurel, MT [Montana], Sulfur Dioxide Area," 73 FR 21418 (April 21, 2008).

¹⁷ See "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 76 FR 21639 (April 18, 2011).

¹⁸ See generally *Catawba County, North Carolina v. EPA*, 571 F.3d 20, 33–35 (D.C. Cir. 2009) (upholding the EPA's process for developing and applying its guidance for designations).

¹⁹ Petition at 2.

²⁰ Petition at 12.

²¹ The EPA notes that a number of commenters described the impacts of SIP provisions of these types. See, e.g., comments of *Sierra Club, et al.*, EPA-HQ-OAR-2012-0322-0622, pp. 28–35 (describing impacts on several specific communities); comments of *American Bottom Conservancy*, EPA-HQ-OAR-2012-0322-0579 (describing impacts on one specific community); and comments of *Citizen for Env't Justice and Env'l Integrity Project*, EPA-HQ-OAR-2012-0322-0621, pp. 8–17 (discussing impacts of such provisions on enforcement more generally).

²² See Memorandum, "Statutory, Regulatory, and Policy Context for this Rulemaking," February 4, 2013, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0029.

²³ Petition at 11.

²⁴ *Id.*

²⁵ Petition at 12.

²⁶ Petition at 10.

²⁷ *Id.*

²⁸ *Id.*

Second, in reliance on CAA section 113(e)(1), the Petitioner argued that in a judicial enforcement action in a district court, the statute explicitly specifies a list of factors that the court is to consider in assessing penalties.²⁹ The Petitioner argued that the EPA's SSM Policy authorizes states to create affirmative defense provisions with criteria for monetary penalties that are inconsistent with the factors that the statute specifies and that the statute explicitly directs courts to weigh in any judicial enforcement action. By specifying particular factors for courts to consider, the Petitioner reasoned, Congress has already definitively spoken to the question of what factors are germane in assessing monetary penalties under the CAA for violations. The Petitioner concluded that the EPA has no authority to allow a state to include an affirmative defense provision in a SIP with different criteria to be considered in awarding monetary penalties because "[p]reventing the district courts from considering these statutory factors is not a permissible interpretation of the Clean Air Act."³⁰ A more detailed explanation of the Petitioner's arguments appears in the 2013 February proposal.³¹

B. What the EPA Proposed

In the February 2013 proposal, consistent with its interpretation of the Act at that time, the EPA proposed to deny in part and to grant in part the Petition with respect to this overarching issue. As a revision to the SSM Policy as embodied in the 1999 SSM Guidance, the EPA proposed a distinction between affirmative defenses for unplanned events such as malfunctions and planned events such as startup and shutdown. The EPA explained the basis for its initial proposed action in detail, including why the Agency then believed that there was a statutory basis for narrowly drawn affirmative defense provisions that met certain criteria applicable to malfunction events but no such statutory basis for affirmative defense provisions applicable to startup and shutdown events. In the February 2013 proposal, the EPA also proposed to deny in part and to grant in part the Petition with respect to specific affirmative defense provisions in the SIPs of various states identified in the Petition consistent with that interpretation. With respect to these specific existing SIP provisions, the EPA distinguished between those provisions

that were consistent with the Agency's interpretation of the CAA as set forth in 1999 SSM Guidance and were limited to malfunction events and other affirmative defense provisions that were not limited to malfunctions or otherwise not consistent with the Agency's interpretation of the CAA and included one or more deficiencies.

Subsequent to the February 2013 proposal, however, a judicial decision by the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in *NRDC v. EPA* concerning the legal basis for affirmative defense provisions in the EPA's own regulations caused the Agency to reconsider the legal basis for any affirmative defense provisions in SIPs, regardless of the type of events to which they apply, the criteria they may contain or the types of judicial remedies they purport to limit or eliminate.³² Thus, the EPA issued an SNPR to revise its proposed response to the Petition with respect to whether affirmative defense provisions in SIPs are consistent with fundamental legal requirements of the CAA.³³ In the SNPR, the EPA also revised its proposed response related to each of the specific affirmative defense provisions identified in the Petition. Changes to the proposed response included revision of the basis for the proposed finding of substantial inadequacy for many of the provisions (to incorporate the EPA's revised interpretation of the CAA into that basis). Other changes to the proposed response included reversal of the proposed denial of the Petition for some provisions that the Agency previously believed to be consistent with CAA requirements but subsequently determined were not authorized by the Act under the analysis prompted by the *NRDC v. EPA* decision. In order to provide comprehensive guidance to all states concerning affirmative defense provisions in SIPs and to avoid confusion that may arise due to recent court decisions relevant to such provisions under the CAA, the EPA also addressed additional existing SIP affirmative defense provisions of which it was aware although the provisions were not specifically identified in the Petition. The EPA initially examined the specific affirmative defense provisions identified by the Petitioner in 14 states but subsequently broadened its review to include additional provisions in four states, including two states that were not included in the Petition. Most importantly, the EPA provided a detailed explanation in the SNPR as to

why it now believes that the logic of the court in the *NRDC v. EPA* decision vacating the affirmative defense in an Agency emission limitation under CAA section 112 likewise extends to affirmative defense provisions in SIPs.

C. What Is Being Finalized in This Action

The EPA is taking final action to grant the Petition on the request to rescind its SSM Policy element that interpreted the CAA to allow states to elect to create affirmative defense provisions in SIPs. The EPA is also taking final action to grant the Petition on the request to make a finding of substantial inadequacy and to issue SIP calls for specific existing SIP provisions that include an affirmative defense as identified in the SNPR. The specific SIP provisions at issue are discussed in section IX of this document. These existing affirmative defense provisions include some provisions that the EPA had previously determined were consistent with the CAA as interpreted in the 1999 SSM Guidance and other provisions that were not consistent even with that interpretation of the CAA. As explained in the SNPR, the EPA has now concluded that the enforcement structure of the CAA, embodied in section 113 and section 304, precludes any affirmative defense provisions that would operate to limit a court's jurisdiction or discretion to determine the appropriate remedy in an enforcement action. These provisions are not appropriate under the CAA, no matter what type of event they apply to, what criteria they contain or what forms of remedy they purport to limit or eliminate.

The EPA is revising its interpretation of the CAA with respect to affirmative defenses based upon a reevaluation of the statutory provisions that pertain to enforcement of SIP provisions in light of recent court opinions. Section 113(b) provides courts with explicit jurisdiction to determine liability and to impose remedies of various kinds, including injunctive relief, compliance orders and monetary penalties, in judicial enforcement proceedings. This grant of jurisdiction comes directly from Congress, and the EPA is not authorized to alter or eliminate this jurisdiction under the CAA or any other law. With respect to monetary penalties, CAA section 113(e) explicitly includes the factors that courts and the EPA are required to consider in the event of judicial or administrative enforcement for violations of CAA requirements, including SIP provisions. Because Congress has already given federal courts the jurisdiction to determine

²⁹ Petition at 11.

³⁰ Petition at 11.

³¹ See February 2013 proposal, 78 FR 12459 at 12468 (February 22, 2013).

³² See *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014).

³³ See SNPR, 79 FR 55919 (September 17, 2014).

what monetary penalties are appropriate in the event of judicial enforcement for a violation of a SIP provision, neither the EPA nor states can alter or eliminate that jurisdiction by superimposing restrictions on that jurisdiction and discretion granted by Congress to the courts. Affirmative defense provisions by their nature purport to limit or eliminate the authority of federal courts to determine liability or to impose remedies through factual considerations that differ from, or are contrary to, the explicit grants of authority in section 113(b) and section 113(e). Accordingly, pursuant to section 110(k) and section 110(l), the EPA cannot approve any such affirmative defense provision in a SIP. If such an affirmative defense provision is included in an existing SIP, the EPA has authority under section 110(k)(5) to require a state to remove that provision.

States have great discretion in how to devise SIP provisions, but they do not have discretion to create provisions that contradict fundamental legal requirements of the CAA. The jurisdiction of federal courts to determine liability and to impose statutory remedies for violations of SIP emission limitations is one such fundamental requirement. The court in the recent *NRDC v. EPA* decision did not remand the regulation to the EPA for better explanation of the legal basis for an affirmative defense; the court instead vacated the affirmative defense and indicated that there could be no valid legal basis for such a provision because it contradicted fundamental requirements of the CAA concerning the jurisdiction of courts in judicial enforcement of CAA requirements. A more detailed explanation of the EPA's basis for determining that affirmative defense provisions in SIPs are similarly contrary to the requirements of the CAA appears in the SNPR.³⁴

Couching an affirmative defense provision in terms of merely defining whether the emission limitation applies and thus whether there is a "violation," as suggested by some commenters, is also problematic. If there is no "violation" when certain criteria or conditions for an "affirmative defense" are met, then there is in effect no emission limitation that applies when the criteria or conditions are met; the affirmative defense thus operates to create an exemption from the emission limitation. As explained in the February 2013 proposal, the CAA requires that emission limitations must apply continuously and cannot contain

exemptions, conditional or otherwise. This interpretation is consistent with the decision in *Sierra Club v. Johnson* concerning the term "emission limitation" in section 302(k).³⁵ Characterizing the exemptions as an "affirmative defense" runs afoul of the requirement that emission limitations must apply continuously.

The EPA recognizes that the original policy objectives behind states' affirmative defense provisions were likely well-intentioned, e.g., to encourage better source design, maintenance and operation through the incentive of being shielded from certain statutory remedies for violations under certain specified conditions. Nevertheless, creation of SIP provisions that would operate to limit or eliminate the jurisdiction of courts to determine liability or to impose remedies provided for by statute is inconsistent with the enforcement structure of the CAA. The EPA emphasizes that the absence of an affirmative defense provision in a SIP, whether as a freestanding generally applicable provision or as a specific component of a particular emission limitation, does not mean that all exceedances of SIP emission limitations will automatically be subject to enforcement or automatically be subject to imposition of particular remedies. Pursuant to the CAA, all parties with authority to bring an enforcement action to enforce SIP provisions (i.e., the state, the EPA or any parties who qualify under the citizen suit provision of section 304) have enforcement discretion that they may exercise as they deem appropriate in any given circumstances. For example, if the event that causes excess emissions is an actual malfunction that occurred despite reasonable care by the source operator to avoid malfunctions, then each of these parties may decide that no enforcement action is warranted. In the event that any party decides that an enforcement action is warranted, then it has enforcement discretion with respect to what remedies to seek from the court for the violation (e.g., injunctive relief, compliance order, monetary penalties or all of the above), as well as the type of injunctive relief and/or amount of monetary penalties sought.³⁶ Further, courts have the discretion under section 113 to decline to impose penalties or injunctive relief in appropriate cases as explained below.

Similarly, the absence of an affirmative defense provision in a SIP does not alter the legal rights of sources under the CAA. In the event of an enforcement action for an exceedance of a SIP emission limit, a source can elect to assert any common law or statutory defenses that it determines is supported, based upon the facts and circumstances surrounding the alleged violation. Under section 113(b), courts have explicit authority to impose injunctive relief, issue compliance orders, assess monetary penalties or fees and impose any other appropriate relief. Under section 113(e), courts are required to consider the enumerated statutory factors when assessing monetary penalties, including "such other factors as justice may require." For example, if the exceedance of the SIP emission limitation occurs due to a malfunction, that exceedance is a violation of the applicable emission limitation, but the source retains the ability to defend itself in an enforcement action and to oppose the imposition of particular remedies or to seek the reduction or elimination of monetary penalties, based on the specific facts and circumstances of the event. Thus, elimination of a SIP affirmative defense provision that purported to take away the statutory jurisdiction of the court to exercise its authority to impose remedies does not disarm sources in potential enforcement actions. Sources retain all of the equitable arguments they could previously have made under an affirmative defense provision; they must simply make such arguments to the reviewing court as envisioned by Congress in section 113(b) and section 113(e). Congress vested the courts with the authority to judge how best to weigh the evidence in an enforcement action and determine appropriate remedies.

Removal of such impermissible SIP affirmative defense provisions is necessary to preserve the enforcement structure of the CAA, to preserve the jurisdiction of courts to adjudicate questions of liability and remedies in judicial enforcement actions and to preserve the potential for enforcement by states, the EPA and other parties under the citizen suit provision as an effective deterrent to violations. In turn, this deterrent encourages sources to be properly designed, maintained and operated and, in the event of violation of SIP emission limitations, to take appropriate action to mitigate the impacts of the violation. In this way, as intended by the existing enforcement structure of the CAA, sources can mitigate the potential for enforcement actions against them and the remedies

³⁵ 551 F.3d 1019 (D.C. Cir. 2008).

³⁶ The EPA notes that only the state and the Agency have authority to seek criminal penalties for knowing and intentional violation of CAA requirements. The EPA has this explicit authority under section 113(c).

³⁴ See 79 FR 55919 at 12931–34 (September 17, 2014).

that courts may impose upon them in such enforcement actions, based upon the facts and circumstances of the event.

D. Response to Comments Concerning Affirmative Defense Provisions in SIPs

The EPA received numerous comments concerning the portion of the Agency's proposed response to the Petition in the February 2013 proposal that addressed the question of whether affirmative defense provisions are consistent with CAA requirements for SIPs. As explained in the SNPR, those particular comments submitted on the original February 2013 proposal are no longer germane, given that the EPA has substantially revised its initial proposed action on the Petition and its basis, both with respect to the overarching issue of whether such provisions are valid in SIPs under the CAA and with respect to specific affirmative defense provisions in existing SIPs of particular states. Accordingly, as the EPA indicated in the SNPR, it considers those particular comments on the February 2013 proposal no longer relevant and has determined that it is not necessary to respond to them. Concerning affirmative defense provisions, the appropriate focus of this rulemaking is on the comments that addressed the EPA's revised proposal in the SNPR.

With respect to the revised proposal concerning affirmative defense provisions in the SNPR, the EPA received numerous comments, some supportive and some critical of the Agency's proposed action on the Petition as revised in the SNPR. Many of these comments raised conceptual issues and arguments concerning the EPA's revised interpretation of the CAA with respect to affirmative defense provisions in SIPs in light of the *NRDC v. EPA* decision and concerning the EPA's application of that interpretation to specific affirmative defense provisions discussed in the SNPR. For clarity and ease of discussion, the EPA is responding to these overarching comments, grouped by issue, in this section of this document.

1. Comments that the EPA is misapplying the decision of the D.C. Circuit in *NRDC v. EPA* to SIP provisions because the decision only applies to the Agency's own regulations pursuant to CAA section 112.

Comment: Many commenters stated that the EPA's reliance on the D.C. Circuit's decision in *NRDC v. EPA* is misplaced in the SNPR because the opinion is limited to disapproval of a Maximum Achievable Control Technology (MACT) standard's affirmative defense for unavoidable malfunctions. The commenters noted

that the *NRDC v. EPA* decision did not address the issue of affirmative defense provisions in SIPs. The commenters argued that the D.C. Circuit's opinion only stands for the narrow proposition that the EPA may not include an affirmative defense to civil penalties in a NESHAP³⁷ under CAA section 112.

One commenter noted that the EPA, in the SNPR, stated that the *NRDC v. EPA* decision did not turn on any factors specific to CAA section 112 as support for the EPA applying the decision to SIPs. However, the commenter argued that this fact is not probative because neither party raised any argument specific to CAA section 112 and it is reasonable for a court to limit its analysis to the arguments presented before it.

One commenter also noted that the EPA is not bound to apply D.C. Circuit law to actions reviewable in other circuits.

Response: As explained in the SNPR, the EPA believes the reasoning of the court in the *NRDC v. EPA* decision indicates that states, like the EPA, have no authority in SIP provisions to alter the jurisdiction of federal courts to assess penalties for violations of CAA requirements through affirmative defense provisions.³⁸ If states lack authority under the CAA to alter the jurisdiction of the federal courts through affirmative defense provisions in SIPs, then the EPA lacks authority to approve any such provision in a SIP.

The EPA agrees with the commenters' statement that the *NRDC v. EPA* decision pertained to a challenge to the EPA's NESHAP regulations issued pursuant to CAA section 112 to regulate hazardous air pollutants (HAPs) from sources that manufacture Portland cement. However, the EPA disagrees with the commenters' contention that, because the *NRDC v. EPA* decision was based on a NESHAP, it is somehow inappropriate for the EPA to rely on the reasoning of the D.C. Circuit's decision as a basis for this action.

As acknowledged by a commenter, the EPA explained in the SNPR that the *NRDC v. EPA* decision did not turn on the specific provisions of CAA section 112.³⁹ However, the commenter missed the importance of this point. Although the *NRDC v. EPA* decision analyzed the

legal validity of an affirmative defense provision created by the EPA in conjunction with a specific NESHAP, the court based its decision upon the provisions of sections 113 and 304. Sections 113 and 304 pertain to enforcement of the CAA requirements more broadly, including to enforcement of SIP requirements. The court addressed section 112 and not sections germane specifically to SIPs, as only that section was before it. The EPA has applied the *NRDC* court's analysis to sections 113 and 304 with respect to SIPs and has concluded that the *NRDC* court's analysis is the better reading of the statutory provisions.

The affirmative defense provision in the Portland Cement NESHAP required the source to prove, by a preponderance of the evidence in an enforcement proceeding, that the source met specific criteria concerning the nature of the event. These specific criteria required to establish the affirmative defense in the Portland Cement NESHAP are functionally the same as the criteria that the EPA previously recommended to states for SIP provisions in the 1999 SSM Guidance and that the EPA repeated in the February 2013 proposal document. Accordingly, the EPA believes that the opinion of the court in *NRDC v. EPA* has significant impacts on the Agency's SSM Policy with respect to affirmative defense provisions. The reasoning by the *NRDC* court, as logically extended to SIP provisions, indicates that neither states nor the EPA have authority to alter either the rights of other parties to seek relief or the jurisdiction of federal courts to impose relief for violations of CAA requirements in SIPs. The EPA believes that the court's decision in *NRDC v. EPA* compelled the Agency to reevaluate its interpretation of the CAA as described in the SNPR.

The EPA also disagrees with commenters who suggested that a decision of the D.C. Circuit should have no bearing on actions that affect states in other circuit courts. The CAA vests authority with the D.C. Circuit to review nationally applicable regulations and any action of nationwide scope or effect. Accordingly, any decision of the D.C. Circuit in conducting such review is binding nationwide with respect to the action under review, and the D.C. Circuit's reasoning is also binding with respect to review of future EPA actions raising the same issues that will be subject to review within that Circuit. Given that the EPA has determined that this action has nationwide scope and effect, it is subject to exclusive review in the D.C. Circuit, so the EPA believes it is appropriate to apply the reasoning

³⁷ The NESHAPs are found in 40 CFR part 61 and 40 CFR part 63. The NESHAPs promulgated after the 1990 CAA Amendments are found in 40 CFR part 63. These standards require application of technology-based emissions standards referred to as Maximum Achievable Control Technology (MACT). Consequently, these post-1990 NESHAPs are also referred to as MACT standards.

³⁸ See 79 FR 55929–30; 55931–34.

³⁹ SNPR, 79 FR 55919 at 55932.

of the *NRDC* court, which interprets CAA sections 113 and 304, to determine the legality of affirmative defense provisions in this national action.⁴⁰

2. Comments that the EPA is misapplying the decision of the D.C. Circuit in *NRDC v. EPA* to SIP provisions because the court did not address the legality of affirmative defense provisions in SIPs.

Comment: Many commenters alleged that the EPA inappropriately relied on the D.C. Circuit's decision in *NRDC v. EPA* in the SNPR because the court specifically stated that its decision did not address whether affirmative defense provisions in SIPs were appropriate. The commenters pointed to the second footnote in the decision, in which the court explicitly stated: "We do not here confront the question whether an affirmative defense may be appropriate in a State Implementation Plan."⁴¹ Accordingly, the commenters argued that the *NRDC v. EPA* decision is "non-binding" with respect to SIP provisions.

Response: The EPA disagrees that the footnote relied upon by commenters renders application of the legal interpretation of the *NRDC* court to SIP provisions improper. The EPA specifically acknowledged and discussed the footnote in the *NRDC v. EPA* decision in the SNPR. The EPA explained its view of the significance of the footnote: "footnote 2 in the opinion does not signify that the court intended to take any position with respect to the application of its interpretation of the CAA to SIP provisions, let alone to suggest that its interpretation would not apply more broadly." As discussed in the SNPR in detail, the EPA believes the logic of the court's decision in *NRDC v. EPA* regarding the interpretation of sections 113 and 304 concerning affirmative defenses does extend to SIP provisions.

3. Comment that the EPA is inappropriately relying on the *NRDC v. EPA* decision because the DC Circuit's decision was decided in error.

Comment: One commenter alleged that the EPA's reliance on the *NRDC v. EPA* decision is misplaced because the court in that decision mistakenly relied on section 304(a) when holding that the EPA cannot restrict the jurisdiction of the courts with affirmative defense provisions. The commenter alleged that Congress did not intend to give the judiciary "fully-unfettered discretion" in section 304(a) because such a reading cannot be squared with section 304(b), which provides that "[n]o action can be commenced . . . if the Administrator or

State has commenced and is diligently prosecuting a civil action in a court of the United States."

Response: The EPA does not agree with the commenter's premise that the *NRDC* court erred by not considering section 304(b) as well as section 304(a). As the court correctly reasoned, section 304(a) authorizes any person to bring an enforcement action for violations of emission limitations. Section 304(f) defines the term "emission limitation" for this purpose very broadly. Section 304(b) does not alter the rights of any person who has given proper notice to bring such an action under section 304(a), unless the EPA or the state is diligently prosecuting a civil action to require compliance. The fact that section 304(b) limits the ability of any person to bring an enforcement action (as opposed to intervening in such action) if the EPA or the state is pursuing enforcement has no bearing upon whether the EPA or a state could seek to alter or eliminate the jurisdiction of the courts to determine liability or to impose remedies for violations of SIP emission limitations in judicial enforcement. The EPA also does not believe that this rulemaking is the appropriate forum in which to challenge the court's decision.

4. Comments that the court's reasoning in the *NRDC v. EPA* decision does not apply to affirmative defenses in SIP provisions because if a source qualifies for an affirmative defense, then there has been no violation.

Comment: Several commenters stated that the D.C. Circuit's analysis in the *NRDC v. EPA* opinion is based on statutory language that indicates Congress intended the courts, not the EPA, to decide what constitutes an appropriate penalty once a violation has occurred. The commenters argued that if a SIP provision contains an affirmative defense, and if a source meets the requirements to qualify for that affirmative defense, then there is no violation of the SIP requirements. One commenter contended that if there is no violation, then the courts have no jurisdiction to award any remedies and thus there can be no concern that the affirmative defense provision alters or eliminates the jurisdiction of the courts. Another commenter argued that affirmative defense provisions in the context of a SIP can be described as limitations on the application of an emission limitation to the conditions under which the emission reduction technology can be effectively operated. The commenters stated that the *NRDC* court did not address the EPA's or states' authority to establish requirements that determine, in the first

instance, whether a violation has occurred.

Response: The EPA disagrees with the commenters' arguments that affirmative defense provisions are appropriate in SIPs if they merely define what constitutes a violation. As explained in detail in the SNPR, the EPA believes that SIP provisions with affirmative defenses that operate to limit or eliminate the jurisdiction of the courts to determine liability and to impose remedies are not consistent with CAA requirements. Under the commenters' theory, such provisions would not improperly impinge on the jurisdiction of the courts to impose remedies for violations by redefining what constitutes a "violation."

First, the EPA does not agree that all affirmative defense provisions in the SIPs at issue in this action are constructed in this way. Some, including those that the EPA previously approved as consistent with the Agency's 1999 SSM Guidance, explicitly provide that the excess emissions that occur are still violations, but a source could be excused from monetary penalties if the source met the criteria for the affirmative defense. Under the EPA's prior interpretation of the CAA, the legal basis for any affirmative defense started with the fact that the excess emissions still constituted a violation and injunctive relief would still be available as appropriate. As explained in the SNPR and this document, the EPA no longer interprets the CAA to allow even narrowly drawn affirmative defense provisions in SIPs, let alone those advocated by the commenters that would provide a complete bar to any type of judicial remedy provided for in section 113(b).

Second, even if a specific affirmative defense provision were worded in the way that the commenters' claim, then that provision would be deficient for other reasons. Under the commenters' premise, if certain criteria are met then there is no "violation" for excess emissions during SSM events. The EPA's view is that this formulation of an affirmative defense in effect means that there is no emission limitation that applies when the criteria are met, *i.e.*, the affirmative defense operates to create a conditional exemption for emissions from the source during SSM events. Such an approach would be inconsistent with the decision in *Sierra Club v. Johnson* concerning the term "emission limitation" in section 302(k).⁴² Exemptions for emissions during SSM events, whether automatic

⁴⁰ CAA section 307(b)(1).

⁴¹ 749 F.3d 1055, 1064, n.2.

⁴² 551 F.3d 1019 (D.C. Cir. 2008).

or conditional based upon the criteria of an affirmative defense, are inconsistent with the requirement for continuous controls on sources.

Finally, the EPA believes that the commenters' premise that an affirmative defense provision merely defines what a violation is also runs afoul of other fundamental requirements for SIP provisions. To the extent any such provision would allow state personnel to decide, unilaterally, whether excess emissions during an SSM event constitute a violation (e.g., through application of an "affirmative defense"), this would interfere with the ability of the EPA or other parties to enforce for violations of SIP requirements. The EPA interprets the CAA to prohibit SIP provisions that impose the enforcement discretion decisions of a state on other parties. This includes provisions that are structured or styled as an affirmative defense but in effect allow *ad hoc* conditional exemptions from emission limitations and preclude enforcement for excess emission during SSM events.

5. Comments that the *NRDC v. EPA* decision, which concerned an emission limitation under section 112, does not apply in the context of section 110, because section 110 affords states flexibility in how to develop emission limitations in SIP provisions.

Comment: Commenters argued that the EPA's extension of the logic of the *NRDC v. EPA* decision to affirmative defenses in SIP provisions is incorrect because the EPA's NESHAP standards are governed by section 112, whereas SIP provisions are governed by section 110. Under the latter, commenters asserted, states are afforded wide discretion in how to develop emission limitations.⁴³ The commenters stated that section 110 governs the development of state SIPs to satisfy the NAAQS, which may address many different types of sources, major and minor, industrial and non-industrial, small and large, and old and new. The commenters alleged that states have independent authority to include affirmative defenses in SIP provisions, so long as the provisions are otherwise approvable, because the state has met its section 110 planning responsibilities and the SIP is enforceable.

Response: The EPA agrees with the commenters that section 110 governs the development of state SIPs and that states are accorded great discretion in determining how to meet CAA requirements in SIPs. However, as explained in the February 2013 proposal, the SNPR and sections IV.D.13 and V.D.2 of this document, states are

obligated to develop SIP provisions that meet fundamental CAA requirements. The EPA has the responsibility to review SIP provisions developed by states to ensure that they in fact meet fundamental CAA requirements. As explained in the SNPR and this document, the EPA no longer believes that affirmative defense provisions meet CAA requirements. Based on the logic of the court in the *NRDC v. EPA* decision, the better reading of the statute is that such provisions have the effect of limiting or eliminating the statutory jurisdiction of the courts to determine liability or impose remedies.

The EPA also disagrees with the commenters' arguments that "emission limitations" under section 112 and section 110 are not comparable with respect to meeting fundamental CAA requirements. As an initial matter, both section 112 MACT standards and section 110 SIP emission limitations can be composed of various elements that include, among other things, numerical emission limitations, work practice standards and monitoring and recordkeeping requirements. However, whether there are other components that are part of the emission limitation to make it apply continuously is not relevant for purposes of determining whether an affirmative defense provision that provides relief from penalties for a violation of either a MACT standard under section 112 or a SIP provision under section 110 is consistent with the CAA.

As explained in the SNPR, the EPA has revised its interpretation of the CAA with respect to affirmative defense provisions in SIPs, based upon the logic of the court in the *NRDC v. EPA* decision. Section 304(a) sets forth the basis for a civil enforcement action and section 113(a)(1) does the same for administrative or judicial enforcement actions brought by the EPA. Sections 113(b) and 304(a) provide the federal district courts with jurisdiction to hear civil enforcement cases. Furthermore, section 113(e) confers jurisdiction on the district court in a civil enforcement case to determine the amount of penalty to be assessed where a violation has been established.

6. Comments that the *NRDC v. EPA* decision does not pertain to the appropriateness of affirmative defense provisions in the context of state administrative or civil enforcement.

Comment: Some commenters noted that the *NRDC* court only reviewed whether affirmative defense provisions could be used to limit CAA citizen suit remedies in judicial enforcement actions. The commenters alleged that the use of an affirmative defense in a

citizen suit under federal regulations does not dictate the appropriateness of similar provisions in the context of state administrative or civil actions.

According to the commenters, a SIP represents an air quality management system and the state administrative process is distinct from federal citizen suits. Similarly, the commenters believed that SIP emission limitations are enforceable via state regulation penalty provisions that are separate from the CAA civil penalty provisions. Because the *NRDC* court spoke only to the appropriateness of affirmative defense provisions in the context of federal citizen suits, the commenters asserted, the decision is inapplicable in the EPA's SIP call action.

Response: The EPA agrees that the court in the *NRDC v. EPA* decision did not speak directly to the issue of whether states can establish affirmative defenses to be used by sources exclusively in state administrative enforcement actions or in judicial enforcement in state courts. The reasoning of the *NRDC* court indicates only that such provisions would be inconsistent with the CAA in the context of judicial enforcement of SIP requirements in federal court. Indeed, the *NRDC* court suggested that if the EPA elected to consider factors comparable to the affirmative defense criteria in its own administrative enforcement proceedings, it may be able to do so. The implication of the commenters, however, is that the EPA should interpret the CAA to allow affirmative defenses in SIP provisions, so long as it is unequivocally clear that sources cannot assert the affirmative defenses in federal court enforcement actions and cannot assert the affirmative defenses in enforcement actions brought by any party other than the state.

The EPA of course agrees that states can exercise their own enforcement discretion and elect not to bring an enforcement action or seek certain remedies, using criteria analogous to an affirmative defense. It does not follow, however, that states can impose this enforcement discretion on other parties by adopting SIP provisions that would apply in federal judicial enforcement, or in enforcement brought by the EPA or other parties. To the extent that the state developed an "enforcement discretion" type provision that applied only in its own administrative enforcement actions or only with respect to enforcement actions brought by the state in state courts, such a provision may be appropriate. This authority is not unlimited because the state could not create affirmative defense provision that in effect undermines its legal authority

⁴³ See, e.g., *Train v. NRDC*, 421 U.S. 60, 79 (1975).

to enforce SIP requirements. Section 110(a)(2)(C) requires states to have a program that provides for enforcement of the state's SIP, and enforcement discretion provisions that unreasonably limit the state's own authority to enforce the requirements of the SIP would be inconsistent with section 110(a)(2)(C). The EPA's obligations with respect to SIPs include determining whether states have adequate enforcement authority.

7. Comments that the EPA's proposal is inappropriate because it runs counter to previous court decisions, including the decision of the U.S. Court of Appeals for the Fifth Circuit (Fifth Circuit) in *Luminant Generation v. EPA*.

Comment: Many commenters on the SNPR argued that the decision of the Fifth Circuit in *Luminant Generation v. EPA* precludes the EPA's proposed action concerning affirmative defenses in SIP provisions, in general and with respect to the provisions in the Texas SIP in particular. The commenters noted that the court upheld the EPA's approval of an affirmative defense provision for unavoidable excess emissions during unplanned SSM events in the Texas SIP.⁴⁴ The commenters argued that the Fifth Circuit ruled that in approving the Texas SIP affirmative defense provision, the EPA "acted neither contrary to law nor in excess of its statutory authority."⁴⁵ According to the commenters, the court specifically considered and rejected arguments by litigants concerning sections 113 and 304. Some commenters argued that the court also considered and "decisively rejected" the legal arguments articulated by the EPA in the SNPR. The commenters alleged that the *Luminant Generation v. EPA* decision demonstrates that affirmative defenses for malfunctions are permissible in SIP provisions. The commenters contended that, because the Fifth Circuit in *Luminant Generation v. EPA* specifically considered whether an affirmative defense provision applicable to malfunctions included in a SIP violates the CAA, unlike the D.C. Circuit in *NRDC v. EPA*, the EPA should follow the *Luminant Generation v. EPA* decision rather than the D.C. Circuit decision in *NRDC v. EPA*.

Some commenters also pointed out that the D.C. Circuit, in the recent *NRDC v. EPA* decision, mentioned and cited the *Luminant Generation v. EPA* opinion and did not expressly disagree

with the Fifth Circuit's holding. One commenter noted that if the *NRDC* court believed that the issue it was deciding was the same as the issue decided in *Luminant Generation v. EPA*, the D.C. Circuit would have explicitly stated that it was declining to follow the Fifth Circuit on the issue instead of acknowledging that the issue upon which the Fifth Circuit ruled was not before the D.C. Circuit.

Several commenters also argued that, because the Fifth Circuit previously determined in *Luminant Generation v. EPA* that the Texas SIP affirmative defense provision at issue in this SIP call action is consistent with CAA sections 113 and 304, the EPA does not have any legal authority under the CAA to finalize the action proposed in SNPR. Some commenters further stated that the EPA lacks authority to disagree with the Fifth Circuit's determination of the law as applied to a state within the Fifth Circuit's jurisdiction. These commenters believed that if the EPA were to finalize the action discussed in the SNPR with respect to the affirmative defense for malfunctions in the Texas SIP, this action would violate the mandate rule. Some commenters also alleged that courts outside the Fifth Circuit, including the D.C. Circuit, will apply principles of claim preclusion, or *res judicata*, to give effect to the Fifth Circuit's prior adjudication on the legal basis for the affirmative defense in the Texas SIP. One commenter claimed that the EPA's "failure" to address how the holdings in *Luminant Generation v. EPA* will no longer apply and how the EPA is exempt from the court's mandate render the theories presented in the SNPR unsupported as a basis for the SIP call action.

Some commenters alleged that the EPA is bound by its own prior representations before the Fifth Circuit, in which it asserted and defended its approval of the affirmative defense provision for malfunctions in the Texas SIP, under the doctrine of judicial estoppel.⁴⁶ Similarly, the commenters alleged that under the doctrine of issue preclusion, or collateral estoppel, the EPA is precluded from re-litigating the issues previously considered and determined by the Fifth Circuit, regardless of where any subsequent challenge to this final action is brought.

Some commenters also cited to other circuit court decisions that have upheld the EPA's approvals of affirmative

defense provisions for malfunctions.⁴⁷ The commenters alleged that other than calling the *NRDC v. EPA* decision a newer decision, the EPA did not explain its justification for relying on the *NRDC v. EPA* opinion instead of following the three circuit court decisions that are directly on point.

Response: The EPA disagrees with the commenters' arguments concerning the application of the court's decision in *Luminant Generation v. EPA* to this SIP call action. As explained in the SNPR, the EPA acknowledges that it has previously approved affirmative defenses in SIP provisions or, when appropriate, promulgated affirmative defenses in FIPs. The EPA also acknowledged that its approval of an affirmative defense provision applicable to "unplanned events" (i.e., malfunctions) in a Texas SIP submission was upheld in 2012 by the U.S. Court of Appeals for the Fifth Circuit. In that litigation, the EPA argued that sections 113 and 304 do not preclude appropriately drawn affirmative defense provisions for malfunctions in SIPs. Importantly, in upholding the EPA's approval of the affirmative defense, the Fifth Circuit determined that *Chevron* step 1 was not applicable to this case and "turn[ed] to step two of *Chevron*"⁴⁸ in holding that the Agency's interpretation of the CAA at that time was a "permissible interpretation of section [113], warranting deference."⁴⁹ The Fifth Circuit did not determine that the EPA's interpretation at the time of the *Luminant Generation v. EPA* decision was the only or even the best permissible interpretation. It is clearly within the EPA's legal authority to now revise its interpretation to a different, but still permissible, interpretation of the statute.⁵⁰ The EPA has explained at length in the SNPR, and elsewhere in this final rulemaking, its reasons for changing its previous interpretation of

⁴⁷ See *Montana Sulphur & Chemical Co. v. EPA*, 666 F.3d 1174 (9th Cir. 2012); *Arizona Public Service Co. v. EPA*, 562 F.3d 1116 (10th Cir. 2009).

⁴⁸ 714 F.3d at 852.

⁴⁹ *Id.* at 853.

⁵⁰ See, e.g., *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005) and *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009). The Agency also notes that commenters' position, that the EPA cannot now change its interpretation of the CAA, is at odds with the SIP call provision established by Congress in section 110(k)(5). That provision provides the EPA with authority to issue a SIP call "whenever" it determines that an existing SIP is substantially inadequate to meet CAA requirements. In other words, section 110(k)(5) expressly envisions cases where the EPA has previously approved a SIP provision as meeting CAA requirements, and one that the EPA may have even defended in court, but later determines that the provision no longer meets CAA requirements, and section 110(k)(5) gives the EPA authority to issue a SIP call in these situations.

⁴⁴ 714 F.3d 841 (5th Cir. 2013).

⁴⁵ *Id.* at 853. The EPA notes that the Fifth Circuit also upheld the Agency's disapproval of the affirmative defense provisions that the state sought to create for "planned" events.

⁴⁶ See, e.g., *New Hampshire v. Maine*, 532 U.S. 742, 749 (2001).

the CAA to permit narrowly drawn affirmative defenses applicable only to penalties and has explained why it now believes that the reasoning of the court in the *NRDC v. EPA* decision is the better reading of the CAA.

Some commenters allege that the Fifth Circuit considered and rejected the legal arguments articulated by the EPA in the SNPR to support the Agency's new interpretation that affirmative defenses in SIP provisions are inconsistent with the Act. The EPA disagrees with commenters' assertions. As explained above, in the *Luminant Generation v. EPA* decision the Fifth Circuit analyzed the EPA's former interpretation of the CAA under step 2 of *Chevron* and found that the Agency's position was reasonable. The Fifth Circuit held that the CAA did not dictate the outcome put forth by environmental petitioners in the *Luminant Generation v. EPA* case; the court did not hold that the Agency could not reasonably interpret the CAA provisions at issue to come to the new position articulated in the SNPR and other sections of this document. In fact, the Fifth Circuit upheld the EPA's reading of the statute to preclude affirmative defense provisions for planned events in the same decision as a reasonable interpretation of the CAA.

In the SNPR, the EPA also addressed the discussion in the *NRDC v. EPA* decision that referred to the earlier *Luminant Generation v. EPA* decision and explained its view that the court in *NRDC v. EPA* did not suggest that its interpretation of the CAA would not apply more broadly to SIP provisions. Rather, the court simply declined to address that issue. As to commenters' allegation that the EPA should follow the *Luminant* court's reasoning because that court addressed the specific issue of affirmative defenses in SIP provisions, the EPA has explained in detail in the SNPR and section IV.D.1 of this document why it now believes that the *NRDC* court's reasoning is applicable here and why it believes this is the better interpretation of sections 113 and 304.

The EPA acknowledges that other circuit courts have also upheld affirmative defense provisions promulgated by the Agency in FIPs.⁵¹ Those decisions were also based upon an interpretation of the CAA that the Agency no longer holds. The EPA further notes that the affirmative defense provisions at issue in the other court decisions cited by the commenters are not at issue in this action. However,

the EPA may elect to address these provisions in a separate rulemaking.

The EPA also disagrees with commenters' allegations that this final SIP call action violates the mandate rule. The mandate rule generally governs how a lower court handles a higher court's decision on remand. The Agency believes that the mandate rule is inapplicable here. Similarly, the Agency believes that the principles of *res judicata*, judicial estoppel and collateral estoppel (issue preclusion) raised by commenters are all inapplicable in this situation. For reasons the EPA has fully explained in this rulemaking, the Agency is adopting a revised interpretation of the CAA. This necessarily changes the issues or claims that may be raised in any future litigation concerning the Agency's action here or subsequent Agency actions taken pursuant to this changed interpretation. As noted previously, the Agency's ability to change its interpretation of the statute is well established, even if courts have previously upheld the Agency's former interpretation as reasonable under step 2 of the *Chevron* analysis.

8. Comments that affirmative defense provisions are needed or appropriate because sources cannot control malfunctions or the excess emissions that occur during them.

Comment: Several commenters claimed that by requiring states to remove affirmative defense provisions, the EPA will create a situation where sources have no potential relief from liability for exceedances resulting from excess emissions during malfunctions. The commenters argued that this will effectively expose sources to penalties for emissions that are not within the sources' control. The commenters alleged that the EPA's proposal is unreasonable because it fails to consider the infeasibility of controlling emissions during malfunction periods. The commenters believe that because malfunction events are uncontrollable by definition, removing affirmative defense provisions applicable to malfunctions will not reduce emissions but instead will only expose facilities to potential enforcement for uncontrollable exceedances.

Response: The EPA disagrees that without affirmative defense provisions, sources will have no "relief" from liability for violations during actual malfunctions. To the extent that sources have an actual malfunction, sources retain the ability to raise this fact in the event of an enforcement action related to the malfunction. Congress has already provided courts with explicit jurisdiction and authority to determine

liability and to impose appropriate remedies, based on the facts and circumstances surrounding the violation. To the extent that there are extenuating circumstances that justify not holding a source responsible for a violation or not imposing particular remedies as a result of a violation, sources retain the ability to raise these facts to the court. In addition, the absence of an affirmative defense provision in the SIP does not impede a violating source from taking appropriate actions to minimize emissions during a malfunction, so as to mitigate the potential remedies that a court may impose as a result of the violation.

Furthermore, the EPA disagrees with the commenters' premise that states have authority to create affirmative defense provisions in SIPs because some sources may otherwise be subject to enforcement actions for emissions during malfunctions. As explained in the SNPR in detail, the EPA has concluded that there is no legal basis for affirmative defenses in SIP provisions, including affirmative defenses applicable to malfunction events. Because such affirmative defense provisions purport to alter or eliminate the statutory jurisdiction of courts to determine liability and to assess appropriate remedies for violations of SIP requirements, these provisions are not permissible.

9. Comments that there will not be any reduction in overall emissions from the EPA's SIP call action because states will need to revise emission limitations to allow more emissions if affirmative defense provisions are removed from the SIPs.

Comment: Commenters on the SNPR questioned whether the elimination of affirmative defenses in SIP provisions would result in any reductions of emissions from sources. Several commenters asserted that affirmative defense provisions allow states to lower emission limitations overall. Thus, the commenters claimed that elimination of the affirmative defense provisions would obligate states to raise affected emission limitations so that sources could comply with them continuously. Another commenter criticized the EPA's approach as requiring each state to reframe the existing episodic emissions provisions of its SIP as alternative emission limitations rather than as more limited and conditional affirmative defenses. This commenter asserted that structuring the provisions as an affirmative defense allows a state to impose more stringent numerical limitations without penalizing sources for unavoidable emissions when those

⁵¹ See *Montana Sulphur & Chemical Co. v. EPA*, 666 F.3d 1174 (9th Cir. 2012); *Arizona Public Service Co. v. EPA*, 562 F.3d 1116 (10th Cir. 2009).

emissions do not compromise the underlying air quality objectives.

Several commenters also disagreed with the EPA's belief that removal of affirmative defense provisions would reduce emissions. One commenter noted that some affirmative defense provisions require a source to evaluate impacts on NAAQS compliance as part of asserting the affirmative defense; the commenter contended that forgoing these provisions would thus reduce the incentive for owners and operators to minimize emissions during malfunctions so that they could qualify for the affirmative defense. Several commenters noted that many sources immediately investigate excess emissions events and implement measures intended to prevent recurrence. Nevertheless, those commenters asserted that because malfunction events are uncontrollable by definition, removing an affirmative defense applicable to malfunctions will not reduce emissions. Commenters also argued that an assumption that elimination of the affirmative defense provisions will reduce emissions is flawed because, given the stringent applicability criteria for a "narrowly drawn" affirmative defense, a facility has no assurance that an affirmative defense will apply to any particular malfunction event and that even if the affirmative defense was available, it would not shield the facility from compliance orders or other injunctive relief (or from criminal prosecution).

Response: The commenters' arguments concerning whether elimination of affirmative defense provisions will or will not reduce emissions during SSM events and will or will not reduce incentives for sources to minimize emissions during SSM events do not address the legal basis for any such affirmative defense provisions. As the commenters correctly observed, the EPA's 1999 SSM Guidance reflected the Agency's prior interpretation of the CAA to permit such affirmative defense provisions, so long as they were sufficiently narrowly drawn, applied only to monetary penalties and required the source to prove that it met the applicable criteria to the trier of fact in an enforcement proceeding. The EPA's arguments for why appropriate affirmative defense provisions could be consistent with CAA requirements included that they could provide an incentive for sources to be properly designed, maintained and operated to minimize emissions at all times.

As explained in the SNPR, however, the EPA has determined that affirmative defenses are impermissible in SIP provisions because they operate to alter

or eliminate the statutory jurisdiction of the courts. The EPA has reached this conclusion in light of the court's decision in *NRDC v. EPA*. Because affirmative defense provisions are inconsistent with the enforcement structure of the CAA, the EPA is making the finding that such provisions are substantially inadequate to meet legal requirements of the CAA. In order to make the finding that these provisions fail to meet legal requirements of the CAA, the EPA is not required to determine or estimate emission reductions that will or will not result from the removal of such provisions from the affected SIPs. The EPA believes this action is necessary to provide environmental protection. However, the EPA's obligation as a legal matter would not change even if commenters were correct in their view that emissions reductions will not result from the removal of the impermissible affirmative defense provisions. The EPA's interpretation of its authority under section 110(k)(5) is discussed in detail in section VIII.A of this document.

The EPA agrees that in response to this SIP call directing the removal of affirmative defense provisions, the affected states may elect to revise affected SIP emission limitation. In so doing, the states may determine that it is appropriate to revise the emission limitations in other respects, so long as they do so consistent with CAA requirements. For example, affected states may elect to create alternative emission limitations that apply to sources during startup and shutdown. The EPA's guidance for this approach is discussed in detail in VII.B.2 of this document. Alternatively, states may elect to overhaul an affected SIP emission limitation entirely to account for the removal of the affirmative defense in some other way. However, states will need to comply with the applicable substantive requirements for the type of SIP provision at issue and the EPA will review those SIP revisions in accordance with the requirements of the CAA, including sections 110(k)(3), 110(l) and 193.

10. Comments that the elimination of affirmative defense provisions will result in sources' facing inconsistent treatment by courts or states when excess emissions are emitted during malfunction events.

Comment: Commenters claimed that the concept and framework for affirmative defense provisions are consistent from state to state and that by removing these provisions, sources will be subject to inconsistent treatment of excess emissions during SSM in

different states. The commenters noted that the EPA recognized in the February 2013 proposal and SNPR that states may elect to revise their deficient SIP provisions differently in response to the SIP call and thus the commenters expressed concern that the potential difference in treatment among states will lead to "inconsistent regulation of air pollution across the country."

Commenters further argued that without the consistent regulatory framework provided by an affirmative defense provision, each court is likely to evaluate SSM events differently in the context of enforcement actions. The commenters suggested that allowing each court to consider the facts and circumstances of the emission event in its penalty evaluation without a governing framework could lead to inconsistent enforcement throughout the country.

Response: The EPA disagrees that it is inappropriate to allow states to determine how best to revise their SIPs in response to this SIP call, consistent with CAA requirements. As discussed in this document, and as many commenters have also noted, the structure of the CAA is based upon cooperative federalism. Under this structure, Congress gave states broad discretion to develop SIP provisions as necessary to attain and maintain the NAAQS and meet other CAA objectives, so long as the SIPs also meet statutory requirements. The very nature of the SIP program is that similar sources can be treated differently in different states, because the states have discretion with respect to developing their SIP provisions consistent with CAA requirements. Thus, whether the affirmative defense provisions at issue in this action added some level of "consistent" treatment of sources across the nation (a statement with which the EPA does not agree) is not relevant for purposes of this SIP call.⁵² Rather, for the reasons explained in the SNPR and in this document, the EPA has determined that affirmative defense provisions are inconsistent with the fundamental legal requirements of the CAA. For that reason, the EPA is requiring the affected states to revise their SIPs to remove the affirmative defense provisions identified in this action. States have discretion in how

⁵² The EPA notes that the actual affirmative defense provisions at issue in this action are very dissimilar; some are based on the EPA's interpretation of the CAA in the 1999 SSM Guidance, but the majority of the provisions are relatively unique from state to state. Accordingly, the EPA disagrees with the commenters' basic premise that the affirmative defense provisions are consistent from state to state.

they revise their SIPs in this context as in all other contexts.

As to the concern that different courts might evaluate liability for violations during SSM events differently in the absence of affirmative defense provisions, the EPA notes that this is not the relevant question. The potential for inconsistent treatment by the courts is not a basis for allowing states to retain SIP provisions that are inconsistent with the legal requirements of the CAA. In any event, the EPA disagrees that elimination of affirmative defenses in SIP provisions make it more likely that there would be "inconsistent enforcement" because of a lack of a "regulatory framework." The enforcement structure of the CAA embodied in section 113 and section 304 already provides a structure for enforcement of CAA requirements in federal courts. For example, the CAA already provides uniform criteria for courts to apply, based upon the facts and circumstances of individual enforcement actions. Similar to an affirmative defense provision, section 113(e) already enumerates the factors that courts are required to consider in determining appropriate penalties for violations and thus there is a consistent statutory framework. In essence the commenters object to the fact that in any judicial enforcement case, the court will determine liability and remedies based on the facts and circumstances of the case. However, this is an inherent feature of the enforcement structure of the CAA, regardless of whether there is an affirmative defense provision at issue.

11. Comments that the EPA should have acted in a single, comprehensive rulemaking rather than issuing the supplemental notice of proposed rulemaking.

Comment: Commenters asserted that the EPA's issuance of two separate proposals instead of one proposal has prevented states and industry from knowing the entire proposed regulatory action. The commenters claimed that if the EPA is going to issue a SIP call to states concerning the treatment of emissions during SSM events, then it should do so in a single comprehensive rulemaking. The commenters argued this is necessary because states consider different options when revising SIP provisions and that thereafter states will have to work with affected sources to revise permits.

Response: The EPA disagrees with the argument that states, industry, individuals and other interested parties have not had an opportunity to know and comment upon the Agency's entire action. The EPA's February 2013

proposal was intended to cover a broad range of issues related to the correct treatment of emissions during SSM events in SIP provisions comprehensively. Because of an intervening court decision that affected the substance of the EPA's initial proposed action, it was necessary to issue a supplemental proposal. The EPA disagrees that the issuance of the SNPR adversely affected the ability of interested parties to understand the Agency's proposed action, because the SNPR only affected one aspect of the original proposed action. As the EPA explained in the SNPR: "In this SNPR, we are supplementing and revising what we earlier proposed as a response to the Petitioner's requests but only to the extent the requests narrowly concern affirmative defense provisions in the SIPs. We are not revising or seeking further comment on any other aspects of the February 2013 proposed action."⁵³

As to the commenters' concern that the EPA should take action in a single comprehensive rulemaking, the Agency is doing so. This SIP call action addresses all aspects of the Petition and it is based upon both the February 2013 proposal and the SNPR. As advocated by the commenters, the EPA's objective in this SIP call action is to provide states with comprehensive and up-to-date guidance concerning the correct treatment of emissions during SSM events in SIP provisions, consistent with CAA requirements as interpreted by recent court decisions. The EPA agrees with the commenters that providing states comprehensive guidance in this rulemaking is important to assist states in revising their SIP provisions consistent with CAA requirements. Any necessary changes to permits to reflect the removal of affirmative defense provisions from the underlying SIP will occur later, after the SIP provisions have been revised.

12. Comments that the EPA has not proven that the existence of affirmative defense provisions in SIPs is resulting in specific environmental impacts or interference with attainment and maintenance of the NAAQS.

Comment: Several commenters argued that the EPA has failed to demonstrate that the affirmative defense provisions at issue in this action have contributed to a specific NAAQS violation or otherwise caused harm to public health or the environment. The commenters contend that, because of the narrow scope of affirmative defense provisions, it is unlikely that their existence would cause or contribute to any violations of the NAAQS. Some commenters further

noted that some states have experienced improved ambient air quality conditions, despite having SIPs in place with affirmative defense provisions at issue in this action.

The commenters alleged that without providing specific record-based evidence of the impacts caused by affirmative defense provisions, it is unreasonable for the EPA to determine that existing provisions are substantially inadequate or otherwise not in compliance with the CAA. Some commenters further alleged that the EPA has no authority to issue a SIP call without "find[ing] that the applicable implementation plan . . . is substantially inadequate to attain or maintain the relevant [NAAQS]."

Response: As explained in the February 2013 proposal, the SNPR and this document, the EPA does not interpret its authority under section 110(k)(5) to require proof that a deficient SIP provision caused a specific violation of the NAAQS at a particular monitor on a particular date, or that a deficient SIP provision undermined a specific enforcement action. Section 110(k)(5) explicitly authorizes the EPA to make a finding that a SIP provision is substantially inadequate to "comply with any requirement of" the CAA, in addition to the authority to do so where a SIP is inadequate to attain and maintain the NAAQS or to address interstate transport. In light of the court's decision in *NRDC v. EPA*, the EPA has reexamined the question of whether affirmative defenses are consistent with CAA requirements for SIP provisions. As explained in this action, the EPA has concluded that such provisions are inconsistent with the requirements of section 113 and section 304. Accordingly, the EPA has the authority to issue SIP calls to states, requiring that they revise their SIPs to eliminate the specific affirmative defense provisions identified in this action. Issues related to the EPA's authority under section 110(k)(5) are discussed in more detail in section VIII.A of this document.

13. Comments that the EPA is violating the principles of cooperative federalism through this action.

Comment: Several commenters stated that the EPA's action with respect to affirmative defenses in SIP provisions is inconsistent with the system of cooperative federalism contemplated by the CAA. The commenters alleged that this action is at odds with established CAA and judicial precedents indicating that states have broad discretion in developing SIP provisions, with the EPA's role being limited. Some commenters further alleged that the

⁵³ 79 FR 55919 at 55923.

EPA's action has the effect of unlawfully directing states to impose a particular control measure. The commenters argued that the EPA must defer to a state's choices on how to meet the relevant NAAQS, through whatever SIP provisions the state elects to develop. One commenter argued that states have independent authority to include affirmative defense policies in their SIPs, even if the DC Circuit has held that the EPA may not include affirmative defense provisions in federal regulations.

Response: The EPA agrees that the CAA is based upon the principle of cooperative federalism but disagrees with the commenters' characterization of the respective authorities and responsibilities of states and the Agency. As explained in the February 2013 proposal, and in section V.D.2 of this document, the EPA has the authority and the obligation to ensure that SIP provisions meet fundamental CAA requirements, when initially submitted and later. In the case of affirmative defenses in SIP provisions, the EPA has determined that such provisions do not comply with CAA requirements because they operate to alter or eliminate the statutory jurisdiction of the courts, contrary to section 113 and section 304. The states have broad discretion in how to create SIP provisions but must do so consistent with CAA requirements. By issuing this SIP call, the EPA is not in any way compelling states to impose any specific SIP control measure on any specific source but merely requiring states to revise their SIP provisions to make them consistent with CAA requirements.

14. Comments that the EPA failed to account adequately for the amount of time and resources that will be required to revise state SIPs.

Comment: Many commenters asserted that the SNPR did not recognize that removal of affirmative defense provisions from SIPs will impose enormous burdens on states because they will need to revise SIPs to create alternative emission limitations in lieu of the affirmative defenses. Commenters contended that removal of the affirmative defense provisions will necessarily require state air agencies to make extensive revisions to SIPs and that in many states, such changes will have to be reviewed by the state legislature. Commenters explained that such an effort could not reasonably be completed in many states within the 18 months the EPA proposed to provide for SIP revisions in response to the final SIP call. Commenters also stated that the SSM provisions that the EPA proposed to require states to remove from their

SIPs have been incorporated into thousands of title V operating permits and that those title V permits would, in turn, need to be modified if the affirmative defense provisions are removed from the approved SIPs. Commenters indicated that states might also need to amend an even larger number of minor source permits.

Commenters also indicated that in conjunction with removal of affirmative defenses, states will also have to reevaluate the emission limitations currently contained in their SIPs to determine if those limitations are still are consistent with federal and state law (e.g., represent reasonably available control technology). Some commenters expressed the view that the EPA must indicate that states will not be required to remove the identified affirmative defense provisions from their SIPs until the state has had time to consider whether emission limitations in state regulations and in construction and operating permits need to be modified and to obtain any necessary EPA approval for the modified requirements. Commenters also argued that the EPA's suggestion that states subject to a SIP call could simply remove an existing affirmative defense provision and rely on enforcement discretion to address "unavoidable" exceedances is wrong and that states adopt emission limitations under state administrative rules that require the agency to provide a record to support the level of the emission limitation.

Response: The EPA has acknowledged that correction of the deficient SIP provisions at issue in this action will take time and resources. For this reason, the EPA is providing states with the maximum time (18 months) permitted by section 110(k)(5) to respond to this SIP call. In addition, the EPA is endeavoring to provide states with clear and comprehensive guidance concerning the proper treatment of excess emissions during SSM events in SIP provisions in order to make this process more efficient.

The EPA acknowledges that some states, in conjunction with removal of affirmative defense provisions, may elect to undertake a more comprehensive revision of affected SIP emission limitations. In so doing, the states may need to undertake a more resource intensive approach than those states that merely elect to eliminate the affirmative defense provisions. In addition, the EPA also recognizes that states may eventually need to revise permits to reflect the elimination of affirmative defense provisions from underlying SIP provisions that may have been reflected in permits. The EPA

discussed these issues in the both the February 2013 proposal and in the SNPR. A summary of comments concerning revisions to operating permits to reflect the revised SIP provisions appears, with the EPA's response to comments, in section VIII.D.28 of this document.

Despite the potential burden on states, as the EPA explained in the February 2013 proposal and the SNPR, the Agency believes that it is obligated and authorized to issue this SIP call action to affected states to require the removal of affirmative defense provisions. The EPA is not in this action evaluating or determining whether SIP emission limitations should or should not be revised in light of the removal of affirmative defenses and is not required to do so. The states have discretion to determine how best to revise the deficient SIP provisions identified in this action, so long as they do so consistent with the CAA requirements.

Further, the EPA does not agree that enforcement discretion cannot substitute for an affirmative defense for malfunctions. For example, the EPA has taken the position that the CAA does not require malfunction emissions to be factored into development of section 112 or section 111 standards and that case-by-case enforcement discretion provides sufficient flexibility.⁵⁴ Moreover, the EPA believes that Congress has already provided for such flexibility in section 113, by providing the courts with jurisdiction to determine liability and to impose remedies. For example, in section 113(e), Congress provided specific criteria for courts to consider in imposing monetary penalties, including consideration of such factors as justice may require.

With respect to the potential need to amend permits, as explained in the February 2013 proposal, "the EPA does not intend its action on the Petition to affect existing permit terms or conditions regarding excess emissions during SSM events that reflect previously approved SIP provisions. . . . [A]ny needed revisions to existing permits will be accomplished in the ordinary course as the state issues new permits or reviews and revises existing permits. The EPA does not intend the issuance of a SIP call to have automatic impacts on the terms of any existing permit."⁵⁵ Thus, these permit revisions that commenters expressed concern about need not occur during the 18-

⁵⁴ See, e.g., "Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards; Proposed rule," 79 FR 41752 at 41762-63 (July 17, 2014).

⁵⁵ See February 2013 proposal, 78 FR 12459 at 12482 (February 22, 2013).

month SIP development timeframe but may proceed thereafter according to normal permit revision requirements.

Finally, the EPA notes, the burdens associated with SIP revisions and permit revisions are burdens imposed by the CAA. The states have both the authority and the responsibility under the CAA to have SIPs and permit programs that meet CAA requirements. It is inherent in the structure of the CAA that states thus have the burden to revise their SIPs and permits when that is necessary, whether because of changes in the CAA, changes in judicial interpretations of the CAA, changes in the NAAQS, or a host of other potential events that necessitate such revisions. Among those is the obligation to respond to a SIP call that identifies legal deficiencies in specific provisions in a state's SIP.

15. Comments that the EPA is being inconsistent because rules promulgated by the EPA provide affirmative defense provisions for malfunction events.

Comment: A number of commenters claimed that the EPA cannot interpret the CAA to prohibit affirmative defenses in SIP provisions because the Agency itself has issued regulations that include affirmative defenses for excess emissions during malfunction events. The commenters claim that the EPA is being inconsistent on this point and thus cannot require states to remove affirmative defenses from SIPs.

Other commenters alleged that the EPA is being inconsistent because it has not adequately explained the reversal of its "decades-old" policy interpreting the CAA to allow affirmative defenses in SIP provision. The commenters cited to SIP provisions that the EPA previously approved in eight states between 2001 and 2010 that they believed would be affected by this SIP call. The commenters claimed that these prior actions were consistent with the EPA's SSM policy memoranda. Additionally, the commenters cited to federal regulations that the EPA has previously promulgated that include affirmative defense provisions. The commenters claimed that these prior actions are "inconsistent with EPA's proposed disallowance of affirmative defenses."

Response: The EPA has acknowledged that it has previously approved some SIP provisions with affirmative defenses that were consistent with its interpretation of the CAA in the 1999 SSM Guidance at the time it acted on those SIP submissions. However, since that time, two decisions from the D.C. Circuit have addressed fundamental interpretations of the CAA related to the legally permissible approaches for addressing excess emissions during

SSM events.⁵⁶ In light of those decisions, as explained in detail in the February 2013 proposal, the SNPR and this document, the EPA has concluded that certain aspects of its prior interpretation of the CAA, as set forth in the SSM Policy, were not the best interpretation of the CAA. As a result, certain SIP provisions that the EPA previously approved are also not consistent with the requirements of the CAA. In particular, this includes the EPA's prior interpretation of the CAA to allow affirmative defense provisions in SIPs in the 1999 SSM Guidance.

The EPA has also acknowledged that it has in the past taken a similar approach regarding affirmative defense provisions in federal regulations addressing hazardous air pollution and in new source performance standards. Indeed, the EPA's inclusion of an affirmative defense provision in a federal regulation resulted in the court decision in *NRDC v. EPA*, in which the court rejected the Agency's interpretation of the CAA to allow affirmative defenses that limit or eliminate the jurisdiction of the courts. Just as the EPA is calling on states to revise their SIPs to remove affirmative defense provisions, the Agency is also taking action to correct such provisions in federal regulations.⁵⁷ The continued existence of such provisions in the EPA regulations that have not yet been corrected does not mean that such provisions are authorized either in state or federal regulations.

As to the claim that the EPA has not adequately explained the basis for changing its interpretation of the CAA regarding affirmative defenses in SIP provisions, the Agency disagrees. The SNPR set forth in detail the basis for the EPA's revised interpretation of the CAA, in light of the court's decision in *NRDC v. EPA*.⁵⁸ The commenters failed to specify why this explanation was "inadequate."

16. Comments that existing affirmative defense provisions do not preclude parties from filing enforcement actions or hinder parties from seeking injunctive relief for violations of SIP requirements.

Comment: One state commenter asserted that the existing affirmative defense provisions in the state's SIP do not prevent the state or the EPA from pursuing injunctive relief or mitigation

of environmental impacts in the event of violations. Thus, the commenter supported the EPA's prior interpretation of the CAA to allow affirmative defense provisions, so long as courts can still award injunctive relief for violations. The commenter did not articulate how this prior statutory interpretation is consistent with the reasoning of the court in *NRDC v. EPA* concerning the same statutory provisions.

By contrast, an environmental group commenter cited a citizen suit enforcement case in Texas in which the commenter claimed that the affirmative defense provision in that state's SIP operated as a *de facto* shield against any enforcement. The commenter stated that the EPA's approval of the affirmative defense was premised upon its only applying to civil penalties and not to injunctive relief and that the Agency's approval of the SIP provision was explicitly upheld on this basis by the Fifth Circuit. Nevertheless, the commenter asserted, the state agency has implemented this provision such that if the affirmative defense criteria are met, there is "no violation" and thus no potential for injunctive relief.

Response: The EPA agrees that some of the affirmative defense provisions at issue in this action are expressly limited to monetary penalties and not to injunctive relief. This approach was consistent with the EPA's prior interpretation of the CAA concerning affirmative defense provisions in SIPs but also consistent with the arguments that the D.C. Circuit rejected in the *NRDC v. EPA* decision. Thus, the fact that some of the affirmative defense provisions addressed in this action preserve the possibility for injunctive relief, even if the court could award no monetary penalties, is no longer a deciding factor.

The EPA also agrees that some agencies or courts may not apply the affirmative defense provisions in the manner intended at the time the EPA approved them into the SIP. Incorrect application of SIP affirmative defense provisions by sources, regulators or courts is a matter of concern. However, even perfect implementation of a SIP affirmative defense provision does not cure the underlying and now evident absence of a legal basis for such provisions. Again, the fact that a given affirmative defense provision is being implemented correctly or incorrectly is no longer a deciding factor for purposes of this SIP call action.

These issues are not pertinent to the EPA's decision in this action to require states to remove the affirmative defense provisions from the previously approved SIPs. Rather, as explained in

⁵⁶ See *Sierra Club v. Johnson*, 551 F.3d 1019 (D.C. Cir. 2008), in the rulemaking docket at EPA-HQ-OAR-2012-0322-0048; see also *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014), in the rulemaking docket at EPA-HQ-OAR-2012-0322-0885.

⁵⁷ See, e.g., 79 FR 60897 (October 8, 2014); 79 FR 72914 (December 8, 2014).

⁵⁸ 79 FR 55919 at 55929-30.

detail in the SNPR and this final action, the EPA is requiring the affected states to remove these SIP provisions because they are inconsistent with CAA requirements. As explained in the SNPR, the EPA has concluded that such affirmative defenses in SIP provisions are inconsistent with section 113 and section 304, in light of the reasoning of the court in *NRDC v. EPA*.

17. Comments that the EPA is changing its policy on affirmative defenses, and this change is arbitrary and capricious and thus an impermissible basis for a SIP call.

Comment: Several commenters stated that the EPA's action with respect to affirmative defense provisions marks a change in the EPA's approach to these provisions. The commenters alleged that this SIP call action is not mandated by judicial precedent, and therefore the SNPR simply reflected a "policy change" by the EPA. The commenters argued that, while the EPA is permitted to change its policy or interpretation of the law, this specific change is arbitrary and capricious and forces unreasonably difficult and burdensome requirements on states and sources. The commenters asserted that the EPA failed to explain adequately this change in policy or to document reasons for the change in the administrative record. Some commenters further alleged that the EPA does not have authority to impose its policy preferences on states.

Response: The EPA disagrees that the basis for this SIP call action is a change of "policy" as alleged by the commenters. The EPA's guidance to states concerning the proper treatment of excess emissions during SSM events in SIP provisions is provided in the SSM Policy, but this guidance reflects the Agency's interpretation of statutory requirements. As explained in detail in the SNPR and in this document, the EPA is changing its interpretation of the CAA with respect to affirmative defenses in SIP provisions based on the logic of the court in *NRDC v. EPA*. Further, as acknowledged by commenters, the EPA is permitted to change its interpretation of the statute provided that it clearly explains the basis for the change. The EPA clearly explained the basis for the changed interpretation in the SNPR based on its analysis of the legal rationale respecting sections 113 and 304 in the *NRDC v. EPA* decision.

18. Comments that emissions during malfunction periods are not "excess" or "violations" but rather are part of the established SIP emission limitations.

Comment: Commenters cited the EPA's brief filed in the Fifth Circuit *Luminant Generation v. EPA* case in

support of an argument that states are not required to attach a penalty or any certain amount of penalty to a violation of a SIP emission limitation. The commenters noted that in the brief, the EPA stated that under section 110 of the CAA, states are authorized "to determine what constitutes a violation, and to distinguish both quantitatively and qualitatively between different types of violations." Further, the commenter noted, the EPA argued in the brief that because the violation is defined by the state, an affirmative defense does not impinge on the court's jurisdiction. The commenters contended that nothing has changed since the brief was filed to justify a change in interpretation of the CAA and that the EPA failed to explain why its prior interpretation is no longer correct.

Other commenters claimed that the EPA takes the position that affirmative defenses in SIP provisions conflict with the court's jurisdiction over enforcement actions and stated that this position is flawed because enforcement is limited to violations as defined in the context of the SIP. The commenters asserted that section 304 does not apply when there is no SIP requirement being violated and that the state has the authority to define what constitutes such a violation. Similarly, commenters argued that an affirmative defense provision may provide that emissions will not be "violations" if criteria are met and that it therefore does not interfere with a court's ability to determine appropriate penalty amounts under section 113. The commenters contended that, because the state has the authority to define what constitutes a violation, SIP provisions that include an affirmative defense do not infringe on a court's authority to penalize a source because the CAA does not provide a court with jurisdiction to impose remedies in the absence of liability.

Response: The EPA explained in detail the rationale for its change in interpretation of the CAA regarding affirmative defenses in the SNPR. The EPA acknowledges that in the *Luminant Generation v. EPA* case, the Agency argued that states are authorized to determine what constitutes a violation and to distinguish between different types of violations. As the EPA explained in the SNPR, the court in *Luminant Generation v. EPA* held that the Agency's interpretation of the CAA to permit affirmative defenses applicable to malfunctions at that time was a "permissible interpretation of section [113], warranting deference." The same court also upheld the EPA's interpretation of the CAA to preclude

affirmative defenses for planned events on the same basis that it was a reasonable interpretation of the CAA. However, the EPA has reevaluated this interpretation of the CAA requirements in light of the more recent *NRDC v. EPA* decision, and the Agency now believes that its prior interpretation of the CAA with respect to the approvability of affirmative defense provisions in SIPs is no longer the best reading of the statute. Thus, the Agency's view now is that a "violation" cannot be defined in a manner that interferes with the court's role in assessing remedies. It is irrelevant that the EPA had argued for a different interpretation in the past as the Agency now believes that the court's analysis in *NRDC v. EPA* is the better reading of the provisions of the statute concerning affirmative defenses. The EPA has authority to revise its prior interpretation of the CAA when further consideration indicates to the Agency that its prior interpretation of the statute is incorrect. The EPA fully explained the basis for this change in its interpretation of the CAA in the SNPR.

The EPA agrees that in some cases, affirmative defense provisions at issue in this SIP call action are structured as a complete defense to any liability, not merely a defense to monetary penalties. The EPA has also determined that affirmative defense provisions of this type are substantially inadequate to meet CAA requirements. Although such affirmative defenses may not present the same concerns as affirmative defenses applicable only to penalties, such affirmative defenses may create a different concern because they in effect provide a conditional exemption from otherwise applicable emission limitations. If there is no "violation" when the criteria of such an "affirmative defense" are met and no legitimate alternative emission limitation applies during that event, then such an affirmative defense in effect operates to create a conditional exemption from applicable emission limitations. This form of "affirmative defense" provision therefore runs afoul of different CAA requirements for SIP provisions. Under section 302(k) of the CAA, emissions standards or limitations must be continuous and cannot include SSM exemptions, automatic or otherwise. Regardless of whether the commenters believe that this form of "affirmative defense" should be allowed, the EPA believes that provisions of this form are inconsistent with the decision of the court in *Sierra Club v. Johnson*.⁵⁹ In that case, the court held that emission limitations under the CAA must impose

⁵⁹ 551 F.3d 1019 (D.C. Cir. 2008).

continuous controls and cannot include exemptions for emissions during SSM events. The EPA concludes that making the exemptions from emission limitations conditional does not alter the fact that once exercised they are illegal exemptions.

19. Comments that the definition of “emission limitation” in CAA section 302(k) does not support this SIP call action.

Comment: Several commenters noted that while the EPA depends on the definition of “emission limitation” in the CAA section 302(k) for this action, that CAA provision does not support this SIP call action, including that the CAA does not require that SIPs contain continuous emissions standards in the form asserted by the EPA. The commenters alleged that the definition in the CAA and supporting materials interpreting that definition do not support the EPA’s requiring one emission limitation to apply in all circumstances at all times. Some commenters further alleged that states subject to the EPA’s SIP call action have implementation plans that provide emission limitations that apply continuously through a combination of numerical emission limitations, the general duty to minimize emissions and the affirmative defense criteria for excess emissions during malfunctions.

Several commenters questioned why, even if the challenged affirmative defense provisions do not qualify as “emission limitations” or “emissions standards” under the first part of the definition, they are not approvable as “design, equipment, work practice or operational standards” promulgated under the second part of the definition. Some commenters argued that, to the extent that affirmative defense provisions in SIPs do not satisfy the definition of “emission limitation,” they would still be approvable elements of a SIP as “other control measures, means, or techniques” allowed under CAA section 110(a)(2). Further, some commenters believe that the legislative history cited in the SNPR does not support the EPA’s position but rather is only intended to preclude the use of dispersion techniques, such as intermittent controls.

One commenter stated that the Portland Cement NESHAP, at issue in the *NRDC v. EPA* decision, was classified by statute as an “emissions standard,” a term defined by the CAA and defined as applying “on a continuous basis.” The commenter stated that SIP provisions involve more than “emissions standards” and need

not be “emissions standards.”⁶⁰ Thus, according to the commenter, the *NRDC v. EPA* decision does not apply to SIP rules.

Response: The commenters alleged that the EPA’s interpretation of the CAA section 302(k) definition of “emission limitation” in this action was inappropriate and that section 302(k) does not support this SIP call action. The EPA notes that it is not the Agency’s position that all emission limitations in SIP provisions must be set at the same numerical level for all modes of source operation or even that they must be expressed numerically at all. To the contrary, the EPA intended in the February 2013 proposal and the SNPR to indicate that states may elect to create emission limitations that include alternative emission limitations, including specific technological controls or work practices, that apply during certain modes of source operation such as startup and shutdown. However, this comment is not relevant to the issue of affirmative defense provisions in SIPs. It is not for the reason that affirmative defense provisions do not meet the definition of an “emission limitation” in section 302(k) that the EPA is promulgating this SIP call action for affirmative defense provisions. The EPA has concluded that affirmative defense provisions are substantially inadequate to meet CAA requirements concerning enforcement, in particular the requirements of section 113 and section 304.

As to commenters’ argument that affirmative defense provisions can be appropriately considered to be “design, equipment, work practice or operational standards” under CAA section 302(k), the critical aspect of an emission limitation in general is that it be a “requirement . . . which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis” These provisions operate to *excuse* sources from liability for emissions under certain conditions, not to *limit* the emissions in question. The affirmative defense provisions at issue in this final action do not themselves, or in combination with other components of the emission limitation, limit the quantity, rate or concentration of air pollutants on a continuous basis. These affirmative defense provisions, therefore, do not themselves meet the statutory definition of an emission limitation under section 302(k).

The EPA notes that the definition of “emission limitation” in section 302(k) is relevant, however, with respect to

those affirmative defense provisions that commenters claim are merely a means to define what constitutes a “violation” of an applicable SIP emission limitation. As previously explained, the EPA believes that an “affirmative defense” structured in such a fashion is deficient because it in effect creates a conditional exemption from the SIP emission limitations. By creating such exemptions, conditional or otherwise, an affirmative defense of this type would render the emission limitations less than continuous.

The EPA disagrees with commenters’ remaining points because the EPA’s position on what appropriately qualifies as an emission limitation is consistent with the CAA, relevant legislative history and case law. These issues are addressed in more detail in sections VII.A.3.i through 3.j of this document.

20. Comments that the EPA has failed to show that state SIPs are substantially inadequate, as is required to promulgate a SIP call.

Comment: Several commenters noted that before the EPA can issue a SIP call under section 110(k)(5) with respect to affirmative defense provisions, the EPA must determine that a SIP provision is “substantially inadequate to attain or maintain the relevant [NAAQS], to mitigate adequately the interstate pollutant transport described in section 7506a of this title or section 7511c of this title, or to otherwise comply with any requirement of this chapter.” The commenters further stated that Congress employed a high bar in the language of CAA section 110(k)(5) in requiring the EPA to find “substantial” inadequacies, as opposed to other CAA provisions that permit the Agency to act based on “discretion” or when it “may be appropriate.” The commenters alleged that the EPA has not demonstrated a “substantial inadequacy” with respect to the affirmative defense provisions at issue in the SNPR, as required to issue a SIP call.

Some commenters also argued that the EPA has failed in its SNPR to define or interpret “substantially inadequate” or provide any standards for assessing the adequacy of a SIP with respect to affirmative defense provisions. The commenters also alleged that, if the EPA is required to rely on data and evidence in evaluating SIP revisions, it follows that the EPA should produce at least the same level of data and evidence, if not more, to support a SIP call that is based on the more stringent substantial inadequacy standard of section 110(k)(5).

Response: The EPA disagrees with the commenters’ arguments that the Agency has failed to establish that the

⁶⁰ See CAA section 110(a)(2)(A).

affirmative defense provisions identified in the SNPR are “substantially inadequate” as required by section 110(k)(5). As explained in the SNPR and this action, the EPA has determined that affirmative defense provisions at issue in this action are substantially inadequate because they are inconsistent with applicable legal requirements of the CAA. The commenters raised similar arguments with respect to the EPA’s authority to issue a SIP call to address other forms of deficient SIP provisions, such as automatic or discretionary exemptions from emission limitations. The EPA responds to these broader arguments in sections VIII.D.46 through D.48 of this document.

21. Comments that this action is not national in scope, and therefore the D.C. Circuit is not the sole venue for review of this action.

Comment: Several commenters claimed that the EPA is incorrect in stating that this SIP call action is a single nationally applicable action and of nationwide scope or effect. The commenters alleged that review of all affected SIP provisions in a single action in the D.C. Circuit would inappropriately limit the scope of review by obscuring distinctions between the various states’ regulatory programs and practical concerns. The commenters asserted that none of the various state SIP provisions addressed in the SNPR were the same, and the EPA analyzed each separately and provided case-by-case justification for its proposed action as to each. Further, the commenters argued that although the EPA has packaged the SIP calls in one **Federal Register** document, any final action that the EPA takes with respect to a single state’s affirmative defense provision is only locally applicable and therefore should be reviewed in the individual circuits with jurisdiction over the affected state. One commenter further contended that, while the EPA’s revised SSM Policy may be of interest to states to which the SIP call does not directly apply, that does not make the action “nationally applicable.”

The commenters acknowledged that the EPA cited *Texas v. EPA* in support of its assertion, but the commenters allege that the Fifth Circuit in that case never reached the issue of nationwide scope and effect.⁶¹ The commenters claimed that this SIP call action is distinct from the rule at issue in *Texas v. EPA* because this final action turns on the particulars of the SIP call action’s

impact on each individual state’s SIP. One commenter also claimed that the EPA has failed to provide authority or a legal basis to support its determination that this rulemaking is of “nationwide scope or effect.” Such failure, according to the commenter, violated the requirements of section 307(d)(3) and did not allow for full and meaningful comment on this issue.

One commenter alleged that the EPA has waived its challenge to venue for those circuits that have already weighed in regarding individual state SIP provisions at issue in this action, including Texas’s affirmative defense provisions. Another commenter claimed that the discussion over appropriate venue in the February 2013 proposal and SNPR presupposes that the EPA’s issuance of a revised SSM Policy is a “final agency action” subject to judicial review under section 307(b)(1) but argued that the EPA has failed to determine that its issuance of the SSM Policy, in and of itself, constitutes “final agency action.”

Response: The EPA disagrees with the commenters’ theories concerning the scope of the Agency’s action. These comments on the SNPR questioning the EPA’s determination of “nationwide scope and effect” for this action largely repeat similar comments on the February 2013 proposal. As with those prior comments, commenters on the SNPR made the basic argument that this action is not of nationwide scope and effect because the EPA is reviewing individual SIP provisions and directing states to correct their respective deficient SIP provisions. The EPA disagrees with commenters because, as explained in more detail in its response in section V.D.6 of this document, this rulemaking action applies the same “process and standard” to numerous areas across the country. While it is correct that the SIP submissions that states make in response to this SIP call will be reviewed separately by the EPA and subsequently subject to potential judicial review in various circuits, the EPA’s legal interpretation of the CAA concerning permissible SIP provisions to address emissions during SSM events in this action is nationally applicable to all states subject to the SIP call. The EPA provided a full explanation of its basis for this determination of nationwide scope and effect in the February 2013 proposal and the SNPR.

The EPA also disagrees with the argument that the Agency has waived venue regarding challenges to this SIP call action concerning the affirmative defense provisions in the Texas SIP. Evidently, the commenter believes that because a prior challenge to another

EPA rulemaking concerning the affirmative defense provisions occurred in the Fifth Circuit, it necessarily follows that any other rulemaking related to such provisions can only occur in the Fifth Circuit. The EPA believes that this interpretation of its authority under section 307(b)(1) is simply incorrect. Under section 307(b)(1), the EPA is explicitly authorized to make a determination that a specific rulemaking action is of “nationwide scope and effect.” The statute does not specify the considerations that the EPA is to take into account when making such a determination, let alone provide that the Agency cannot invoke this because some aspect of the rulemaking at issue might previously have been addressed in one or more other circuit courts. To the contrary, the EPA believes that section 307(b)(1) explicitly provides authority for the Agency to determine that a given rulemaking should be reviewed in the D.C. Circuit in situations such as those presented in this action that affects important questions of statutory interpretation that affect states nationwide.

The EPA likewise disagrees with the argument that its action is not a final agency action. Within this action, the EPA is taking final agency action to respond to the Petition, updating its interpretations of the CAA in the SSM Policy and applying its interpretations of the CAA in the SSM Policy to specific SIP provisions in the SIPs of many states. The EPA is conducting this action through notice-and-comment rulemaking to assure full consideration of the issues. As stated elsewhere in this document, the revised SSM Policy is a nonbinding policy statement that does not, in and of itself, constitute “final” action. However, the EPA is taking “final” action by responding to the Petition and issuing the resulting SIP call action. To the extent that interpretations expressed in the revised SSM Policy are also relied on to support this “final” action, then the EPA’s interpretations of the CAA requirements for SIP provisions applicable to emissions during SSM events are part of the final agency action and are subject to judicial review. To the extent the commenters are otherwise arguing that the issuance of the updated SSM Policy in and of itself is not final agency action subject to judicial review under the CAA, the EPA agrees with this assertion. The EPA notes that the commenters are at liberty to adopt this position and waive their opportunity to challenge the SSM Policy because they do not consider it final agency action.

⁶¹ See No. 10–60961, 2011 WL 710598 (5th Cir. Feb. 24, 2011).

22. Comments that the EPA should clarify that SIPs can include work practice standards or general-duty clauses to apply during malfunction periods in place of affirmative defense provisions.

Comment: Several commenters stated that the EPA should announce in this final action that in lieu of affirmative defenses, states may elect to revise their SIP provisions to include work practice standards or general-duty clauses that are modeled on existing affirmative defense provisions and that would apply during malfunctions. Most of these commenters advocated that the EPA's previously recommended criteria for an "affirmative defense" for malfunctions should simply be changed into criteria for a "work practice" provision instead. One commenter made the same suggestion but also advocated that the EPA eliminate six of the nine criteria and rephrase the remaining criteria, in order to "improve the standards, reduce uncertainty, and reduce wasteful litigation." This commenter advocated that the EPA also redefine the term "malfunction" to much more broadly mean any "sudden and unavoidable breakdown of process or control equipment." Specifically, the commenter advocated, the EPA should no longer recommend that a malfunction be defined as an event that: (i) Was caused by a sudden, infrequent and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal or usual manner; (ii) could not have been prevented through careful planning, proper design or better operation and maintenance practices; (iii) did not stem from any activity or event that could have been foreseen and avoided or planned for; and (iv) was not part of a recurring pattern indicative of inadequate design, operation or maintenance. By changing the "affirmative defense" provisions for malfunctions into "work practice" or "general duty" provisions for malfunctions, the commenters argued, the revised provisions would be consistent with CAA requirements. Under this approach, the commenters asserted that compliance with these new requirements would mean that any emissions during a malfunction event could not be considered "excess" or result in any violation if the source had complied with the "work practice" criteria.

Response: As an initial matter, the EPA has not established a regulatory definition of "malfunction" that is binding on states when developing SIPs. States have the flexibility in their SIPs to define that term. Thus, the EPA is not

addressing here the comments requesting that EPA "redefine" the definition of malfunction.

Regarding the more general concern of the commenters, that states be allowed to establish an alternative emission limitation in the form of a work practice standard that applies during malfunctions, the EPA notes two points. First, the CAA does not preclude that emissions during malfunctions could be addressed by an alternative emission limitation. The EPA's general position in the context of standards under sections 111, 112 and 129 is that: (i) The applicable emission limitation applies at all times including during malfunctions; (ii) the CAA does not require the EPA to take into account emissions that occur during periods of malfunction when setting such standards; and (iii) accounting for malfunctions would be difficult, if not impossible, given the myriad types of malfunctions that can occur across all sources in a source category and given the difficulties associated with predicting or accounting for the frequency, degree and duration of various malfunctions that might occur. Although the EPA has not, to date, found it practicable to develop emission standards that apply during periods of malfunction in place of an otherwise applicable emission limitation, this does not preclude the possibility that a state may determine that it can do so for all or some set of malfunctions. Second, states are not bound to establish any specific definition of "malfunction" in their SIPs. Thus, it is difficult to judge at this time whether any particular alternative emission limitation in a SIP for malfunctions, including any specific work practice requirements in place of an otherwise applicable emission limitation, would be approvable.

With regard to the specific comment that the affirmative defense criteria could be converted into a work practice requirement to apply during malfunctions in place of an otherwise applicable emission limitation, the EPA is unsure at this time whether the criteria previously recommended for an affirmative defense provision would serve to meet the obligation to develop an appropriate alternative emission limitation. Existing affirmative defense criteria (which include, among other things, making repairs expeditiously, taking all possible steps to minimize emissions and operating in a manner consistent with good practices for minimizing emissions) were developed in the context of helping to determine whether a source should be excused from monetary penalties for violations of CAA requirements and were not

developed in the context of establishing an enforceable alternative emission limitation under the Act. The EPA would need to consider this approach in the context of a specific SIP regulation for a specific type of source and emission control system.

Finally, the EPA notes that any emission limitation, including an alternative emission limitation, that applies during a malfunction must meet the applicable stringency requirements for that type of SIP provision (e.g., would need to meet RACT for sources subject to the RACT requirement) and must be legally and practically enforceable. Thus, the SIP provision would need to: (i) Clearly define when the alternative emission limitation applied and the otherwise applicable emission limitation did not; (ii) clearly spell out the requirements of that standard; and (iii) include adequate monitoring, recordkeeping and reporting requirements in order to make it enforceable. In addition, the state would need to account for emissions attributable to these foreseen events in emissions inventories, modeling demonstrations and other regulatory contexts as appropriate.

23. Comments that the EPA has failed to account adequately for the cost of this SIP call action and is therefore in violation of the Regulatory Flexibility Act, the Unfunded Mandates Reform Act and Administration policy.

Comment: Two commenters argued that the SNPR lacks sufficient analysis of what this action will cost states, stationary sources and the public. The commenters allege that this absence of economic impact analysis is contrary to the Regulatory Flexibility Act, the Unfunded Mandates Reform Act and Administration policy. One of the commenters also noted that imposing substantial "unfunded mandates" on state regulatory agencies and forcing stationary sources to absorb additional costs should be evaluated carefully.

Response: The EPA disagrees with the commenters' allegation that the EPA has failed to comply with relevant statutes and Administration policy in accounting for the cost of the actions proposed in the SNPR. The EPA did in fact properly consider the costs imposed by this action. These issues are addressed in more detail in section V.D.7 of this document.

24. Comments that states should not be required to eliminate affirmative defense provisions but rather should be allowed to revise them to be appropriate under CAA requirements.

Comment: One state commenter claimed that it should be allowed to revise its existing affirmative defense

provisions rather than remove them. The commenter asserted that the state should be allowed to revise the provision to make clear that it does not apply to private enforcement actions under CAA section 304(a), which was the only issue specifically before the court in *NRDC v. EPA*. Relying on the court's decision, the commenter claimed that the state should be allowed to revise the affirmative defense provisions to apply only in administrative enforcement proceedings. The commenter also argued that there may be other options for appropriately tailoring the state's existing affirmative defense provisions rather than removing them from the SIP.

Response: The EPA agrees that the court in *NRDC v. EPA* did not directly address whether states have authority to create affirmative defense provisions that apply exclusively to state personnel in the context of state administrative enforcement actions. Statements by the court concerning the EPA's own authority in the context of administrative enforcement, however, indicate that the court did not intend to foreclose the Agency from exercising its own enforcement discretion with respect to remedies in federal administrative enforcement actions. However, the EPA has reevaluated its interpretation of CAA requirements in light of the court's decision in *NRDC v. EPA* and the EPA now interprets the CAA to preclude state SIP provisions creating affirmative defenses that sources could assert in the context of judicial enforcement in federal court, whether initiated by states, the EPA, or other parties pursuant to section 304.

The EPA agrees that states may elect to revise their existing deficient affirmative defense provisions to make them "enforcement discretion"-type provisions that apply only in the context of administrative enforcement by the state. Such revised provisions would need to be unequivocally clear that they do not provide an affirmative defense that sources can raise in a judicial enforcement context or against any party other than the state. Moreover, such provisions would have to make clear that the assertion of an affirmative defense by the source in a state administrative enforcement context has no bearing on the additional remedies that the EPA or other parties may seek for the same violation in federal administrative enforcement proceedings or judicial proceedings.

In this action, the EPA is not determining whether any such revisions would meet applicable CAA requirements. The EPA would need to consider the precise wording of any

such revised provisions in evaluating whether the state has adequate enforcement authority to meet the requirements of section 110(a)(2)(C) and also whether application of such a provision in a state administrative proceeding could interfere with the ability of a citizen or the EPA to bring a federal enforcement action.

25. Comments that states' ability to use enforcement discretion is not an adequate replacement for affirmative defense provisions.

Comment: Several commenters argued that exercise of enforcement discretion is not an adequate substitute for an affirmative defense, particularly where the emissions at issue resulted from an inevitable and unavoidable malfunction. In any individual case, the commenters were concerned that even if a state elects not to enforce against a violation, the EPA or others might elect to bring an enforcement action. One commenter contended that it is inappropriate for the EPA to encourage states to use enforcement discretion instead of encouraging them to create alternative emission limitations to replace affirmative defenses in SIP provisions. The commenters also alleged that reliance on judicial discretion to determine the appropriateness of penalties is similarly inadequate.

The commenters contended that, although it is reasonable for a state to exercise enforcement discretion under circumstances when an emission limitation cannot be met, it is not reasonable to adopt SIP provisions with emission limitations that put some sources in the position of "repeated noncompliance."

Response: These comments addressing whether an enforcement discretion approach is sufficient are similar to comments received on the February 2013 proposal to which the EPA responds in section VII.A.3.p of this document. Through this SIP call, the EPA is not requiring states to rely on enforcement discretion in place of achievable SIP emission limitations. Rather, the EPA is requiring states to ensure that emission limitations are consistent with the definition of that term in section 302(k), and specifically that emission standards provide for continuous compliance. If emission limitations that apply during routine operations cannot be met by a source during periods of startup or shutdown, states have authority to establish alternative emission standards. The EPA disagrees that an affirmative defense for penalties for excess emissions for periods of malfunctions is an adequate substitute for an enforceable continuous emission limitation and concludes that

such an approach is inconsistent with the CAA as interpreted by the court in *NRDC*, as explained in the SNPR.

The EPA also disagrees that affirmative defense provisions would have been appropriate to address the "repeated noncompliance" concerns of the commenters. The EPA's prior interpretation of the CAA was that states could create narrowly tailored affirmative defense provisions applicable to malfunctions. However, to the extent that there are malfunctions that put a source in the position of "repeated noncompliance," the form of affirmative defense that the EPA previously believed was consistent with the CAA would not have provided relief because several of the criteria could not be met. Specifically, the EPA believes repeated noncompliance is typically a result of inadequate design, is part of a "recurring pattern," and thus likely could have been "foreseen and avoided." In short, an affirmative defense would not have been appropriate for such a source.

26. Comments that the EPA should establish specific rules to govern how states set alternative limitations that apply in lieu of affirmative defense provisions.

Comment: Commenters urged the EPA to clarify in this final action that states may establish alternative emission limitations applicable to startup and shutdown only if the source meets all applicable CAA requirements, including but not limited to BACT/LAER, and the state also demonstrates through modeling that potential worst-case emissions from startup and shutdown would not interfere with attainment and reasonable further progress. Other commenters stated that any changes to SIP emission limitations must be made as part of a SIP revision process, which would include a demonstration that higher levels of emissions during startup and/or shutdown would not lead to violations of the NAAQS or PSD increments.

Commenters also argued that any such alternative emission limitation should "sunset" each time the EPA promulgates a new NAAQS and that the Agency should require the state to demonstrate again that an alternative emission limitation applicable during startup and/or shutdown does not interfere with attainment or other applicable requirements of the CAA for the revised NAAQS. In support of their arguments that the EPA should impose specific requirements of this type, the commenters indicated that a state has issued permits for sources that establish particulate matter (PM) emission limitations less stringent than existing

permit terms and without requiring a BACT/LAER/ambient impacts analysis and has done so without public notice and comment. Commenters urged the EPA to require states to follow public notice-and-comment processes before issuing any permits for sources with alternative limitations less stringent than those imposed by the SIP and claimed such process is required under the CAA.

In addition, some commenters stated that if the EPA allows states to set “new, higher, or alternate limits” applicable during startup and shutdown, the EPA should set clear parameters. According to commenters, the EPA at a minimum should require, for emissions that have not previously been authorized or considered part of a source’s potential to emit, that: (i) Limitations must meet BACT/LAER; (ii) there should be clear, enforceable rules for when alternate limitations apply; (iii) there should be a demonstration that worst-case emissions will not cause or contribute to a violation of the NAAQS or PSD increments; and (iv) proposed limitations should be subject to public notice and comment and judicial review. The commenter pointed to a letter from the EPA to Texas in which, the commenter claims, the Agency indicated that these parameters must be met.

A commenter stated that the EPA should unequivocally state in this final action that: (i) All potential to emit emissions, including quantifiable emissions associated with startup and shutdown, must be included in federal applicability determinations and air quality permit reviews; (ii) authorization of these emissions must include technology reviews and impacts analyses; and (iii) the above requirements must be included in the permit that authorizes routine emissions from the applicable units and must be subject to public notice, comment and judicial review.

A commenter recognized that there may be a variety of ways in which states can authorize different limits to apply during startup and shutdown but argued that, no matter the method chosen, the emissions need to be fully accounted for by the state in the relevant SIP, including a demonstration that the additional emissions authorized during startup and shutdown will not violate any NAAQS.

Response: The EPA understands the concerns raised by the commenters but does not agree that further regulatory action such as issuance of regulatory text is necessary at this time. Through this action, the EPA is providing comprehensive guidance to states

concerning issues related to the proper treatment of emissions during SSM events in SIP provisions. For example, the EPA is addressing the concern raised by commenters that states will need to ensure that any SIP revisions in response to this SIP call will meet applicable CAA requirements. Under section 110(k)(3), the EPA has authority to approve SIP revisions only if they comply with CAA requirements. Moreover, under section 110(l), the EPA cannot approve SIP revisions if they would “interfere with any applicable requirement concerning attainment and reasonable further progress . . . or any other applicable requirement” of the CAA. The EPA believes that both states and the Agency can address these issues in SIP rulemakings without the need for any additional federal regulations as suggested by the commenters.

The EPA agrees with the concerns raised by the commenters regarding instances where a state has issued source permits that impose less stringent emission limitations than otherwise established in the SIP. Using a permitting process to create exemptions from emission limitations in SIP emission limitations applicable to the source is tantamount to revising the SIP without meeting the procedural and substantive requirements for a SIP revision. The Agency’s views on this issue are described in more detail in section VII.C.3.e of this document.

The EPA does not agree with the comment that suggests “worst-case modeling” would always be needed to show that a SIP revision establishing alternative emission limitations for startup and shutdown would not interfere with attainment or reasonable further progress. The nature of the technical demonstration needed under section 110(l) to support approval of a SIP revision depends on the facts and circumstances of the SIP revision at issue. The EPA will evaluate SIP submissions that create alternative emission limitations applicable to certain modes of operation such as startup and shutdown carefully and will work with the states to assure that any such limitations are consistent with applicable CAA requirements. Under certain circumstances, there may be alternative emission limitations that necessitate a modeling of worst-case scenarios, but those will be determined on a case-by-case basis.

The EPA also does not agree that existing SIP provisions with alternative emission limitations should automatically “sunset” upon promulgation of a new or revised NAAQS. Such a process could result in gaps in the state’s regulatory structure

that could lead to backsliding. When the EPA promulgates new or revised NAAQS, it has historically issued rules or guidance to states concerning how to address the transition to the new NAAQS. In this process, the EPA typically addresses how states should reexamine existing SIP emission limitations to determine whether they should be revised. With respect to technology-based rules, the EPA has typically taken the position that states need not adopt new SIP emission limitations for sources where the state can demonstrate that existing SIP provisions still meet the relevant statutory obligations. For example, the EPA believes that states can establish that existing SIP provisions still represent RACT for a specific source or source category for a revised NAAQS. In making this determination, states would need to review the entire emission limitation, including any alternative numerical limitations, control technologies or work practices that apply during modes of operation such as startup and shutdown, and ensure that all components of the SIP emission limitation meet all applicable CAA requirements.

27. Comments that the EPA should closely monitor states’ SIP revisions in response to this SIP call.

Comment: Commenters urged the EPA to monitor states’ efforts to revise SIPs in response to the SIP call closely in order to assure that the revisions meet all applicable requirements. The commenters indicated concern that states and industry may weaken emission limitations through this process. The commenter alleged that one state has issued permits for sources with emission limitations applicable during SSM events that are less stringent than the emission limitations approved in the SIP. Furthermore, the commenter alleged, the state issued these permits without public notice and comment. As support for this contention, the commenter detailed the differences between the requirements of a permit issued for a source and the requirements in the SIP. The commenter also claimed that the state has issued permits for other facilities similar to the one it described in detail in the comments.

Response: The EPA understands the concerns expressed by the commenter that SIP revisions made in response to this SIP call need to be consistent with CAA requirements. As explained in this document, the states and the EPA will work to assure that the SIP revisions will meet applicable legal requirements. The EPA will evaluate these SIP submissions consistent with its

obligations under sections 110(k)(3), 110(l) and 193 and under any other substantive provisions of the CAA applicable to specific SIP submissions.

To the extent that the commenters are concerned about whether the SIP revisions meet applicable requirements, they will have the opportunity to participate in the development of those revisions. States must submit SIP revisions following an opportunity for comment at the state level. Additionally, the EPA acts on SIP submissions through its own notice-and-comment process. As part of these administrative processes, both the state and the EPA will need to evaluate whether the proposed revision to the SIP meets applicable CAA requirements. In the context of those future rulemaking actions, the public will have a chance to review the substance of the specific SIP revisions in response to this SIP call, as well as the state's and the EPA's analysis of the SIP submissions for compliance with the CAA.

28. Comments that the EPA does not have authority to take this action without Congressional authorization.

Comment: A commenter contended that the EPA does not have the authority to write law and that the EPA should be required to seek changes to the applicable law through Congress, before eliminating affirmative defense and due process provisions from SIPs.

Response: Through this action the EPA is not attempting to rewrite the CAA. Rather, the EPA is requiring states to revise specific SIP provisions to comply with the existing requirements of the CAA, as interpreted by the courts. As explained in detail in the SNPR and this document, the EPA has determined that affirmative defense provisions at issue in this action are inconsistent with the existing requirements of the CAA.

29. Comments that affirmative defense provisions are needed to ensure sources' Constitutional right to due process in the event of violations.

Comment: A number of commenters argued that by requiring the removal of affirmative defense provisions from SIPs, the EPA is impinging on the Constitutional rights of sources that may have wanted to assert such affirmative defenses in an enforcement action. A commenter claimed that affirmative defense provisions are not "loop holes," as alleged by the EPA, but instead are fundamental due process provisions which should be retained at all levels for the protection of the public. Another commenter cited *State Farm Mut. Auto Ins. Co. v. Campbell*, for the proposition that a monetary penalty that is "grossly excessive . . . constitutes an arbitrary

deprivation of property."⁶² Other commenters claimed that excessive penalties constitute an arbitrary deprivation of property. The commenters asserted that a penalty is excessive where it applies severe punishment to an act that is unavoidable.

Response: The commenters' due process concerns suggest that without an affirmative defense provision, any penalty assessed for violation of a SIP would be *per se* "excessive" or "arbitrary." Though not expressly stated, some of these comments appear to suggest that the existing CAA enforcement provisions are facially unconstitutional. The EPA disagrees. The CAA does not mandate that any penalty is automatically assessed for a violation. Rather the CAA establishes a maximum civil penalty in section 113(b) but then expressly provides in section 113(e) the criteria that the EPA or the courts (as appropriate in administrative or judicial enforcement) "shall take into consideration (in addition to other factors as justice may require)." These criteria explicitly include consideration of "good faith efforts to comply." Thus, the CAA on its face does not mandate the imposition of any penalty automatically, much less one that is *per se* excessive. Notably, the commenters do not elaborate on how or why they believe the statutory penalty provisions of the CAA are facially unconstitutional, instead making generalized claims.

To the extent that the commenters are raising an "as applied" claim of unconstitutionality, any such claim can be raised in the future in the context of a specific application of the statute in an enforcement action. Such was the case in the *State Farm* case cited by the commenters. In that case, a court had awarded punitive damages of \$145 million in addition to \$1 million compensatory damages in an automobile liability case. A statutory penalty provision was not at issue in that case and thus there were no statutory criteria for the lower court to consider in determining the appropriate penalty amount. Rather, in its review of whether the punitive damage award was excessive, and thus violated due process, the Court looked at three factors it has instructed lower courts to consider in assessing punitive damages. Such would be the case with any claim that a CAA penalty violated due process, where a reviewing court would consider whether the court appropriately considered the relevant penalty factors in assessing a penalty

claimed as unconstitutional "as applied."

30. Comments that the EPA's action eliminating affirmative defense provisions from SIPs violates the Eighth Amendment of the Constitution.

Comment: Several commenters asserted that relying on judicial discretion to determine the appropriateness of penalties is arguably unconstitutional under the Eighth Amendment's prohibition on excessive fines and punishments by allowing potentially significant penalties that are disproportionate to the offense. The commenter stated that an affirmative defense provision "helps guard against infringement of the Eighth Amendment's protections." Other commenters argued that the U.S. Supreme Court has held that Eighth Amendment protections apply to government action in a civil context as well as in a criminal context. The commenters claimed that significant penalties are not proportional to an offense caused by unavoidable events, such as excess emissions during malfunction events. The commenters concluded that unless the EPA allows states to accommodate unavoidable emissions through changes to applicable emission limitations before affirmative defenses are removed, the EPA's proposal would "run afoul of Constitutional limitations."

One commenter stated that an affirmative defense is the "minimum protection EPA or the state must provide to avoid infringing constitutional rights." The commenter also argued that the EPA itself has relied on the existence of an affirmative defense to defend against a challenge to the achievability of an emission limitation in a FIP. To support this argument, the commenter quoted from the court's opinion in *Montana Sulphur*.⁶³

Response: For the reasons provided above regarding commenters' due process claims, the EPA also disagrees with their claims that eliminating affirmative defense provisions in SIPs would result in the penalty provisions of the CAA being facially in violation of the Eighth Amendment. Similarly, if a party believes that the penalties assessed in any civil enforcement action do violate the Eighth Amendment, they can raise a challenge that the specific SIP provision at issue "as applied" in that instance violates the U.S. Constitution. As with the commenters'

⁶³ See 666 F.3d at 1192–93 ("EPA acknowledges that violations are likely inevitable, but relies on the provision of an affirmative defense to compensate for infeasibility problems.").

⁶² See 538 U.S. 408, 417 (2003).

due process arguments, the EPA believes that Congress has already adequately addressed their concerns about potential unfair punishment for violations by authorizing courts to consider a range of factors in determining what remedies to impose for a particular violation, including the explicit factors for consideration in imposition of civil penalties as well as other factors as justice may require.

The EPA acknowledges that it has previously relied on affirmative defense provisions as a mechanism to mitigate penalties where a violation was beyond the control of the owner or operator. These actions, however, predated the court's decision in *NRDC v. EPA* and the EPA has since revised its approach to affirmative defense provisions in its own rulemaking actions. In addition, the EPA believes that the penalty criteria in section 113(e) provide a similar function and the commenters do not explain why they believe these explicit statutory factors do not provide sufficient relief from the imposition of an allegedly unconstitutionally excessive penalty.

31. Comments that the EPA should impose a deadline of 12 months for states to respond to this SIP call with respect to affirmative defense provisions.

Comment: An environmental organization commented that the EPA should require affected states to make the required SIP revisions within 12 months, rather than the 18 months proposed in the February 2013 proposal and the SNPR. The commenter claimed that communities near large sources have been suffering for decades and individuals are suffering adverse health effects because of the emissions from sources that are currently allowed by deficient SIP provisions. The commenter also stated that the EPA has recognized that excess emissions allowed by the SIP provisions subject to the SIP call are continuing to interfere with attainment and maintenance of the NAAQS and that this justifies imposing a shorter schedule for states to respond to the SIP call.

Response: The EPA acknowledges the concerns expressed by the commenters and the importance of providing environmental protection. However, as explained in the February 2013 proposal and in section IV.D.14 of this document, the EPA believes that providing states with the full 18 months authorized by section 110(k)(5) is appropriate in this action. The EPA is taking into consideration that state rule development and the associated administrative processes can be complex and time-consuming. This is

particularly true where states might elect to consider more substantial revision of a SIP emission limitation, rather than merely removal of the impermissible automatic or discretionary exemption or the impermissible affirmative defense provision. In addition, the EPA believes that providing states with the full 18 months will be more likely to result in timely SIP submissions that will meet CAA requirements and provide the ultimate outcome that the commenters seek. Some states subject to the SIP call may be able to revise their deficient SIP provisions more quickly, and the EPA is committed to working with states to revise these provisions consistent with CAA requirements in a timely fashion. For these reasons, the EPA does not agree that it would be reasonable to provide less than the 18-month maximum period allowed under the CAA for states to submit SIP revisions in response to the SIP call.

32. Comments that the EPA should encourage states to add reporting and notification provisions into their SIPs.

Comment: A commenter urged the EPA to encourage states to make information about excess emissions events easily and quickly accessible to the public. The commenter claimed that it is unacceptable to make it difficult for members of the public to obtain information about potential harmful exposure to pollutants and that state "open-record" request laws are inadequate, particularly when the public is not informed that an event occurred. The commenter also asserted that reporting provisions enhance compliance and cited to the Toxic Release Inventory program's success in driving pollution reduction. The commenter argued that contemporaneous reporting of the conditions surrounding a violation, the cause and the measures taken to limit or prevent emissions ensure that stakeholders can respond in real time and also target enforcement efforts to violations where further action is warranted. As support for this approach, the commenter pointed to Jefferson County, Kentucky, as a local air quality control area that has already corrected problematic regulations in advance of this SIP call and also noted that the County included notification and reporting requirements, recognizing that they would reduce the burden on the government in trying to calculate the level of excess emissions and also help in responding to citizen inquiries about such events.

Response: The EPA agrees with the commenter that reporting and notification provisions can ease the

burden on government agencies by placing the burden on the entity that is in the best position to calculate the level of excess emissions and also provide other relevant information regarding such events. In addition, to make this information available to the public quickly allows for a timely response if there is any health concern. An increased level of communication between industry and residents also serves to build a better community relationship and partnership. The EPA also supports such requirements as components of SIP emission limitations because they facilitate effective compliance assurance. However, the EPA does not believe that the Agency should create a separate federal requirement addressing this issue beyond general CAA requirements at this time.

33. Comments that this SIP call action concerning affirmative defense provisions is being taken pursuant to sue-and-settle tactics.

Comment: One commenter alleged that the action proposed in the EPA's SNPR has an "impermissible sue-and-settle genesis" and that the EPA is attempting to grant as much of Sierra Club's petition as it can "regardless of the wisdom or permissibility of doing so."

Response: The EPA disagrees with the commenter's allegation that the EPA's proposed action in the SNPR is inappropriate because it is the result of "sue-and-settle" actions. This is a rulemaking in which the EPA is taking action to respond to a petition for rulemaking, and it has undergone a full notice-and-comment rulemaking process as provided for in the CAA. This issue is addressed in more detail in section V.D.1 of this document.

34. Comments that affirmative defense provisions do not alter or eliminate federal court jurisdiction and therefore do not violate CAA sections 113 or 304.

Comment: Two commenters argued that SIP affirmative defense provisions do not in fact interfere with the rights of litigants to pursue enforcement consistent with their rights under the citizen suit provision of CAA section 304, because plaintiffs have the right to bring a citizen suit despite the existence of affirmative defense provisions. One commenter cited at least four instances in the last few years in which environmental groups filed enforcement actions against sources in federal district court based on alleged emissions events for which the companies asserted affirmative defenses. The commenters stated that courts applied the affirmative defense provision criteria and the criteria of section 113(e) to determine

whether penalties were appropriate for alleged violations and did not dismiss plaintiffs' claims for lack of jurisdiction. According to the commenters, affirmative defense provisions place additional burden on the sources, not plaintiffs, to demonstrate that the criteria of an affirmative defense are met.

Response: The commenters argued that affirmative defense provisions are not inconsistent with the statutory requirements of section 304, because citizen groups still bring enforcement actions for events where companies may raise an affirmative defense. Even if this were so, the EPA disagrees with the commenters that this establishes that affirmative defense provisions are consistent with CAA requirements. The mere existence of enforcement actions does not negate the fact that affirmative defense provisions interfere with effective enforcement of SIP emission limitations according to CAA section 304. More to the point, affirmative defense provisions purport to alter or eliminate the statutory jurisdiction of courts to determine liability or to impose remedies for violations, which makes the provisions inconsistent with the grant of authority in sections 113 and 304. The court's decision in *NRDC v. EPA* was not based on the question of whether plaintiffs could still try to bring an enforcement case for violations of the EPA regulation at issue; the case was decided on the grounds that the EPA when creating regulations has no authority to limit or eliminate the jurisdiction of the courts. As explained in the SNPR and this document, the EPA believes that the same principle applies to states when creating SIP provisions.

35. Comments that this action may increase the chance of catastrophic failure at facilities.

Comment: One commenter expressed a concern that eliminating affirmative defense provisions applicable to emissions during SSM events could increase the potential for environmental harm caused by catastrophic failure by outlawing and penalizing the emissions during SSM events that have previously been allowed or shielded from liability through affirmative defense provisions. As an example, the commenter argued that refineries and gas plants must be allowed to vent VOCs to the atmosphere on the rare occasion that there is an equipment malfunction that could otherwise cause an explosion that might destroy the plant and surrounding neighborhood. The commenter speculated that the threat of costly new fines inherent with the removal of affirmative defense provisions could

cloud plant operators' thinking when they make safety decisions. The commenter contended that allowing rare, safely controlled releases of emissions would invariably be better for both the natural and human environment than the damage from a catastrophic explosion.

Response: Although the comment refers to SSM events generally, the only specific concern raised by the commenter concerning affirmative defense provisions is that if they are not allowed in SIPs, this may lead to an increase in malfunction-related catastrophic events. The EPA does not agree with the commenter's view that removal of affirmative defense provisions may increase environmental harm related to catastrophic events. The EPA believes that it is unlikely the availability or unavailability of an affirmative defense will affect a responsible and competent source operator's response to a risk of explosion. First, an explosion presents much more serious and more certain adverse economic consequences for the source than does the specter of a potential enforcement action for a CAA violation, especially because enforcement agencies and courts are likely to exercise leniency if the violation was the result of an unpreventable malfunction. Second, even if an affirmative defense were available, it is only used after initiation of an enforcement proceeding, and successful assertion of such a defense in an enforcement proceeding depends on meeting all affirmative defense criteria and is not guaranteed. The EPA does not believe that a responsible and competent source operator's actions in an emergency situation would be influenced by speculation that if the source is subject to an enforcement action in the future, there may be a defense to penalties available.

Moreover, as explained in detail in the SNPR and this document, the court's decision in *NRDC v. EPA* held that section 113 and section 304 preclude EPA authority to create affirmative defense provisions in the Agency's own regulations imposing emission limitations on sources, because such provisions purport to alter the jurisdiction of federal courts to assess liability and impose penalties for violations of those limits in private civil enforcement cases. The EPA believes that the reasoning of the court in that decision indicates that the states, like the EPA, have no authority in SIP provisions to alter the jurisdiction of federal courts to assess penalties for violations of CAA requirements through affirmative defense provisions. If states

lack authority under the CAA to alter the jurisdiction of the federal courts through affirmative defense provisions in SIPs, then the EPA lacks authority to approve any such provision in a SIP. The EPA notes that the court in *NRDC v. EPA* did not indicate that the statutory provisions should be interpreted differently based on speculation that a given source operator might allow a catastrophic explosion because of the absence of an affirmative defense.

36. Comments that the SNPR did not meet the procedural requirements of section 307(d) because the EPA failed to provide its legal interpretations or explain the data relied upon in this rulemaking.

Comment: Commenters claimed that the EPA violated the procedural requirements of the CAA in the SNPR. The commenters asserted that the EPA designated this rulemaking a section 307(d) action, and the commenters claimed that the EPA did not follow the procedures required in section 307(d). The commenters claimed that the EPA failed to provide a statement of basis and purpose that includes "the major legal interpretations and policy consideration underlying the proposed rule."

In particular, the commenters argued that the EPA did not provide required information with regard to its proposed SIP call concerning the affirmative defense provisions in the Texas SIP. Commenters claimed that the SNPR is deficient because it does not address: (i) Why the Fifth Circuit decision in *Luminant Generation v. EPA* does not control the present action; (ii) on what basis the EPA believes it may disregard the judgment in *Luminant Generation v. EPA*; (iii) why the DC Circuit decision, which does not address the Texas SIP, should take precedence over the *Luminant Generation v. EPA* decision; (iv) on what basis the EPA believes that the DC Circuit may reach a different result than the Fifth Circuit as to the affirmative defenses in the Texas SIP; and (v) the grounds for "acquiescing" to the DC Circuit decision in *NRDC v. EPA*, which specifically states that it does not apply to SIP revisions, and ignoring the relevant holding in the Fifth Circuit. Commenters cited several cases claiming that the DC Circuit has held that, unlike under the Administrative Procedure Act (APA), under CAA section 307(d) the EPA is required to give a detailed explanation of its reasoning and that commenters should not be required to "divine the agency's unspoken thoughts."

Response: The EPA disagrees with the commenters' premise. The EPA did

discuss the *Luminant Generation v. EPA* decision in the SNPR and also explained in detail why it believes that the logic of the DC Circuit's decision in *NRDC v. EPA* supports this SIP call action for affirmative defense provisions. Specifically, the EPA recognized that both the Fifth Circuit and the DC Circuit were evaluating the same fundamental question—whether section 113 and section 304 preclude the creation of affirmative defense provisions that alter or eliminate the jurisdiction of federal courts to determine liability and impose remedies for violations of CAA requirements in judicial enforcement actions. The EPA explained that, after reviewing the *NRDC v. EPA* decision and the *Luminant Generation v. EPA* decision, the Agency determined that its prior interpretation of the CAA, as advanced in both courts, is not the best reading of the statute. Indeed, it is significant that the *Luminant* court upheld the EPA's approval of affirmative defense provisions for unplanned events (*i.e.*, malfunctions) and the disapproval of affirmative defenses for planned events (*i.e.*, startup, shutdown and maintenance) specifically because the court deferred to the Agency's reasonable interpretation of ambiguous statutory provisions in the case at hand. In the SNPR, the EPA explained point by point why it now believes that the decision of the DC Circuit in *NRDC v. EPA* reflected the better reading of section 113 and section 304 and thus that the Agency no longer interprets the CAA to permit affirmative defenses in SIP provisions. Therefore, the EPA believes the Fifth Circuit could also take a different view of the reasonableness of the EPA's resolution of ambiguous provisions after reviewing the EPA's current interpretation of the statute.

37. Comments that the EPA has recently approved affirmative defense provisions through various SIP actions and, therefore, these provisions are proper under the EPA's interpretation of the CAA.

Comment: One commenter noted that the EPA has never taken issue with the affirmative defense provisions in states' SIPs across the many instances where the EPA has reviewed the states' later SIP submissions. The implication of the commenters' argument is that if the EPA has previously approved a SIP submission and directly or indirectly reapproved an affirmative defense provision in the past, this means that the affirmative defense provision still meets CAA requirements.

Response: The EPA disagrees with this comment. As explained in the EPA's response in section VIII.D.18 of

this document, when the EPA takes final action on a state's SIP submission, this does not necessarily entail reexamination and reapproval of every provision in the existing SIP. The EPA often only examines the specific SIP provision the state seeks to revise in the SIP submission, which may not include any affirmative defense provisions. To the extent the EPA did review and approve any affirmative defense provision consistent with its prior interpretation of the CAA that narrowly tailored affirmative defenses were appropriate, the EPA has fully explained why it is now revising that interpretation such that past action based on the earlier interpretation would no longer provide precedent for the EPA's actions. As part of this final action, applying its revised SSM Policy, the EPA is taking action to address affirmative defense provisions in SIPs. Since the issuance of the court's opinion in *NRDC v. EPA*, the EPA has similarly taken steps in its own ongoing NSPS and NESHAP rulemakings to ensure that any existing affirmative defense provisions are removed and that no affirmative defenses are proposed or finalized.⁶⁴

38. Comments that affirmative defense provisions function as structured state "enforcement discretion" and are an important tool for states to prioritize enforcement activities.

Comment: A state commenter characterized the affirmative defense contained in the state's SIP as an "enforcement discretion" tool that supports the state's regulation of excess emissions during malfunction events and promotes preventive measures, proper monitoring and reporting by sources. The state asserted that removal of the affirmative defense provision from the SIP would require the state to address and track violations that are not a high priority to the state agency. The state argued that the affirmative defense provision provides certainty to the

regulated community by providing structure to how the state will exercise its enforcement discretion. The state expressed concern that without the affirmative defense, there will be uncertainty for the regulated community and less incentive for sources to make repairs and submit excess emissions reports promptly. The commenter explained that state law requires reporting of emission events that exceed an established "reportable" quantity and that this prompt reporting allows the state agency to evaluate each event reported quickly. In investigating reports of emission events, the state claimed, it "exercises enforcement discretion only in cases in which it determines that each affirmative defense criteria is met," and the state claimed that elimination of the affirmative defense provision would result in an increase of unavoidable emissions being treated as violations. In general, the state objected to the elimination of the affirmative defense provision because it would strain the state agency's enforcement resources.

Response: These comments concerning the state's use of affirmative defense criteria in structuring the exercise of its enforcement discretion (*e.g.*, determining whether to bring an enforcement action or to further investigate an emissions event) appear to be based on a misunderstanding of the SNPR. This SIP call action directing states to remove affirmative defense provisions from SIPs would not prevent the state from applying such criteria in the exercise of its own enforcement discretion. For example, the state is free to consider factors such as a facility's efforts to comply and the facility's compliance history in determining whether to investigate an excess emissions event or whether to issue a notice of violation or otherwise pursue enforcement. Application of such criteria may well be useful and appropriate to the state in determining the best way to allocate its own enforcement resources. So long as a state does not use the criteria in such a way that the state fails to have a valid enforcement program as required by section 110(a)(2)(C), the state is free to use criteria like those of an affirmative defense as a way to "structure" its exercise of its own enforcement discretion.

However, as explained in the SNPR, the EPA's view is that SIPs cannot include affirmative defense provisions that alter the jurisdiction of the federal court to assess penalties in judicial enforcement proceeding for violation of CAA requirements. The EPA has determined that the specific affirmative

⁶⁴ See, *e.g.*, "National Emission Standards for Hazardous Air Pollutants Residual Risk and Technology Review for Flexible Polyurethane Foam Production; Final rule," 79 FR 48073 (August 15, 2014) (announcing decision not to finalize the proposed affirmative defense); "National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards; and Manufacture of Amino/Phenolic Resins; Final rule," 79 FR 60897 (October 8, 2014) (announcing decision not to finalize the proposed affirmative defense); "Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards; Final rule," 79 FR 79017 (December 31, 2014) (removing affirmative defense from regulations); and "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed rule," 80 FR 3089 (January 21, 2015) (proposing to remove affirmative defense from regulations).

defense provisions at issue in the SIP of the state commenter are inconsistent with CAA requirements for SIP provisions. In addition, the EPA interprets the CAA to bar “enforcement discretion” provisions in SIPs that operate to impose the enforcement discretion decisions of the state upon the EPA or any other parties who may seek to enforce pursuant to section 304. Pursuant to the requirements of sections 110(k), 110(l) and 193, the EPA has both the authority and the responsibility to evaluate SIP submissions to assure that they meet the requirements of the CAA. Pursuant to section 110(k)(5), the EPA has authority and discretion to take action to require states to revise previously approved SIP provisions if they do not meet CAA requirements.

39. Comments that requiring states to adopt emissions standards that are not achievable at all times and then expecting courts to render those standards lawful by employing discretion in the assessment of penalties is contradictory to CAA section 307(b)(2), which mandates pre-enforcement review.

Comment: Commenters claimed that courts have consistently held that regulators cannot rely on enforcement discretion to establish the achievability of emission limitations. The commenters referred to a 1973 case addressing NSPS regulations in which they claimed the court remanded the standard to the EPA to support an “at all times” standard.

Commenters further asserted that reliance on the discretion of judges to decide whether and to what extent penalties are appropriate is also not lawful. The commenters claimed that if a state establishes an emission limitation on the basis that it is achievable, then the standard must be achievable under all circumstances to which it applies. The commenters argued that if a state adopts an emission limitation that is not achievable under all conditions, then the state must explain how the standard can be reasonably enforced. The commenters concluded that a numerical emission limitation that cannot be achieved by sources at all times is not enforceable because no amount of penalty can deter the violating conduct. The commenters recognized that it is reasonable for states to exercise enforcement discretion under circumstances when an emission limitation cannot be met but argued that it is not reasonable to adopt a SIP that puts sources in a state of repeated noncompliance.

Commenters further claimed that the decision in *NRDC v. EPA*, while allowing sources to argue unjust

punishment should not be imposed, conflicts with the CAA’s requirements for pre-enforcement review. The commenters stated that emission limitations that could have been challenged at the time of promulgation are not subject to judicial review in an enforcement proceeding. Thus, the commenters claimed that any challenges to the achievability of a SIP emission limitation must be made at the time the emission limitation is promulgated and that judges will not consider such arguments in the context of an enforcement action. The commenters argued that forcing states to adopt unachievable standards and then prohibiting them from including an affirmative defense for penalties for unavoidable exceedances creates a dilemma Congress sought to avoid.

Response: A number of the arguments that the commenters are raising appear to go beyond the scope of the affirmative defense issues in the SNPR. In the SNPR, the EPA revised its prior proposal with respect to issues related exclusively to affirmative defense provisions in SIPs. These comments are similar to an argument that any period during which an emission limitation cannot be met must be deemed not to be a violation of the standard. The EPA is addressing these types of issues, to the extent that they were raised in comments on the February 2013 proposal. The EPA does note, however, that the Agency is not requiring states to adopt standards that cannot be met and then providing that states rely only on enforcement discretion to address periods of noncompliance. As the EPA has already noted, states may choose to adopt standards that are different from the underlying standards for periods where the underlying standards cannot otherwise be met.

The EPA also disagrees with the comments that the holding in *NRDC v. EPA* is inconsistent with section 307(b)(2) that provides that regulations that could have been challenged at promulgation cannot later be challenged in an enforcement action. Nothing in section 307(b) limits the ability of the court to consider the criteria of section 113(e), such as good faith efforts of a source to comply in assessing penalties. Neither the decision in *NRDC v. EPA* nor this SIP call action requires states to adopt standards that cannot be met. Moreover, the public, including regulated sources, will be able to comment on the revised emission limitations developed by states in response to this SIP call. If an interested party believes that the state has adopted unachievable emission limitations, that

party can challenge such standards at the time of adoption.

40. Comments that the EPA should announce that it no longer recognizes existing affirmative defense provisions, effective immediately.

Comment: Commenters claimed that because the court held in *NRDC v. EPA* that the EPA was without authority to interpret the CAA to allow affirmative defenses, the EPA should explicitly state that it no longer recognizes such provisions immediately. The commenters argued that by proceeding under its authority under section 110(k)(5), the EPA is providing states 18 months to remove the affirmative defense provisions and that thereafter the EPA will take additional time to act upon those SIP revisions under section 110(k). The commenters argued that this in effect allows sources to continue relying on affirmative defense provisions that are not consistent with CAA requirements for a period of years into the future. Because the EPA did not have authority to approve the affirmative defense provisions in the first instance, the commenters contended that the Agency should simply declare that the affirmative defense provisions are now null and void.

Response: The EPA understands the concerns raised by the commenters but does not agree that it is inappropriate for the Agency to proceed under section 110(k)(5). The affirmative defense provisions at issue in this action are part of the EPA-approved SIPs for the affected states. The EPA, as well as states, cannot unilaterally change provisions of the approved SIP without following appropriate notice-and-comment procedures. To the extent that the commenters were advocating that the EPA should have proceeded under its authority to do error corrections under section 110(k)(6) rather than a SIP call under section 110(k)(5), the Agency has explained in detail in the February 2013 proposal and this document why it is more appropriate to proceed via SIP call instead. Under the SIP call process, the EPA cannot declare approved SIP provisions null and void prior to state submission and Agency approval of revised SIP provisions.

41. Comments that instead of acting through a nationwide SIP call action, the EPA should have worked individually with states to correct any deficient SIP provisions.

Comment: One commenter stated that rather than using a SIP call to address SSM issues in existing SIPs, the EPA should work with each state’s air agency individually to identify and address SIP deficiencies and work through the

normal rulemaking and SIP revision processes to correct any identified problems.

Response: The CAA provides a mechanism specifically for the correction of flawed SIPs. Section 110(k)(5) provides: "Whenever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to . . . comply with any requirement of [the Act], the Administrator shall require the State to revise the plan as necessary to correct such inadequacies." This type of action is commonly referred to as a "SIP call." The EPA, in this action, is using a SIP call to notify states of flawed provisions in SIPs and initiate a process for correction of those provisions.

The EPA, largely through its Regional Offices, has individually reviewed each state provision subject to the SIP call. The EPA will work closely with each state, during future rulemaking actions taken by states to adopt SIP revisions and then subsequent actions by the EPA, to determine whether these adopted SIP revisions meet the mandate of the SIP call and are consistent with CAA requirements. As part of these actions, each individual state will work closely with the EPA to address the SIP deficiencies identified in this action.

42. Comments that the EPA should not consider those comments on the February 2013 proposal that concern affirmative defense provisions in SIPs to no longer be relevant.

Comment: One commenter disagreed with the EPA's decision not to respond to certain comments submitted on the February 2013 proposal, to the extent the comments applied to issues related to affirmative defense provisions in SIPs generally or to issues related to specific affirmative defense provisions identified by the Petitioner, on a basis that those comments are no longer relevant if the EPA finalizes its action as proposed in the SNPR. According to the commenter, the EPA's interpretation of the CAA has not changed so as to exclude the other SSM provisions in the proposed action, and this alone shows that the comments submitted on the February 2013 proposal are still relevant.

Response: The EPA's proposed action on the Petition in the SNPR superseded the February 2013 proposal with respect to the issues related to affirmative defense provisions in SIPs. As explained in detail in the SNPR, after the February 2013 proposal, a federal court ruled that the CAA precludes authority of the EPA to create affirmative defense provisions applicable to private civil suits in its own regulations. As a result, the EPA issued the SNPR to propose applying a

revised interpretation of the CAA to affirmative defense provisions in SIPs consistent with the reasoning of court's decision in *NRDC v. EPA*. The EPA supplemented and revised its proposed response to the issues raised in the Petition to the extent they concern affirmative defenses in SIPs, and the EPA solicited comment on its revised proposed response. Because the EPA's interpretation of the CAA with respect to the legal basis for affirmative defense provisions in SIPs changed from the time of the February 2013 proposal to the SNPR, comments on the February 2013 proposal, to the extent they concern affirmative defenses in SIPs, are not relevant to the EPA's revised proposed action. For example, comments on the February 2013 proposal that argue that the EPA was wrong to interpret the CAA to allow affirmative defense provisions for malfunction events but not for startup or shutdown events are not relevant when the Agency's interpretation of the CAA is now that no such affirmative defense provisions are valid. Similarly, comments that the criteria that the EPA previously recommended for valid affirmative defense provisions were too many, too few, too stringent or too lax simply have no relevance when the EPA does not interpret the CAA to allow any such affirmative defense provisions regardless of the number, nature or stringency of the criteria for qualifying for the affirmative defense. The EPA believes that it is reasonable for the Agency to determine that comments that have no bearing on the proposed action concerning affirmative defense provisions in the SNPR are not relevant. Because the EPA is finalizing the action on the Petition as proposed in the SNPR concerning affirmative defense provisions in SIPs, it is doing so based on evaluation of the comments that are relevant to the SNPR.

V. Generally Applicable Aspects of the Final Action in Response to Request for the EPA's Review of Specific Existing SIP Provisions for Consistency With CAA Requirements

A. What the Petitioner Requested

The Petitioner's second request was for the EPA to find as a general matter that SIPs "containing an SSM exemption or a provision that could be interpreted to affect EPA or citizen enforcement are substantially inadequate to comply with the requirements of the Clean Air Act."⁶⁵ In addition, the Petitioner requested that if the EPA finds such defects in existing

SIPs, the EPA "issue a call for each of the states with such a SIP to revise it in conformity with the requirements or otherwise remedy these defective SIPs."⁶⁶

The Petitioner argued that many SIPs currently contain provisions that are inconsistent with the requirements of the CAA. According to the Petitioner, these provisions fall into two general categories: (1) Exemptions for excess emissions by which such emissions are not treated as violations; and (2) enforcement discretion provisions that may be worded in such a way that a decision by the state not to enforce against a violation could be construed by a federal court to bar enforcement by the EPA under CAA section 113, or by citizens under CAA section 304.

First, the Petitioner expressed concern that many SIPs have either automatic or discretionary exemptions for excess emissions that occur during periods of SSM. Automatic exemptions are those that, on the face of the SIP provision, provide that any excess emissions during such events are not violations even though the source exceeds the otherwise applicable emission limitations. These provisions preclude enforcement by the state, the EPA or citizens, because by definition these excess emissions are defined as not violations. Discretionary exemptions or, more correctly, exemptions that may arise as a result of the exercise of "director's discretion" by state officials, are exemptions from an otherwise applicable emission limitation that a state may grant on a case-by-case basis with or without any public process or approval by the EPA, but that do have the effect of barring enforcement by the EPA or citizens. The Petitioner argued that "[e]xemptions that may be granted by the state do not comply with the enforcement scheme of title I of the Act because they undermine enforcement by the EPA under section 113 of the Act or by citizens under section 304."

The Petitioner explained that all such exemptions are fundamentally at odds with the requirements of the CAA and with the EPA's longstanding interpretation of the CAA with respect to excess emissions in SIPs. SIPs are required to include emission limitations designed to provide for the attainment and maintenance of the NAAQS and for protection of PSD increments. The Petitioner emphasized that the CAA requires that such emission limitations be "continuous" and that they be established at levels that achieve sufficient emissions control to meet the required CAA objectives when adhered

⁶⁵ Petition at 14.

⁶⁶ *Id.*

to by sources. Instead, the Petitioner contended, exemptions for excess emissions through “loopholes” in SIP provisions often result in real-world emissions that are far higher than the level of emissions envisioned and planned for in the SIP.

Second, the Petitioner expressed concern that many SIPs have provisions that may have been intended to govern only the exercise of enforcement discretion by the state’s own personnel but are worded in a way that could be construed to preclude enforcement by the EPA or citizens if the state elects not to enforce against the violation. The Petitioner contended that “any SIP provision that purports to vest the determination of whether or not a violation of the SIP has occurred with the state enforcement authority is inconsistent with the enforcement provisions of the Act.”

After articulating these overarching concerns with existing SIP provisions, the Petitioner requested that the EPA evaluate specific SIP provisions identified in the separate section of the Petition titled, “Analysis of Individual States’ SSM Provisions.”⁶⁷ In that section, the Petitioner identified specific provisions in the SIPs of 39 states that the Petitioner believed to be inconsistent with the requirements of the CAA and explained in detail the basis for that belief. In the conclusion section of the Petition, the Petitioner listed the SIP provisions in each state for which it seeks a specific remedy. A more detailed explanation of the Petitioner’s arguments appears in the 2013 February proposal.⁶⁸

B. What the EPA Proposed

In its February 2013 proposal, the EPA proposed to deny in part and to grant in part the Petition with respect to this two-part request. The EPA explained its longstanding interpretations of the CAA with respect to SIP provisions that apply to excess emissions during SSM events. The EPA also agreed that automatic exemptions, discretionary exemptions via director’s discretion, ambiguous enforcement discretion provisions that may be read to preclude EPA or citizen enforcement and affirmative defense provisions can interfere with the overarching objectives of the CAA, such as attaining and maintaining the NAAQS, protecting PSD increments and improving visibility. Such provisions in SIPs can interfere with effective enforcement by air agencies, the EPA and the public to

assure that sources comply with CAA requirements, and such interference is contrary to the fundamental enforcement structure provided in CAA sections 113 and 304.

Accordingly, the EPA evaluated each of the specific SIP provisions that the Petitioner identified to determine whether it is consistent with CAA requirements for SIP provisions. The EPA conducted this evaluation in light of its interpretations of the CAA reflected in the SSM Policy and recent court decisions pertaining to relevant issues. In section IX of the February 2013 proposal, the EPA provided its proposed view with respect to each of these SIP provisions. The EPA solicited comment on its proposed grant or denial of the Petition for each of the specific SIP provisions and its rationale for the proposed action. Through consideration of the overarching issues raised by the Petition, and informed by the evaluation of the specific SIP provisions identified in the Petition as a group, the EPA also determined that it was necessary to reiterate, clarify and amend its SSM Policy. The EPA thus took comment on its interpretations of the CAA set forth in the SSM Policy in order to assure that it provides comprehensive and up-to-date guidance to states concerning SIP provisions applicable to emissions from sources during SSM events.

C. What Is Being Finalized in This Action

The EPA is taking final action to deny in part and to grant in part the Petition with respect to the request to find specific SIP provisions inconsistent with the CAA as interpreted by the Agency in the SSM Policy. The EPA is also taking final action to grant the Petition on the request to make a finding of substantial inadequacy and to issue a SIP call for specific existing SIP provisions. The basis for the SIP call is that these provisions include an automatic exemption, a discretionary exemption, an inappropriate enforcement discretion provision, an affirmative defense provision, or other form of provision that is inconsistent with CAA requirements for SIP provisions. For those SIP provisions that the EPA has determined to be consistent with CAA requirements, however, the Agency is taking final action to deny the Petition and taking no further action with respect to those provisions. The specific SIP provisions at issue are discussed in detail in section IX of this document.

As a result of its review of the issues raised by the Petition, the EPA is also through this action clarifying, reiterating and updating its SSM Policy to make

certain that it provides comprehensive and up-to-date guidance to air agencies concerning SIP provisions to address emissions during SSM events, consistent with CAA requirements. With respect to automatic exemptions from emission limitations in SIPs, the EPA’s longstanding interpretation of the CAA is that such exemptions are impermissible because they are inconsistent with the fundamental requirements of the CAA. The EPA has reiterated this point in numerous guidance documents and rulemaking actions and is reaffirming that interpretation in this final action. By exempting emissions that would otherwise constitute violations of the applicable emission limitations, such exemptions interfere with the primary air quality objectives of the CAA (e.g., attainment and maintenance of the NAAQS), undermine the enforcement structure of the CAA (e.g., the requirement that all SIP provisions be legally and practically enforceable by states, the EPA and parties with standing under the citizen suit provision), and eliminate the incentive for emission sources to comply at all times, not solely during normal operation (e.g., incentives to be properly designed, maintained and operated so as to minimize emissions of air pollutants during startup and shutdown or to take prompt steps to rectify malfunctions).

The court’s decision in *Sierra Club v. Johnson* concerning exemptions for SSM events in the EPA’s own regulations has reemphasized the fact that emission limitations under the CAA are required to be continuous. The court held that this statutory requirement precludes emission limitations that would allow periods during which emissions are exempt. Moreover, from a policy perspective, the EPA notes that the existence of impermissible exemptions in SIP provisions has the potential to lessen the incentive for development of control strategies that are effective at reducing emissions during certain modes of source operation such as startup and shutdown, even while such strategies could become increasingly helpful for various purposes, including attaining and maintaining the NAAQS. The issue of automatic exemptions for SSM events in SIP provisions is discussed in more detail in section VII.A of this document.

With respect to discretionary exemptions from emission limitations in SIPs, the EPA also has a longstanding interpretation of the CAA that prohibits “director’s discretion” provisions in SIPs if they provide unbounded discretion to allow what would amount to a case-specific revision of the SIP

⁶⁷ Petition at 17.

⁶⁸ See February 2013 proposal, 78 FR 12459 at 12473–74 (February 22, 2013).

without meeting the statutory requirements of the CAA for SIP revisions. In particular, the EPA interprets the CAA to preclude SIP provisions that provide director's discretion authority to create discretionary exemptions for violations when the CAA would not allow such exemptions in the first instance. As with automatic exemptions for excess emissions during SSM events, discretionary exemptions for such emissions interfere with the primary air quality objectives of the CAA, undermine the enforcement structure of the CAA and eliminate the incentive for emission sources to minimize emissions of air pollutants at all times, not solely during normal operations. Through this action, the EPA is reiterating its interpretation of the provisions of the CAA that preclude unbounded director's discretion provisions in SIPs. The EPA is also explaining two ways in which air agencies may elect to correct a director's discretion type of deficiency. The issue of director's discretion in SIP provisions applicable to SSM events is discussed in more detail in section VII.C of this document.

With respect to enforcement discretion provisions in SIPs, the EPA also has a longstanding interpretation of the CAA that SIPs may contain such provisions concerning the exercise of discretion by the air agency's own personnel, but such provisions cannot bar enforcement by the EPA or by other parties through a citizen suit.⁶⁹ In the event such a SIP provision could be construed by a court to preclude EPA or citizen enforcement, that provision would be at odds with fundamental requirements of the CAA pertaining to enforcement. Such provisions in SIPs can interfere with effective enforcement by the EPA and the public to assure that sources comply with CAA requirements, and this interference is contrary to the fundamental enforcement structure provided in CAA sections 113 and 304. The issue of enforcement discretion in SIP provisions applicable to SSM events is discussed in more detail in section VII.D of this document.

The EPA has evaluated the concerns expressed by the Petitioner with respect to each of the identified SIP provisions and has considered the specific remedy sought by the Petitioner. Through evaluation of comments on the February 2013 proposal and the SNPR, the EPA has taken into account the perspective of other stakeholders concerning the proper application of the CAA and the Agency's preliminary evaluation of the

specific SIP provisions identified in the Petition. In many instances, the EPA has concluded that the Petitioner's analysis is correct and that the provision in question is inconsistent with CAA requirements for SIPs. For those SIP provisions, the EPA is granting the Petition and is simultaneously making a finding of substantial inadequacy and issuing a SIP call to the affected state to rectify the specific SIP inadequacy. In other instances, however, the EPA disagrees with the Petitioner's analysis of the provision, in some instances because the analysis applied to provisions that have since been corrected in the SIP. For those provisions, the EPA is therefore denying the Petition and taking no further action. In summary, the EPA is granting the Petition in part, and denying the Petition in part, with respect to all of the specific existing SIP provisions for which the Petitioner requested a remedy. The EPA's evaluation of each of the provisions identified in the Petition and the basis for the final action with respect to each provision is explained in detail in section IX of this document.

D. Response to Comments Concerning the CAA Requirements for SIP Provisions Applicable to SSM Events

The EPA received numerous comments, both supportive and adverse, concerning the Agency's decision to propose action on the Petition with respect to the overarching issues raised by the Petitioner. A number of these comments also raised important issues concerning the rights of citizens to petition their government, the process by which the EPA evaluated the issues raised in the Petition and the relative authorities and responsibilities of states and the EPA under the CAA. Many commenters raised the same conceptual issues and arguments. For clarity and ease of discussion, the EPA is responding to these overarching comments, grouped by topic, in this section of this document. The responses to more specific substantive issues raised by commenters on the EPA's interpretation of the CAA in the SSM Policy appear in other sections of this document that focus on particular aspects of this action.

1. Comments that the EPA should not have responded to the petition for rulemaking or that the EPA was wrong to do so.

Comment: Some commenters opposed the EPA's proposed action on the Petition in the February 2013 proposal entirely and alleged that it is "sue-and-settle rulemaking" or "regulation by litigation." Commenters stated that the "proposed rule and corresponding

aggressive deadline schedule stem from" a settlement of litigation brought by Sierra Club to respond to the Petition.

Some commenters expressed concern that the EPA's proposed action was made in response to a settlement agreement, through a process that, the commenters alleged, did not permit any opportunity for participation by affected parties. Other commenters, believing that the EPA's proposed action was taken to fulfill a consent decree obligation, argued that consent decree deadlines "often do not allow EPA enough time to write quality regulations" or would not allow "opportunity to properly research and investigate the effect of State SSM provisions or the State's ability to meet the NAAQS, or to determine whether the SSM provisions are somehow inconsistent with the CAA." The commenters alleged that the process "bypasses the traditional rulemaking concepts of transparency and effective public participation" and "sidesteps the proper rulemaking channels and undercuts meaningful opportunities for those affected by the proposed rule to develop and present evidence that would support a competing and fully informed viewpoint on the substantive issues during the rulemaking process."

Response: The EPA believes that these comments reflect fundamental misunderstandings about this action. This is a rulemaking in which the EPA is taking action to respond to a petition for rulemaking, and it has undergone a full notice-and-comment rulemaking process as provided for in the CAA. In the February 2013 proposal, the EPA proposed to take action on the Petition. Under the CAA, the APA and the U.S. Constitution, citizens have the right to petition the government for redress. For example, the APA provides that "[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule."⁷⁰ When citizens file a petition for rulemaking, they are entitled to a response to such petition—whether that response is to grant the petition, to deny the petition, or to partially grant and partially deny the petition as has occurred in this rulemaking action.

Some of these commenters expressed concern that the EPA's action on the Petition was the result of the Agency's obligations under a consent decree or settlement agreement and that this fact in some way invalidates the substantive action. First, the EPA notes that the action was undertaken not in response to a consent decree but rather in

⁶⁹ See, e.g., 1983 SSM Guidance at Attachment p. 2.

⁷⁰ 5 U.S.C. 553(e).

response to a settlement agreement. Second, the EPA notes that this settlement agreement was entered into by the Agency and the Sierra Club in order to resolve allegations that the EPA was not correctly evaluating and acting upon SIP submissions from states. In particular, the Sierra Club claimed that the EPA was illegally ignoring existing deficiencies in the SIPs of many states, including existing allegedly deficient provisions concerning the treatment of excess emissions during SSM events, when acting on certain SIP submissions. As a result, the Sierra Club alleged, the EPA was acting in contravention of its obligations under the CAA and various consent decrees and thus should be held in contempt for failure to address these issues. In order to resolve these allegations, the EPA agreed only to take action on a petition for rulemaking and to take the action that it deemed appropriate after evaluation of the allegations in the petition. The terms of the settlement agreement underwent public comment and are a matter of public record and are in the docket for this rulemaking.⁷¹

The EPA does not enter into settlement agreements lightly, nor does the EPA enter into settlement agreements without following the full public process required by CAA section 113(g), which the Agency followed in this case.⁷² The EPA solicited comment on the draft settlement agreement as required by section 113(g). In no case does the EPA enter into a settlement agreement that has not been officially reviewed not only by the Agency but also by the Department of Justice. Thus, contrary to the commenters' implications, this rulemaking is the result of an appropriate settlement agreement that did undergo public comment and is legitimate.

In acting on the Petition the EPA has followed all steps of a notice-and-comment rulemaking, as governed by applicable statutes, regulations and executive orders, including a robust process for public participation. When the EPA initially proposed to take action on the Petition, in February 2013, it simultaneously solicited public comment on all aspects of its proposed response to the issues in the Petition and in particular on its proposed action with respect to each of the specific existing SIP provisions identified by the Petitioner as inconsistent with the

requirements of the CAA. In response to requests, the EPA extended the public comment period for this proposal to May 13, 2013, which is 80 days from the date the proposed rulemaking was published in the **Federal Register** and 89 days from the date the proposed rulemaking was posted on the EPA's Web site.⁷³ The EPA deemed this extension appropriate because of the issues raised in the February 2013 proposal. The EPA also held a public hearing on March 12, 2013. In response to this proposed action, the EPA received approximately 69,000 public comments, including over 50 comment letters from state and local governments, over 150 comment letters from industry commenters, over 25 comment letters from public interest groups and many thousands of comments from individual commenters. Many of these comment letters were substantial and covered numerous issues.

Similarly, when the EPA ascertained that it was necessary to revise its proposed action on the Petition with respect to affirmative defenses in SIP provisions, the Agency issued the SNPR. In that supplemental proposal, in September 2014, the EPA fully explained the issues and took comment on the questions related to whether affirmative defense provisions are consistent with CAA requirements concerning the jurisdiction of courts in enforcement actions, and thus whether such provisions are consistent with fundamental CAA requirements for SIP provisions. The EPA provided a public comment period ending November 6, 2014, which is 50 days from the date the SNPR was published in the **Federal Register** and 62 days from the date the SNPR was posted on the EPA's Web site. The EPA believes that the comment period was sufficient given that the subject of the SNPR was limited to the narrow issue of whether affirmative defense provisions are consistent with CAA requirements. The EPA also held a public hearing on the SNPR on October 7, 2014 on the specific topic of the legitimacy of affirmative defense provisions in SIPs. In response to the SNPR, the EPA received over 20,000 public comments, including at least 9 comment letters from states and local governments, over 40 comment letters from industry commenters, at least 6 comment letters from public interest

groups, and many thousands of comments from individual commenters.

2. Comments that EPA's action on the Petition violates "cooperative federalism."

Comment: Many commenters asserted that the EPA's proposed action on the Petition and the issuance of this SIP call violate principles of cooperative federalism because they impermissibly substitute the EPA's judgment for that of the states in the development of SIPs. This argument was raised by both air agency and industry commenters.

These commenters described the relationship between states and the EPA with respect to SIPs in general. The commenters stated that Congress designed the CAA as a regulatory partnership between the EPA and the states, *i.e.*, a relationship based on "cooperative federalism." Under cooperative federalism, the commenters noted, the EPA has the primary responsibility to identify air pollutants that endanger the public health and welfare and to set national standards for those pollutants. By contrast, the states have primary responsibility to determine how to achieve those national standards by developing federally enforceable measures through SIPs. According to these commenters, however, once a state has made a SIP submission, the EPA's role is relegated exclusively to the ministerial function of reviewing whether the SIP submission will result in compliance with the NAAQS. Similarly, the commenters claim that when EPA is evaluating in the context of a SIP call whether a state's existing SIP continues to meet applicable CAA requirements, the only relevant question is whether the existing SIP will result in compliance with the NAAQS. Thus, the commenters claimed that by finding certain existing SIP provisions substantially inadequate because they are legally deficient to meet CAA requirements for SIP provisions, the EPA is usurping state authority under the cooperative-federalism structure of the CAA.

To support this view, many commenters cited to the "*Train-Virginia* line of cases," named for the U.S. Supreme Court case *Train v. Natural Resources Defense Council, Inc.*,⁷⁴ and to the D.C. Circuit case *Virginia v. EPA*.⁷⁵ The D.C. Circuit has described these cases as defining a "federalism bar" that constrains the EPA's authority with respect to evaluation of state SIPs

⁷¹ See Settlement Agreement executed November 30, 2011, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0039.

⁷² See "Proposed Settlement Agreement, Clean Air Act Citizen Suit" (notice of proposed settlement agreement; request for public comment), 76 FR 54465 (September 1, 2011).

⁷³ See "State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction; Notice of extension of public comment period," 78 FR 20855 (April 8, 2013), in the rulemaking docket at EPA-HQ-OAR-2012-0322-0126.

⁷⁴ 421 U.S. 60 (1975).

⁷⁵ 108 F.3d 1397 (D.C. Cir. 1997).

under section 110.⁷⁶ Many commenters asserted that this federalism bar limits the EPA's oversight of state SIPs exclusively to whether a SIP will result in compliance with the NAAQS. The commenters evidently construe "compliance with the NAAQS" very narrowly to mean the SIP will factually result in attainment of the NAAQS, regardless of whether the SIP provisions in fact meet all applicable CAA requirements (e.g., the requirement that the SIP emission limitations be continuous and enforceable).

Accordingly, most of these commenters selectively quoted or cited a passage in *Train*,⁷⁷ and similar passages in circuit court opinions following *Train*, for the proposition that the EPA cannot issue a SIP call addressing the SIP provisions at issue in this SIP call action. Some of these commenters asserted that if the EPA were to finalize this action, the states would have "nothing left" of their discretion in SIP development and implementation in the future.

Response: The EPA agrees that the CAA establishes a framework for state-federal partnership based on cooperative federalism. The EPA does not, however, agree with the commenters' characterization of that relationship. The EPA explained its view of the cooperative-federalism structure in the February 2013 proposal, especially the fact that under this principle both states and the EPA have authorities and responsibilities with respect to implementing the requirements of the CAA.⁷⁸ The EPA believes that the commenters fundamentally misunderstand or inaccurately describe this action, as well as the "'division of responsibilities' between the states and the federal government" in section 110 that is described in the *Train-Virginia* line of cases.⁷⁹

In CAA section 110(a)(1), Congress imposed the duty upon all states to have a SIP that provides for "the implementation, maintenance, and enforcement" of the NAAQS. In section 110(a)(2), Congress clearly set forth the basic SIP requirements that "[e]ach such plan *shall*" satisfy.⁸⁰ By using the

mandatory "shall" in section 110(a)(2), Congress established a framework of mandatory requirements *within which* states may exercise their otherwise considerable discretion to design SIPs to provide for attainment and maintenance of the NAAQS and to meet other CAA requirements. In other sections of the Act, Congress also imposed additional, more specific SIP requirements (e.g., the requirement in section 189 that states impose RACM-level emission limitations on sources located in PM_{2.5} nonattainment areas).

In particular, this SIP call action concerns whether SIP provisions satisfy section 110(a)(2)(A), which requires that each SIP "[shall] include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter."

As explained in the February 2013 proposal, the automatic and discretionary exemptions for emissions from sources during SSM events at issue in this action fail to meet this most basic SIP requirement and are also inconsistent with the enforcement requirements of the CAA. Similarly, the enforcement discretion provisions at issue in this action that have the effect of barring enforcement by EPA or citizens fail to meet this requirement for enforceable emission limitations by interfering with the enforcement structure of the CAA as established by Congress. The affirmative defense provisions at issue are similarly inconsistent with the requirement that SIPs provide for enforcement of the NAAQS and also contravene the statutory jurisdiction of courts to determine liability and to impose remedies for violations of SIP requirements. Each of these types of deficient SIP provisions is thus inconsistent with legal requirements of the CAA for SIP provisions. Contrary to the claims of many commenters, the EPA has authority and responsibility to assure that a state's SIP provisions in fact comply with fundamental legal requirements of the CAA as part of the obligation to ensure that SIPs protect the NAAQS.⁸¹

The *Train-Virginia* line of cases affirms the plain language of the Act—that in addition to providing generally for attainment and maintenance of the NAAQS, all state SIPs must satisfy the specific elements outlined in section 110(a)(2). Even setting aside that *Train* predated substantive revisions to the CAA that strengthened section 110(a)(2)(A) in ways relevant here,⁸² the *Train* Court clearly stated that section 110(a)(2) imposes additional requirements for state submissions to be accepted, independent of the general obligation to meet the NAAQS. Many commenters on the February 2013 proposal selectively quoted or cited only portions of the following excerpt from *Train*, omitting or ignoring the portions emphasized here:

The Agency is plainly charged by the Act with the responsibility for setting the national ambient air standards. Just as plainly, however, it is relegated by the Act to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations which are necessary if the national standards it has set are to be met. Under § 110(a)(2), the Agency is required to approve a state plan which provides for the timely attainment and subsequent maintenance of ambient air standards, *and which also satisfies that section's other general requirements*. The Act gives the Agency no authority to question the wisdom of a State's choices of emission limitations *if they are part of a plan which satisfies the standards of § 110(a)(2)*. . . . Thus [i.e., provided the state plan satisfies the basic requirements of § 110(a)(2)], so long as the ultimate effect of a State's choice of emission limitations is compliance with the national standards for ambient air, the State is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation.⁸³

the NAAQS, as well as to meet other objectives such as protection of PSD increments and visibility.

⁸² For example, to the extent the *Train* Court was construing section 110(a)(2)'s emission limitation provision, it is important to note that while that statutory section before the *Train* Court required approvable SIPs to include certain controls "necessary to insure compliance with [the] primary or secondary standards" (i.e., the NAAQS), *see* CAA of 1970, Pub. L. 91–604, section 4(a), 84 Stat. 1676, 1680 (December 31, 1970), that section now more broadly speaks of controls "necessary or appropriate to meet the applicable requirements of this chapter" (i.e., the CAA). Section 110(a)(2)(A) (emphasis added). Among the other relevant textual changes are the qualification that emission limitations and other controls be "enforceable," *id.*; a statutory definition of "emission limitation" that adds requirements not contemplated by *Train*, *compare* Section 302(k), with *Train*, 421 U.S. at 78; as well as a recharacterization of section 110(a)(2)'s emission limitation requirement from one bearing on whether "[t]he Administrator shall approve such plan," *see* Pub. L. 91–604, section 4(a), 84 Stat. at 1680, to a requirement expressly directed at what "[e]ach plan shall" include.

⁸³ 421 U.S. at 79 (emphasis added) (footnotes omitted).

⁷⁶ See, e.g., *Michigan v. EPA*, 213 F.3d 663, 687 (D.C. Cir. 2000).

⁷⁷ See 421 U.S. at 79.

⁷⁸ See 78 FR 12459 at 12468; Background Memorandum at 1–3.

⁷⁹ See *Virginia v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir. 1997) (quoting *Train*, 421 U.S. at 79).

⁸⁰ Section 110(a)(2) (emphasis added); *see EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1600 (2014) (holding that section 110(a)(2) "speaks without reservation" regarding what "components" a SIP "'shall' include"); H. Rept. 101–490, at 217 (calling the provisions of section 110(a)(2)(A) through (M) "the basic requirements of SIPs").

⁸¹ The EPA notes that many of the specific SIP elements required in section 110(a)(2) are not themselves stated in terms of attainment and maintenance of the NAAQS. Instead, these requirements are part of the SIP structure that Congress deemed necessary to support implementation, maintenance and enforcement of

When read in its entirety, without omitting the portions italicized above, *Train* clearly does not stand for the proposition that SIPs must be judged exclusively on the basis of whether they will ensure attainment and maintenance of the NAAQS. To the contrary, the Court made clear that approvable SIP submissions must not only provide for attainment and maintenance of the NAAQS but must also satisfy section 110(a)(2)'s "other general requirements" ⁸⁴ Furthermore, while states have great latitude to select emission limitations, *Train* explained that those emission limitations must nevertheless be "part of a plan which satisfies the standards of § 110(a)(2)" ⁸⁵ Finally, the EPA notes that many commenters quoting the final sentence excerpted above typically excluded the word "Thus," which references the preceding sentence stating that SIPs must "satisfy [section 110(a)(2)]'s other general requirements." ⁸⁶ By omitting the word "thus," and the passages concerning the obligation of states to comply with section 110(a)(2) and other obligations of the CAA, the commenters disregard the critical point that the EPA has the statutory responsibility to assure that state SIPs meet the specific requirements of the CAA, not merely that they provide for attainment of the NAAQS regardless of whether they meet other mandatory legal requirements. ⁸⁷ In short, the *Train* Court did not hold that SIPs must merely provide for attainment of the NAAQS even under the 1970 Act, much less the text of the CAA applicable today. To the contrary, the U.S. Supreme Court indicated that approvable state plans were also required to meet other legal specifications of the CAA for SIPs such as those in section 110(a)(2) and that the EPA's responsibility is to determine whether they do so. The EPA's own

⁸⁴ See *id.* (emphasis added).

⁸⁵ See *id.* The EPA notes that section 110(a)(2) and other sections relevant to SIPs in fact contain numerous procedural and substantive requirements that air agencies must meet. Section 110(a) is not composed of a single sentence that directs states merely to attain the NAAQS; it is replete with legal requirements applicable to SIPs that help to assure that a SIP will successfully meet that objective.

⁸⁶ See *id.*

⁸⁷ As a related point, the EPA notes that commenters claiming that the proposed SIP call was a violation of cooperative federalism likewise typically did not address the existence or significance of sections 110(k), 110(l) and 193. All of these provisions indicate that the EPA has statutory authority and responsibility to approve or disapprove SIP submissions, based upon whether they meet applicable requirements of the CAA. The EPA fully explained its views concerning its authority and responsibility under these provisions in the February 2013 proposal. See 78 FR 12459 at 12471, 12477–78, 12483–89; Background Memorandum at 2–3.

obligations with respect to evaluating SIPs under sections 110(k)(3), 110(l) and 193 continue to provide this authority and responsibility today.

After *Train*, one of the cases most frequently cited by commenters for its discussion of cooperative federalism was the D.C. Circuit's decision in *EME Homer City Generation, L.P. v. EPA*, a case since overturned by the U.S. Supreme Court. ⁸⁸ In that case arising under section 110(a)(2), the D.C. Circuit vacated the EPA's Cross-State Air Pollution Rule for two reasons, one being related to statutory interpretation of section 110(a)(2)(D)(i), the other being "a second, entirely independent problem" based on the EPA's purported overstep of the federalism bar identified in the *Train-Virginia* line of cases. ⁸⁹ After recounting a list of decisions that recognize the cooperative-federalism structure of the CAA, the D.C. Circuit concluded that even though states have the "primary responsibility" for implementing the NAAQS, in this case the states had no responsibility to address interstate transport until the EPA first quantified the obligations of the states. The dissent described the majority's application of the *Train-Virginia* cases as "a redesign of Congress's vision of cooperative federalism in implementing the CAA" ⁹⁰ The commenters approvingly cited to the D.C. Circuit's *EME Homer City* decision, evidently to illustrate the importance of states' role under section 110. That states are given the first opportunity to develop a SIP that complies with section 110 is not in dispute. What is in dispute are the authority and the responsibility of the EPA to take action when states fail to comply with all of the requirements for SIP provisions under the CAA, whether that requirement is to address interstate transport or to meet other specific legal requirements of the Act applicable to SIP provisions.

The U.S. Supreme Court reversed the *EME Homer City* decision in June 2014, ⁹¹ rendering suspect the D.C. Circuit's interpretation of the *Train-Virginia* line of cases, as well as rendering suspect the commenters' even broader characterization of that interpretation as *per se* authorizing the states to create provisions such as the SSM exemptions and affirmative defenses at issue in this SIP call. The U.S. Supreme Court held that the

⁸⁸ 696 F.3d 7, 29 (D.C. Cir. 2012) *rev'd*, 134 S. Ct. 1584 (2014).

⁸⁹ *Id.* at 28.

⁹⁰ *Id.* at 38 (Rogers, J., dissenting).

⁹¹ See *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014).

touchstone for identifying the division of responsibility between the EPA and the states is the text of section 110(a)(2) itself. ⁹² Although this SIP call involves different requirements of section 110(a)(2) than the one at issue in *EME Homer City*—there, the interstate transport obligations of 110(a)(2)(D)(i)(I)—the Court expressly held that "[n]othing in the Act differentiates the Good Neighbor Provision from the several other matters a State must address in its SIP." ⁹³ After the U.S. Supreme Court's ruling, the EPA's role under section 110's cooperative-federalism framework—as the agency charged with reasonably interpreting the fundamental requirements of section 110(a)(2), and applying those reasonably interpreted requirements to state SIPs—cannot reasonably be in doubt. ⁹⁴

The touchstone of the cooperative-federalism concept outlined in the *Train-Virginia* line of cases is that, under the authority of section 110, the EPA may not legally or functionally require a state to adopt a specific control measure in its SIP in response to a SIP call. ⁹⁵ On this point, the DC Circuit's opinion in *EME Homer City* was largely in line with *Train, Virginia*, and other DC Circuit cases. In that decision, the court described the *Train-Virginia* federalism bar as prohibiting the EPA "from using the SIP process to adopt specific control measures." ⁹⁶ The *EME Homer City* court did not more broadly hold that section 110(a)(2) imposes no independent limits on state discretion

⁹² *Id.* at 1600–01.

⁹³ *Id.* at 1601 (citing, *inter alia*, section 110(a)(2)).

⁹⁴ See *id.* at 1593 (citing *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984)). See, e.g., *Oklahoma v. EPA*, 723 F.3d 1201, 1208 (10th Cir. 2013), *cert. denied*, 134 S. Ct. 2662 (2014) (applying *Chevron* to uphold EPA's disapproval of a SIP for noncompliance with regional haze requirements in section 110(a)(2)(JJ)); *North Dakota v. EPA*, 730 F.3d 750 (8th Cir. 2013), *cert. denied*, 134 S. Ct. 2662 (2014) (applying *Chevron* to uphold EPA's disapproval of a SIP for noncompliance with interstate visibility requirements in section 110(a)(2)(D)(i)(II)); *Luminant Generation v. EPA*, 714 F.3d 841, 856 (5th Cir. 2013), *cert. denied*, 134 S. Ct. 387 (2013); *Mont. Sulphur & Chem. Co. v. United States EPA*, 666 F.3d 1174, 1180, 1189 (9th Cir. 2012), *cert. denied*, 133 S. Ct. 409 (2012) ("The Clean Air Act gives the EPA significant national oversight over air quality standards, to be exercised pursuant to statutory specifications, and provides EPA with regulatory discretion in key respects relevant to SIP calls and determinations about the attainment of the NAAQS"); *Mich. Dep't of Envtl. Quality v. Browner*, 230 F.3d 181, 184–85 (6th Cir. 2000) ("Although states are given broad authority to design programs, the EPA has the final authority to determine whether a SIP meets the requirements of the CAA.").

⁹⁵ 78 FR 12459 at 12489 & nn.89–90.

⁹⁶ See *EME Homer City Generation, L.P. v. EPA*, 696 F.3d at 29 (citing *Michigan*, 213 F.3d at 687; *Virginia*, 108 F.3d at 1410) (emphasis added).

by requiring the states to meet legal requirements for SIP provisions, or that the EPA is prohibited from either interpreting 110(a)(2)'s basic requirements or reviewing state SIPs for compliance with those requirements. Accordingly, the EPA believes that to the extent that the DC Circuit's *EME Homer City* decision is relevant to this action, the decision in fact supports the basic principle that the EPA has authority and responsibility to assure that states comply with legal requirements of the CAA applicable to SIP provisions.

This view of what cooperative federalism prohibits is consistent with *Train*, where the U.S. Supreme Court stated that the EPA "is relegated by the [1970] Act to a secondary role in the process of determining and enforcing the *specific, source-by-source emission limitations* which are necessary if the national standards it has set are to be met."⁹⁷ It is also consistent with the *Virginia* decision, where the DC Circuit held that the EPA cannot under section 110 functionally require states to "adopt[] particular control measures" in a SIP but must rather ensure that states have a meaningful choice among alternatives.⁹⁸ Moreover, it is consistent with the court's view in *Michigan v. EPA*,⁹⁹ a case involving a SIP call, in which the DC Circuit interpreted and applied those precedents:

Given the *Train* and *Virginia* precedent, the validity of the NOx budget program underlying the SIP call depends in part on whether the program in effect constitutes an EPA-imposed control measure or emission limitation triggering the *Train-Virginia* federalism bar. In other words, on whether the program constitutes an *impermissible source-specific means rather than a permissible end goal*. However, the program's validity also depends on whether EPA's budgets *allow the covered states real choice with regard to the control measure options available to them* to meet the budget requirements.¹⁰⁰

Clearly, in this SIP call the EPA is leaving the states the freedom to correct the inappropriate provisions in any manner they wish as long as they comply with the constraints of section 110(a)(2).

Finally, this view is consistent with *Appalachian Power Co. v. EPA*, where the DC Circuit reiterated that *Virginia* "disapproved the EPA's plan to reject SIPs that did not incorporate *particular limits* upon emissions from new cars."¹⁰¹ The specific controls discussed in these cases are quite different, both as a legal matter and functionally, from the statutory constraints on the states' exercise of discretion that the EPA is interpreting and applying in this action.¹⁰²

As explained in the February 2013 proposal, in this action the EPA is not requiring states to adopt any particular emission limitation or to impose a specific control measure in a SIP provision; the EPA is merely directing the states to address the fundamental statutory requirements that all SIP provisions must meet.¹⁰³ This SIP call outlines the principles and framework for how states can revise the existing deficient SIP provisions to meet a permissible end goal¹⁰⁴—compliance with the Act. In so doing, the EPA is merely acting pursuant to its supervisory role under the CAA's cooperative-federalism framework, to ensure that SIPs satisfy those broad requirements that section 110(a)(2) mandates SIPs "shall" satisfy. With respect to section 110(a)(2)(A), this means that a SIP must at least contain legitimate, enforceable emission limitations to the extent they are necessary or appropriate "to meet the applicable requirements" of the Act. SIPs cannot contain unbounded director's discretion provisions that functionally subvert the requirements of the CAA for approval and revision of SIP provisions. Likewise, SIPs cannot have enforcement discretion provisions or affirmative defense provisions that contravene the fundamental requirements concerning the enforcement of SIP provisions. Accordingly, the EPA believes that this SIP call fully accords with the federal-state partnership outlined in section 110, by providing the states meaningful latitude when developing SIP submissions, while "nonetheless subject[ing] the States to strict minimum compliances requirements' and giv[ing] EPA the authority to determine a state's compliance with those requirements."¹⁰⁵

The EPA emphasizes that this action also allows states "real choice" concerning their SIP provisions, so long as the provisions are consistent with applicable requirements. For example, this SIP call does not establish any specific, source-by-source limitations. To the contrary, as described in section VII.A of this document, emission limitations meeting the requirements of section 110(a)(2)(A) may take a variety of forms. Under section 110(a)(2)(A), states are free to include in their SIPs whatever emission limitations they wish, provided the states comply with applicable legal requirements. Among those requirements are that an emission limitation in a SIP must be an "emission limitation" as defined in section 302(k) and that all controls—emission limitations and otherwise—must be sufficiently "enforceable" to ensure compliance with applicable CAA requirements. The SSM provisions at issue in this SIP call subvert both of these legal requirements.

3. Comments that the EPA should expand the rulemaking to include additional SIP provisions that the commenters consider deficient with respect to SSM issues.

Comment: Some commenters requested that the EPA expand its February 2013 proposed action to include additional SIP provisions that the commenters consider deficient with respect to SSM issues. Specifically, commenters identified additional SIP provisions in Wisconsin (a state not identified by the Petitioner) and New Hampshire (a state for which the Petitioner did specifically identify other SIP provisions).

One commenter argued that "[i]t would substantially ease the administrative burden on EPA as well on public commenters" and "ensure that companies in all states are treated equally" if the EPA were to include "all SIPs with faulty SSM provisions in [a] consolidated SIP call." Another commenter noted that "the interests of regulatory efficiency will be served" by adding additional SIP provisions to the SIP call because "all changes required by the policy underlying this rulemaking" to state SIPs would then be made at once.

Response: The EPA acknowledges the requests made by the commenters concerning additional SIP provisions that may be inconsistent with CAA

⁹⁷ 421 U.S. at 79 (emphasis added).

⁹⁸ *Virginia v. EPA*, 108 F.3d 1397, 1415 (D.C. Cir. 1997) (holding that functionally, in that case, "EPA's alternative is no alternative at all"); see also *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1047 (D.C. Cir. 2001) (citing *Virginia*, 108 F.3d at 1406, 1410) ("We did not suggest [in *Virginia*] that under § 110 states may develop their plans free of extrinsic legal constraints. Indeed, SIP development . . . commonly involves decisionmaking subject to various legal constraints.").

⁹⁹ 213 F.3d 663 (D.C. Cir. 2000).

¹⁰⁰ *Id.* at 687 (emphasis added).

¹⁰¹ 249 F.3d 1032, 1047 (D.C. Cir. 2001) (citing *Virginia*, 108 F.3d at 1410) (emphasis added).

¹⁰² See *id.*

¹⁰³ 78 FR 12459 at 12489.

¹⁰⁴ See, e.g., *Michigan*, 213 F.3d at 687.

¹⁰⁵ *Michigan v. EPA*, 213 F.3d 663, 687 (D.C. Cir. 2000) (quoting *Union Elec. Co. v. EPA*, 427 U.S. 246, 256–57 (1976)); see *Mont. Sulphur & Chem. Co. v. United States EPA*, 666 F.3d 1174, 1181 (9th

Cir. 2012), *cert. denied*, 133 S. Ct. 409 (2012) ("The Clean Air Act gives the EPA significant national oversight power over air quality standards, to be exercised pursuant to statutory specifications, and provides the EPA with regulatory discretion in key respects relevant to SIP calls and determinations about the attainment of NAAQS.").

requirements. The EPA also agrees with the points made by the commenters concerning the potential benefits of expanding the rulemaking to include evaluation of additional provisions. However, in the February 2013 proposal the EPA elected to review the specific SIP provisions identified by the Petitioner in the SIPs of only the 39 states (and jurisdictions) identified by the Petitioner to determine whether they were consistent with the CAA as interpreted in the EPA's SSM Policy as requested in the Petition.¹⁰⁶ Although there may be additional SIP provisions that are deficient, the EPA determined that it would first focus its review on the SIP provisions for which possible deficiencies had already been identified by the Petitioner.¹⁰⁷ Accordingly, the February 2013 proposal addressed only those states identified in the Petition, in order to use EPA and state resources most efficiently.

With respect to the specific additional SIP provisions identified by the commenters on the February 2013 proposal, the EPA also notes that it cannot take final action on any additional SSM-related SIP provisions without first providing an opportunity for public notice and comment with respect to those additional SIP provisions. The EPA agrees that an important objective of its action on the Petition is to provide complete, comprehensive and up-to-date guidance to all air agencies concerning SIP provisions that apply to emissions during SSM events. The EPA is endeavoring to do this by responding to the Petition fully and by updating its interpretation of the CAA in the SSM Policy to reflect the relevant statutory requirements and recent court decisions. All states should feel free to apply this revised guidance in reviewing their own SIP provisions and revising them as appropriate. The EPA may address other SSM-related provisions that may be inconsistent with EPA's SSM Policy and the CAA in a later separate notice-and-comment action(s). The EPA has authority to address those provisions separately.¹⁰⁸

¹⁰⁶ February 2013 proposal, 78 FR 12459 (February 22, 2013).

¹⁰⁷ The SIP provisions for which the EPA proposed SIP calls in its February 2013 proposal were further limited to those for which the Petitioner specifically requested action, with three exceptions; the EPA proposed SIP calls for additional SIP provisions in Ohio, North Dakota and West Virginia (one each), for reasons explained in section IX of the February 2013 proposal.

¹⁰⁸ The EPA notes that it has received a separate petition for rulemaking requesting it to evaluate SIP provisions in the State of Wisconsin. The EPA is not taking action on that separate petition as part of this action but will take action on that petition in a future rulemaking.

The EPA notes that with respect to the issue of affirmative defenses in SIP provisions, the Agency determined that it was necessary to amend its February 2013 proposal to take into consideration a subsequent court decision concerning the legal basis for such provisions. As explained in the SNPR and also in section IV of this document, the DC Circuit in the *NRDC* case decided that the CAA precludes any affirmative defense provisions that would operate to limit a court's jurisdiction or discretion to determine the appropriate remedy in an enforcement action. Thus, the EPA issued the SNPR to address this development in the law. Because of recent EPA actions and court decisions on this subject, the Agency determined that it was important to address not only the affirmative defense provisions identified in the Petition but also affirmative defense provisions that the EPA independently identified in six states' SIPs.¹⁰⁹ The SNPR was explicitly limited to the narrow concern of affirmative defense provisions, which was one of the types of issued specifically identified by the Petitioner. The EPA issued the SNPR with the same intention as that with which it issued the February 2013 proposal—so that the final action would provide guidance that reflects the EPA's updated interpretation of the CAA and would respond to the Petitioner's request that "EPA find that all SIPs containing an SSM exemption or a provision that could be interpreted to affect EPA or citizen enforcement are substantially inadequate to comply with the requirements of the Clean Air Act and issue a call for each of the states with such a SIP to revise it in conformity with the requirements of the Act or otherwise remedy these defective SIPs."¹¹⁰ The EPA included these six states' affirmative defense provisions in order to provide comprehensive guidance to all states concerning affirmative defense provisions in SIPs and to avoid confusion that may arise due to recent rulemakings and court decisions relevant to such provisions under the CAA.

¹⁰⁹ Of these six states in which the EPA independently identified affirmative defense provisions, two states (California and Texas) were not identified in the Petition. For another two of these states (New Mexico and Washington), the EPA had already reviewed other affirmative defense provisions specifically identified in the Petition and had already proposed SIP calls in the February 2013 proposal. For the other two states (South Carolina and West Virginia), the EPA had already reviewed and proposed SIP calls for provisions that were identified by the Petitioner but that did not include affirmative defenses.

¹¹⁰ Petition at 14.

The SIP call promulgated by the EPA in this action applies only to the particular SIP provisions identified in this document, and the scope of the SIP call for each state is limited to those provisions. However, if states of their own accord wish to revise SIP provisions, beyond those identified in this SIP call, that they believe are inconsistent with the SSM Policy and the CAA, the EPA will review and act on those SIP revisions in accordance with CAA sections 110(k), 110(l) and 193.

4. Comments that the EPA should create regulatory text in 40 CFR part 51 to forbid SSM exemptions in SIP provisions if the CAA precludes them.

Comment: Commenters argued that the EPA, before issuing a SIP call requiring states to revise SIP provisions containing exemptions for emissions during SSM events, should first have promulgated specific regulations articulating that such exemptions are precluded by the CAA. According to commenters, taking this approach would have given states more certainty and clarity and provided states with more time to develop SIP revisions consistent with those regulatory requirements. Commenters also asserted that it is not appropriate for the EPA to proceed with a SIP call to states without prior rulemaking to create regulatory provisions explicitly prohibiting SSM exemptions in SIPs, given that the Agency has previously approved the SIP provisions at issue.

Response: The EPA disagrees with the commenters' argument that the Agency must first promulgate regulations to make clear that exemptions for emissions during SSM events are not permissible in SIPs, prior to issuing this SIP call. The EPA likewise disagrees with the implication that its authority to promulgate a SIP call is restricted only to those issues for which there is specifically applicable regulatory text, as opposed to requirements related to statutory provisions, court decisions or other legal or factual bases for a determination that an existing SIP provision is substantially inadequate to meet CAA requirements. The EPA disagrees with the commenters for several reasons.

First, the CAA does not impose a general obligation upon the Agency to promulgate regulations applicable to all SIP requirements. Although the EPA has elected to promulgate regulations to address a broad variety of issues relevant to SIPs,¹¹¹ the Agency is not obligated to promulgate regulations

¹¹¹ See, generally, 40 CFR part 51 (including regulations applicable to many aspects of SIPs).

unless there is a specific statutory mandate that it do so.¹¹² In addition, the EPA has authority under section 301 to promulgate such regulations as it deems necessary to implement the CAA (e.g., to fill statutory gaps left by Congress for the EPA to fill or to clarify ambiguous statutory language). With respect to SIP requirements, however, the EPA has elected to promulgate regulations or to issue guidance to states to address different requirements, as appropriate.¹¹³ In short, there is no specific statutory requirement that the EPA promulgate regulations with respect to the types of deficiencies in SIP provisions at issue in this action prior to issuing a SIP call.

Second, the EPA has historically elected to address the key issues relevant to this SIP call action in guidance. Through a series of guidance documents, issued in 1982, 1983, 1999 and 2001, the EPA has previously explained its interpretations of the CAA with respect to SIP provisions that contain automatic SSM exemptions, discretionary SSM exemptions, the exercise of enforcement discretion for SSM events and affirmative defenses for SSM events. Starting in the 1982 SSM Guidance, the EPA explicitly acknowledged that it had previously approved some SIP provisions related to emissions during SSM events that it should not have, because the provisions were inconsistent with requirements for SIPs. In addition, the EPA has in rulemakings applied its interpretation of the CAA with respect to issues such as exemptions for emissions during SSM events, and these actions have been approved by courts.¹¹⁴ Under these circumstances, the EPA does not agree that promulgation of generally applicable regulations was necessary to put states on notice of the Agency's interpretation of the CAA with respect

to these issues, prior to issuance of a SIP call.

Finally, the EPA's authority under section 110(k)(5) is not limited, expressly or otherwise, solely to inadequacies related to regulatory requirements. To the contrary, section 110(k)(5) refers broadly to attainment and maintenance of the NAAQS, adequate mitigation of interstate transport and compliance with "any requirement of" the CAA. In addition, section 110(k)(5) specifically contemplates situations such as this one, "whenever" the EPA finds previously approved SIP provisions to be deficient. Nothing in the CAA requires the EPA to conduct a separate rulemaking clarifying its interpretation of the CAA prior to issuance of this SIP call. For the types of deficiencies at issue in this action, the EPA believes that the statutory requirements of the CAA itself and recent court decisions concerning those statutory provisions provide sufficient basis for this SIP call.

For the foregoing reasons, the EPA disagrees that before requiring states to revise SIPs that contain provisions with SSM exemptions, the EPA first must promulgate regulations explicitly stating that such exemptions are impermissible under the CAA. In addition, the EPA notes that although it is not promulgating generally applicable regulations in this action, it is nonetheless revising its guidance in the SSM Policy through rulemaking and has thereby provided states and other parties the opportunity to comment on the Agency's interpretation of the CAA with respect to this issue.

5. Comments that the EPA did not provide a sufficiently long comment period on the proposal in general or as contemplated in Executive Order 13563.

Comment: A number of commenters argued that the comment period provided by the EPA for the February 2013 proposal was "at odds with" Executive Order 13563. The commenters alleged that the comment period was "unconscionably short," even so short as to be "arbitrary and capricious" because, in order to provide comments, "impacted States and industries must perform the data collection and analysis necessary to evaluate the need for the proposed rule and its impacts." Further, the commenters alleged, the "EPA's failure and refusal to perform any technical analyses of the feasibility of source operations after the elimination of SSM provisions or the likely capital and operating costs of additional control equipment required to meet numeric standards during all operational periods has denied the States, the affected

parties, and the public a meaningful opportunity to evaluate and comment upon the proposed rule." Finally, one commenter asserted that Executive Order 13563 requires that "[b]efore issuing a notice of proposed rulemaking, each agency, where feasible and appropriate, shall seek the views of those who are likely to be affected."¹¹⁵ The commenter claimed that because the EPA allegedly "failed to seek the views of those who are likely to be affected and those who are potentially subject to such rulemaking, EPA's actions ignore the requirements of the Executive Order."

Response: The EPA disagrees that it has not provided sufficiently long comment periods to address the specific issues relevant to this action. As described in section IV.D.1 of this document, the EPA has followed all steps of a notice-and-comment rulemaking, as governed by applicable statutes, regulations and executive orders, including a robust process for public participation. When the EPA initially proposed to take action on the Petition, in February 2013, it simultaneously solicited public comment on all aspects of its proposed response to the issues in the Petition and in particular on its proposed action with respect to each of the specific existing SIP provisions identified by the Petitioner as inconsistent with the requirements of the CAA. In response to requests, the EPA extended the public comment period for this proposal to May 13, 2013, which is 80 days from the date the proposed rulemaking was published in the **Federal Register** and 89 days from the date the proposed rulemaking was posted on the EPA's Web site.¹¹⁶ The EPA deemed this extension appropriate because of the issues raised in the February 2013 proposal. The EPA also held a public hearing on March 12, 2013. In response to this proposed action, the EPA received approximately 69,000 public comments, including over 50 comment letters from state and local governments, over 150 comment letters from industry commenters, over 25 comment letters from public interest groups and many thousands of comments from individual commenters. Many of these comment

¹¹² See, e.g., CAA section 169A(a)(4) (requiring the EPA to promulgate regulations governing the requirements relevant to SIP requirements for purposes of regional haze reduction).

¹¹³ See, e.g., "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992) (the "General Preamble" that continues to provide guidance recommendations to states for certain attainment plan requirements for various NAAQS); 40 CFR part 51, subpart Z (imposing regulatory requirements for certain attainment plan requirements for the 1997 PM_{2.5} NAAQS).

¹¹⁴ See, e.g., *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000) (upholding the "NO_x SIP Call" to states requiring revisions to previously approved SIPs with respect to ozone transport and section 110(a)(2)(D)(i)(I)); "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 74 FR 21639 (April 18, 2011) (the EPA issued a SIP call to rectify SIP provisions dating back to 1980).

¹¹⁵ See E.O. 13563 section 2(c).

¹¹⁶ See "State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction; Notice of extension of public comment period," 78 FR 20855 (April 8, 2013), in the rulemaking docket at EPA-HQ-OAR-2012-0322-0126.

letters were substantial and covered numerous issues.

Similarly, when the EPA ascertained that it was necessary to revise its proposed action on the Petition with respect to affirmative defenses in SIP provisions, the Agency issued the SNPR. In that supplemental proposal, in September 2014, the EPA fully explained the issues and took comment on the questions related to whether affirmative defense provisions are consistent with CAA requirements concerning the jurisdiction of courts in enforcement actions, and thus whether such provisions are consistent with fundamental CAA requirements for SIP provisions. The EPA provided a public comment period ending November 6, 2014, which is 50 days from the date the SNPR was published in the **Federal Register** and 62 days from the date the SNPR was posted on the EPA's Web site. The EPA believes that the comment period was sufficient given that the subject of the SNPR was limited to the narrow issue of whether affirmative defense provisions are consistent with CAA requirements. The EPA also held a public hearing on the SNPR on October 7, 2014 on the specific topic of the legitimacy of affirmative defense provisions in SIPs. In response to the SNPR, the EPA received over 20,000 public comments, including at least 9 comment letters from states and local governments, over 40 comment letters from industry commenters, at least 6 comment letters from public interest groups, and many thousands of comments from individual commenters.

Executive Order 13563 provides that each agency should "afford the public a meaningful opportunity to comment through the Internet on any proposed regulation, with a comment period that should generally be *at least 60 days*."¹¹⁷ The length of the Agency's comment period for the original proposed rulemaking well-exceeded this standard. The EPA also facilitated comment on the action by providing a full and detailed evaluation of the relevant issues in the February 2013 proposal, the background memorandum supporting the proposal and the SNPR.

When considering whether an agency has provided for adequate public input, reviewing courts are generally most concerned with the overall adequacy of the opportunity to comment. This, in turn, typically depends on steps the agency took to notify the public of information that is important to this action. Comment period length is only one factor that courts consider in this analysis, and courts have regularly

found that comment periods of significantly shorter length than the 80 days provided here on the February 2013 proposal were reasonable in various circumstances.¹¹⁸ Given the nature of the issues raised by the Petition, the EPA believes that the comment period was appropriate and sufficient to allow for full analysis of the issues and preparation of comments. The number of comments received on the February 2013 proposal, and the breadth of issues and level of detail provided by the commenters, both supportive and adverse, serve to support the EPA's view on this point.

The EPA also disagrees with respect to the claims of commenters that the comment period was insufficient because the EPA should provide time for commenters to evaluate and analyze fully the possible ultimate impacts of the SIP call upon particular sources, to determine what type of SIP revision by a state is appropriate in response to a SIP call, or to ascertain what specific new emission limitation or control measure requirement states should impose upon sources in such a future SIP revision. The EPA's action on the Petition concerning specific existing SIP provisions is focused upon whether those existing provisions meet fundamental legal requirements of the CAA for SIP provisions. The EPA is not required to provide a comment period for this action that allows states actually to determine which of the potential forms of SIP revision they may wish to undertake, or to complete those SIP revisions, as part of this rulemaking. The subsequent state and EPA rulemaking processes on the SIP revisions in response to this SIP call action will provide time for further evaluation of the issues raised by commenters.

As explained in the February 2013 proposal, the EPA does not interpret section 110(k)(5) to require it to "prove causation" concerning what precise impacts illegal SIP provisions are having on CAA requirements, such as attainment and maintenance of the NAAQS and enforcement of SIP

requirements.¹¹⁹ Nor is the EPA directing states to adopt a specific control measure in response to the SIP call; the decision as to how to revise the affected SIP provisions in response to the SIP call is left to the states. The state's response to the SIP call will be developed in future rulemaking actions at both the state and federal level which will similarly be subject to full notice-and-comment proceedings. In electing to proceed by SIP call under section 110(k)(5), rather than by error correction under section 110(k)(6), the EPA is providing affected states with the maximum time permitted by statute to determine how best to revise their SIP provisions, consistent with CAA requirements. During this process, the commenters and other stakeholders will have the opportunity to participate in the development of the SIP revision, including decisions such as how the state elects to revise the deficient SIP provisions (e.g., merely to eliminate an exemption for SSM events or to impose an alternative emission limitation applicable to startup and shutdown).

The questions posed by the commenters about what specific emission limitations should apply during startup and shutdown events, what control measures will meet applicable CAA legal requirements, what control measures will be effective and cost-effective to meet applicable legal standards and other similar questions are exactly the sorts of issues that states will evaluate in the process of revising affected SIP provisions. Moreover, these are the same sorts of questions that the EPA will be evaluating when it reviews state SIP submissions made in response to the SIP call. The EPA is not required, by Executive Order 13563 or otherwise, to provide a comment period that would allow for all future actions in response to the SIP call to occur before issuing the SIP call. The EPA anticipates that the commenters will be able to participate actively in the actions that will happen in due course in response to this SIP call.

Finally, the EPA disagrees that it did not adequately seek the views of potentially affected entities prior to issuance of the February 2013 proposal. The EPA alerted the public to the existence of the Petition by soliciting comment on the settlement agreement that obligated the Agency to act upon it, in accordance with CAA section 113(g). Subsequently, EPA personnel communicated about the Petition and the issues it raised in various standing

¹¹⁸ See, e.g., *Omnipoint Corp. v. Fed. Comm'n*, 78 F.3d 620, 629 (D.C. Cir. 1996) (approving a 7-day comment period); *Florida Power & Light Co. v. United States*, 846 F.2d 765, 772 (D.C. Cir. 1988) (holding a 15-day comment period to not be unreasonable under the governing circumstances); *Conn. Light & Power Co. v. NRC*, 673 F.2d 525, 534 (D.C. Cir. 1982) (holding 30 days not unreasonable in the particular situation); *Am. Farm Bureau Fed'n v. United States EPA*, 984 F.Supp.2d 289, 333 (M.D. Pa. 2013) (holding that a 45-day comment period was adequate despite "technical complexities of the regulations and issues raised").

¹¹⁹ This issue is addressed in more detail in section VIII.A.1 of this document.

¹¹⁷ See E.O. 13563 section 2(b) (emphasis added).

meetings and conference calls with states and organizations that represent state and local air regulators.

6. Comments that this action is not “nationally applicable” for purposes of judicial review.

Comment: Commenters alleged that the SSM SIP call is not “nationally applicable” for purposes of judicial review. One state commenter cited *ATK Launch Systems* for the proposition that the specific language of the regulation being challenged indicates whether an action is nationally or locally/regionally applicable. Because a SIP provision subject to this SIP call is state-specific, the commenter argued, it is of concern only for that state and thus the SIP call is a locally applicable action.¹²⁰

Response: The EPA disagrees with the commenter that the SIP call is not a nationally applicable action. In this action, the EPA is responding to a Petition that requires the Agency to reevaluate its interpretations of the CAA in the SSM Policy that apply to SIP provisions for all states across the nation. In so doing, the EPA is reiterating its interpretations with respect to some issues (e.g., that SIP provisions cannot include exemptions for emissions during SSM events) and revising its interpretations with respect to others (e.g., so that SIP provisions cannot include affirmative defenses for emissions during SSM events). In addition to reiterating and updating its interpretations with respect to SIP provisions in general, the EPA is also applying its interpretations to specific existing provisions in the SIPs of 41 states. Through this action the EPA is establishing a national policy that it is applying to states across the nation. As with many nationally applicable rulemakings, it is true that this action also has local or regional effects in the sense that EPA is requiring 36 individual states to submit revisions to their SIPs. However, through this action the EPA is applying the same legal and policy interpretation to each of these states. Thus, the underlying basis for the SIP call has “nationwide scope and effect” within the meaning of section 307(b)(1) as explained by the EPA in the February 2013 proposal. A key purpose of the CAA in channeling to the D.C. Circuit challenges to EPA rulemakings that have nationwide scope and effect is to minimize instances where the same legal and policy basis for decisions may be challenged in multiple courts of appeals, which instances would potentially lead to inconsistent judicial holdings and a patchwork application of

the CAA across the country. We note that in the *ATK Launch* case cited by commenters, the U.S. Court of Appeals for the Tenth Circuit (Tenth Circuit) in fact transferred to the D.C. Circuit challenges to the designation of two areas in Utah that were part of a national rulemaking designating areas across the U.S. for the PM_{2.5} NAAQS. In transferring the challenges to the D.C. Circuit, the Tenth Circuit noted that the designations rulemaking “reached areas coast to coast and beyond” and that the EPA had applied a uniform process and standard.¹²¹ Significantly, in support of its decision to transfer the challenges to the D.C. Circuit, the Tenth Circuit stated: “The challenge here is more akin to challenges to so-called ‘SIP Calls,’ which the Fourth and Fifth Circuits have transferred to the D.C. Circuit Although each of the SIP Call petitions challenged the revision requirement as to a particular state, the SIP Call on its face applied the same standard to every state and mandated revisions based on that standard to states with non-conforming SIPs in multiple regions of the country.”¹²²

7. Comments that the EPA was obligated to address and justify the potential costs of the action and failed to do so correctly.

Comment: Several commenters alleged that the EPA has failed to address the costs associated with this rulemaking action appropriately and consistent with legal requirements. In particular, commenters alleged that the EPA is required to address costs of various impacts of this SIP call, including the costs that may be involved in changes to emissions controls or operation at sources and the costs to states to revise permits and revise SIPs in response to the SIP call.

Commenters also alleged that the EPA has failed to comply with Executive Order 12291, Executive Order 12866, Executive Order 13211, the Regulatory Flexibility Act and the Unfunded Mandates Reform Act.

One commenter supported the EPA’s approach with respect to cost.

Response: The EPA disagrees with commenters concerning its compliance with the Executive Orders and statutes applicable to agency rulemaking in general. The EPA maintains that it did properly consider the costs imposed by this SIP call action, as required by law. As explained in the February 2013 proposal, to the extent that the EPA is issuing a SIP call to a state under section 110(k)(5), the Agency is only requiring a state to revise its SIP to

comply with existing requirements of the CAA. The EPA’s action, therefore, would leave to states the choice of how to revise the SIP provision in question to make it consistent with CAA requirements and of determining, among other things, which of several lawful approaches to the treatment of excess emissions during SSM events will be applied to particular sources. Therefore, the EPA considers the only direct costs of this rulemaking action to be those to states associated with preparation and submission of a SIP revision by those states for which the EPA issues a SIP call.¹²³ Examples of such costs could include development of a state rule, conducting notice and public hearing and other costs incurred in connection with a SIP submission. The EPA notes that it did not consider the costs of potential revisions to operating permits for sources to be a direct cost imposed by this action, because, as stated elsewhere in this document, the Agency anticipates that states will elect to delay any necessary revision of permits until the permits need to be reissued in the ordinary course after revision of the underlying SIP provisions.

The commenters also incorrectly claim that the EPA failed to comply with Executive Order 12291. That Executive Order was explicitly revoked by Executive Order 12866, which was signed by President Clinton on September 30, 1993.

The commenters are likewise incorrect that the EPA did not comply with Executive Order 12866. This action was not deemed “significant” on a basis of the cost it will impose as the commenters claimed. The EPA has already concluded that this action will not result in a rule that may have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, of state, local or tribal governments or communities. The EPA instead determined that, as noted in both the February 2013 proposal (section X.A) and the SNPR (section VIII.A), this action is a “significant regulatory action” as that term is defined in Executive Order 12866 because it raises novel legal or policy issues. Accordingly, it was on that basis that the EPA submitted the February 2013 proposal, the SNPR and the final action to the Office of Management and Budget (OMB) for review. Changes made

¹²⁰ See *ATK Launch Systems, Inc. v. EPA*, 651 F.3d 1194 (10th Cir. 2011).

¹²¹ *Id.*, 651 F.3d at 1197.

¹²² *Id.*, 651 F.3d at 1199.

¹²³ See Memorandum, “Estimate of Potential Direct Costs of SSM SIP Calls to Air Agencies,” April 28, 2015, in the rulemaking docket.

in response to OMB review are documented in the docket for this action. The EPA believes it has fully complied with Executive Order 12866.

As stated in the February 2013 proposal, the EPA does not believe this is a “significant energy action” as defined in Executive Order 13211, because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. As described earlier, this action merely requires that states revise their SIPs to comply with existing requirements of the CAA. States have the choice of how to revise the deficient SIP provisions that are the subject of this action; there are a variety of different ways that states may treat the issue of excess emissions during SSM events consistent with CAA requirements for SIPs. This action merely prescribes the EPA’s action for states regarding their obligations for SIPs under the CAA, and therefore it is not a “significant energy action” under Executive Order 13211.

With respect to the Regulatory Flexibility Act (RFA), as the EPA explained in the February 2013 proposal, courts have interpreted the RFA to require a regulatory flexibility analysis only when small entities will be subject to the requirements of the rule.¹²⁴ This action will not impose any requirements on small entities. Instead, it merely reiterates the EPA’s interpretation of the statutory requirements of the CAA. To the extent that the EPA is issuing a SIP call to a state under section 110(k)(5), the EPA is only requiring the state to revise its SIP to comply with existing requirements of the CAA. In turn, the state will determine whether and how to regulate specific sources, including any small entities, through the process of deciding how to revise a deficient SIP provision. The EPA’s action itself will not have a significant economic impact on a substantial number of small entities.

As the EPA explained in the February 2013 proposal, this action is not subject to the requirements of the Unfunded Mandates Reform Act (UMRA) because it does not contain a federal mandate that may result in expenditures of \$100 million or more for state, local and tribal governments, in the aggregate, or the private sector in any one year. With respect to the impacts on sources, the EPA’s action in this rulemaking is not directly imposing costs on any sources. The EPA’s action is merely directing states to revise their SIPs in order to bring them into compliance with the

legal requirements of the CAA for SIP provisions. In response to the SIP call, the states will determine how best to revise their deficient SIP provisions in order to meet CAA requirements. It is thus the states that will make the decisions concerning how best to revise their SIP provisions and will determine what impacts will ultimately apply to sources as a result of those revisions.

8. Comments that the EPA’s action violates procedural requirements of the CAA or the APA, because the EPA is acting on the Petition, updating its SSM Policy and applying its interpretation of the CAA to specific SIP provisions in one action.

Comment: Commenters argued that the EPA’s proposed action on the Petition, which includes simultaneous updating of its interpretations of the CAA in the SSM Policy and application of those revised interpretations to existing SIP provisions, is in violation of procedural requirements of the CAA and the APA. According to the commenters, the EPA’s combination of actions is a “subterfuge” to avoid notice and comment on the proposed actions in the February 2013 proposal. The commenters claimed that the EPA could only take these actions through two or more separate rulemaking actions. By proposing to update its interpretation of the CAA in the SSM Policy through notice-and-comment rulemaking and proposing to apply its interpretation of the CAA through notice-and-comment rulemaking to existing SIP provisions, the commenters claimed, the EPA has prejudged the outcome of this action.

Response: The EPA does not agree that it was required to take this action in multiple separate rulemakings as claimed by the commenters. First, the EPA notes, the fact that the commenters’ allegation—that the Agency failed to proceed by notice and comment—was raised in a comment letter submitted on the February 2013 proposal belies the commenters’ overarching procedural argument that the EPA is failing to subject its interpretations of the CAA to notice-and-comment rulemaking. Second, although the EPA could elect to undertake two or more separate notice-and-comment rulemakings in order to answer the Petition, to revise its interpretations of the CAA in the SSM Policy and to evaluate existing provisions in state SIPs against the requirements of the CAA, there is no requirement for the Agency to do so. To the contrary, the EPA believes that it is preferable to take these interrelated actions in a combined rulemaking process. This combined approach allows the EPA to explain its actions comprehensively and in their larger

context. The combined approach allows commenters to participate more meaningfully by considering together the proposed action on the Petition, the proposed interpretations of the CAA in the SSM Policy and the proposed application of the EPA’s interpretation to specific SIP provisions. By addressing the interrelated actions together and comprehensively, the EPA is striving to be efficient with the resources of both regulators and regulated parties. Most importantly, by combining these actions the EPA is being responsive to the need for prompt evaluation of the SIP provisions at issue and for correction of those found to be legally deficient in a timely fashion. Far from “prejudging” the issues, the EPA explicitly sought comment on all aspects of the February 2013 proposal and sought additional comment on issues related to affirmative defense provisions in the SNPR. Naturally, the EPA’s proposal and supplemental proposal reflected its best judgments on the proper interpretations of the CAA and application of those interpretations to the issues raised by the Petition, as of the time of the February 2013 proposal and the SNPR.

VI. Final Action in Response To Request That the EPA Limit SIP Approval to the Text of State Regulations and Not Rely Upon Additional Interpretive Letters From the State

A. What the Petitioner Requested

The Petitioner’s third request was that when the EPA evaluates SIP revisions submitted by a state, the EPA should require “all terms, conditions, limitations and interpretations of the various SSM provisions to be reflected in the unambiguous language of the SIPs themselves.”¹²⁵ The Petitioner expressed concern that the EPA has previously approved SIP submissions with provisions that “by their plain terms” do not appear to comply with the EPA’s interpretation of CAA requirements embodied in the SSM Policy and has approved those SIP submissions in reliance on separate “letters of interpretation” from the state that construe the provisions of the SIP submission itself to be consistent with the SSM Policy.¹²⁶ Because of this reliance on interpretive letters, the Petitioner argued that “such constructions are not necessarily apparent from the text of the provisions and their enforceability may be difficult and unnecessarily complex and

¹²⁴ See, e.g., *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000); *Mid-Tex Elec. Co-op, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985).

¹²⁵ Petition at 16.

¹²⁶ Petition at 14.

inefficient.”¹²⁷ The Petitioner cited various past rulemaking actions to illustrate how EPA approval of ambiguous SIP provisions can inject unintended confusion for regulated entities, regulators, and the public in the future, especially in the context of future enforcement actions. Accordingly, the Petitioner requested that the EPA discontinue reliance upon interpretive letters when approving state SIP submissions, regardless of the circumstances. A more detailed explanation of the Petitioner’s arguments appears in the 2013 February proposal.¹²⁸

B. What the EPA Proposed

In the February 2013 proposal, the EPA proposed to deny the Petition with respect to this issue. The EPA explained the basis for this proposed disapproval in detail, including a discussion of the statutory provisions that the Agency interprets to permit this approach, an explanation of why this approach makes sense from both a practical and an efficiency perspective under some circumstances, and a careful explanation of the process by which EPA intends to rely on interpretive letters in order to assure that the concerns of the Petitioner with respect to potential future disputes about the meaning of SIP provisions should be alleviated.

C. What is being finalized in this action?

The EPA is taking final action to deny the Petition on this request. The EPA believes that it has statutory authority to rely on interpretive letters to resolve ambiguity in a SIP submission under appropriate circumstances and so long as the state and the EPA follow an appropriate process to assure that the rulemaking record properly reflects this reliance. To avoid any misunderstanding about the reasons for this denial or any misunderstandings about the circumstances under which, or the proper process by which, the EPA intends to rely interpretive letters, the Agency is repeating its views in this final action in detail.

As stated in the February 2013 proposal, the EPA agrees with the core principle advocated by the Petitioner, *i.e.*, that the language of regulations in SIPs that pertain to SSM events should be clear and unambiguous. This is necessary as a legal matter but also as a matter of fairness to all parties, including the regulated entities, the regulators, and the public. In some

cases, the lack of clarity may be so significant that amending the state’s regulation may be warranted to eliminate the potential for confusion or misunderstanding about applicable legal requirements that could interfere with compliance or enforcement. Indeed, as noted by the Petitioner, the EPA has requested that states clarify ambiguous SIP provisions when the EPA has subsequently determined that to be necessary.¹²⁹

However, the EPA believes that the use of interpretive letters to clarify ambiguity or perceived ambiguity in the provisions in a SIP submission is a permissible, and sometimes necessary, approach under the CAA. Used correctly, and with adequate documentation in the **Federal Register** and the docket for the underlying rulemaking action, reliance on interpretive letters can serve a useful purpose and still meet the enforceability concerns of the Petitioner. So long as the interpretive letters and the EPA’s reliance on them is properly explained and documented, regulated entities, regulators, and the public can readily ascertain the existence of interpretive letters relied upon in the EPA’s approval that would be useful to resolve any perceived ambiguity. By virtue of being part of the stated basis for the EPA’s approval of that provision in a SIP submission, the interpretive letters necessarily establish the correct interpretation of any arguably ambiguous SIP provision. In other words, the rulemaking record should reflect the shared state and EPA understanding of the meaning of a provision at issue at the time of the approval, which can then be referenced should any question about the provision arise in a future enforcement action.

In addition, reliance on interpretive letters to address concerns about perceived ambiguity can often be the most efficient and timely way to resolve concerns about the correct meaning of regulatory provisions. Both air agencies and the EPA are required to follow time- and resource-intensive administrative processes in order to develop and evaluate SIP submissions. It is reasonable for the EPA to exercise its discretion to use interpretive letters to clarify concerns about the meaning of regulatory provisions, rather than to require air agencies to reinitiate a complete administrative process merely to resolve perceived ambiguity in a

provision in a SIP submission.¹³⁰ In particular, the EPA considers this an appropriate approach where reliance on such an interpretive letter allows the air agency and the EPA to put into place SIP provisions that are necessary to meet important CAA objectives and for which unnecessary delay would be counterproductive. For example, where an air agency is adopting emission limitations for purposes of attaining the NAAQS in an area, a timely letter from the air agency clarifying that an enforcement discretion provision is applicable only to air agency enforcement personnel and has no bearing on enforcement by the EPA or the public could help to assure that the provision is approved into the SIP promptly and thus allow the area to reach attainment more expeditiously than requiring the air agency to undertake a time-consuming administrative process to make a minor clarifying change in the regulatory text.

There are multiple reasons why the EPA does not agree with the Petitioner with respect to the alleged inadequacy of using interpretive letters to clarify specific ambiguities in a SIP submission and the SIP provisions that may ultimately result from approval of such a submission, provided this process is done correctly. First, under section 107(a), the CAA gives air agencies both the authority and the primary responsibility to develop SIPs that meet applicable statutory and regulatory requirements. However, the CAA generally does not specify exactly how air agencies are to meet the requirements substantively, nor does the CAA specify that air agencies must use specific regulatory terminology, phraseology, or format, in provisions submitted in a SIP submission. Air agencies each have their own requirements and practices with respect to rulemaking, making flexibility respecting terminology on the EPA’s part appropriate, so long as CAA requirements are met.

As a prime example relevant to the SSM issue, CAA section 110(a)(2)(A) requires that a state’s SIP shall include “enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights) as well as schedules and

¹³⁰ CAA section 110(k) directs the EPA to act on SIP submissions and to approve those that meet statutory and regulatory requirements. Implicit in this authority is the discretion, through appropriate notice-and-comment rulemaking, to determine whether a given SIP provision meets such requirements, in reliance on the information that the EPA considers relevant for this purpose.

¹²⁷ Petition at 15.

¹²⁸ See February 2013 proposal, 78 FR 12459 at 12474 (February 22, 2013).

¹²⁹ See, e.g., “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision,” 76 FR 21639 at 21648 (April 18, 2011).

timetables for compliance as may be necessary or appropriate to meet the applicable requirements of” the CAA. Section 302(k) of the CAA further defines the term “emission limitation” in important respects but nevertheless leaves room for variations of approach, stating that it is “a requirement established by the State or Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under [the CAA].”

Even this most basic requirement of SIPs, the inclusion of enforceable “emission limitations,” allows air agencies discretion in how to structure or word the emission limitations, so long as the provisions meet fundamental legal requirements of the CAA.¹³¹ Thus, by the explicit terms of the statute and by design, air agencies generally have considerable discretion in how they elect to structure or word their state regulations submitted to meet CAA requirements in a SIP.

Second, under CAA section 110(k), the EPA has both the authority and the responsibility to assess whether a SIP submission meets applicable CAA and regulatory requirements. Given that air agencies have authority and discretion to structure or word SIP provisions as they think most appropriate, so long as the SIP provisions meet CAA and regulatory requirements, the EPA’s role is to evaluate whether those provisions in fact meet those legal requirements.¹³² Necessarily, this process entails the exercise of judgment concerning the specific text of regulations, with regard both to content and to clarity. Because actions on SIP submissions are subject to notice-and-comment rulemaking, there is also the opportunity for other parties to identify SIP provisions that they consider problematic and to bring to the EPA’s attention any concerns

about ambiguity in the meaning of the SIP provisions under evaluation.

Third, careful review of regulatory provisions in a SIP submission can reveal areas of potential ambiguity. It is essential, however, that regulations are sufficiently clear that regulated entities, regulators and the public can all understand the SIP requirements. Where the EPA perceives ambiguity in draft SIP submissions, it endeavors to resolve those ambiguities through interactions with the relevant air agency even in advance of the SIP submission. On occasion, however, there may still remain areas of regulatory ambiguity in a SIP submission’s provisions that the EPA identifies, either independently or as a result of public comments on a proposed action, for which resolution is both appropriate and necessary as part of the rulemaking action.

In such circumstances, the ambiguity may be so significant as to require the air agency to revise the regulatory text in its SIP submission in order to resolve the concern. At other times, however, the EPA may determine that with adequate explanation from the state, the provision is sufficiently clear and complies with applicable CAA and associated regulatory requirements. In some instances, the air agency may supply the explanation necessary to resolve any potential ambiguity in a SIP submission by sending an official letter from the appropriate authority. When the EPA bases its approval of a SIP submission in reliance on the air agency’s official interpretation of the provision, that reading is explicitly incorporated into the EPA’s action and is memorialized as the proper intended reading of the provision. In other words, the state and the EPA will have a shared understanding of the proper interpretation of the provision, and that interpretation will provide the basis for the approval of that provision into the SIP. The interpretation will also be clearly identified and presented for the public and regulated entities in the **Federal Register** document approving the SIP submission.

For example, in the Knoxville redesignation action that the Petitioner noted in the Petition, the EPA took careful steps to ensure that the perceived ambiguity raised by commenters was substantively resolved and fully reflected in the rulemaking record, *i.e.*, through inclusion of the interpretive letters in the rulemaking docket, quoting relevant passages from the letters in the **Federal Register**, and carefully evaluating the areas of potential ambiguity in response to public comments on a provision-by-provision basis. By discussing the

resolution of the perceived ambiguity explicitly in the rulemaking record, the EPA assured that the correct meaning of that provision should be evident from the record, should any question concerning its meaning arise in a future dispute.

Finally, the EPA notes that while it is possible to reflect interpretive letters in the Code of Federal Regulations (CFR) or incorporate them into the regulatory text of the CFR in appropriate circumstances, there is no requirement to do so in all actions, and there are other ways for the public to have a clear understanding of the content of the SIP. First, for each SIP, the CFR contains a list or table of actions that reflects the various components of the approved SIP, including information concerning the submission of, and the EPA’s action approving, each component. With this information, interested parties can readily locate the actual **Federal Register** document in which the EPA will have explained the basis for its approval in detail, including any interpretive letters that may have been relied upon to resolve any potential ambiguity in the SIP provisions. With this information, the interested party can also locate the docket for the underlying rulemaking and obtain a copy of the interpretive letter itself. Thus, if there is any debate about the correct reading of the SIP provision, either at the time of the EPA’s approval or in the future, it will be possible to ascertain the mutual understanding of the air agency and the EPA of the correct reading of the provision in question at the time the EPA approved it into the SIP. Most importantly, regardless of whether the content of the interpretive letter is reflected in the CFR or simply described in the **Federal Register** preamble accompanying the EPA’s approval of the SIP submission, this mutual understanding of the correct reading of that provision upon which the EPA relied will be the reading that governs, should that later become an issue.

The EPA notes that the existence of, or content of, an interpretive letter that is part of the basis for the EPA’s approval of a SIP submission is in reality analogous to many other things related to that approval. Not everything that may be part of the basis for the SIP approval in the docket—including the proposal or final preambles, the technical support documents, responses to comments, technical analyses, modeling results, or docket memoranda—will be restated *verbatim*, incorporated into, or referenced in the CFR. These background materials remain part of the basis for the SIP

¹³¹ The EPA notes that notwithstanding discretion in wording in regulatory provisions, many words have specific recognized legal meaning whether by statute, regulation, case law, dictionary definition, or common usage. For example, the term “continuous” has a specific meaning that must be complied with substantively, however the state may elect to word its regulatory provisions.

¹³² See, e.g., *Luminant Generation v. EPA*, 714 F.3d 841 (5th Cir. 2013) (upholding the EPA’s disapproval in part of affirmative defense provision with unclear regulatory text); *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1170 (10th Cir. 2012) (upholding the EPA’s issuance of a SIP call to clarify a provision that could be interpreted in a way inconsistent with CAA requirements).

approval and remain available should they be needed in the future for any purpose. To the extent that there is any question about the correct interpretation of an ambiguous provision in the future, an interested party will be able to access the docket to verify the correct meaning of SIP provisions.

With regard to the Petitioner's concern that either actual or alleged ambiguity in a SIP provision could impede an effective enforcement action, the EPA believes that its current process for evaluating SIP submissions and resolving potential ambiguities, including the reliance on interpretive letters in appropriate circumstances with correct documentation in the rulemaking action, minimizes the possibility for any such ambiguity in the first instance. To the extent that there remains any perceived ambiguity, the EPA concludes that regulated entities, regulators, the public, and ultimately the courts, have recourse to use the administrative record to shed light on and resolve any such ambiguity as explained earlier in this document.

The EPA emphasizes that it is already the Agency's practice to assure that any interpretive letters are correctly and adequately reflected in the **Federal Register** and are included in the rulemaking docket for a SIP approval. Should the Petitioner or any other party have concerns about any ambiguity in a provision in a SIP submission, the EPA strongly encourages that they bring this ambiguity to the Agency's attention during the rulemaking action on the SIP submission so that it can be addressed in the rulemaking process and properly reflected in the administrative record. Should an ambiguity come to light later, the EPA encourages the Petitioner or any other party to bring that ambiguity to the attention of the relevant EPA Regional Office. If the Agency agrees that there is ambiguity in a SIP provision that requires clarification subsequent to final action on the SIP submission, then the EPA can work with the relevant air agency to resolve that ambiguity by various means.

D. Response to Comments Concerning Reliance on Interpretive Letters in SIP Revisions

The EPA received relatively few comments, both supportive and adverse, concerning the Agency's overarching decision to deny the Petition with respect to this issue. For clarity and ease of discussion, the EPA is responding to these comments, grouped by whether they were supportive or adverse, in this section of this document.

1. Comments that supported the EPA's interpretation of the CAA to

allow reliance on interpretive letters to clarify ambiguities in state SIP submissions.

Comment: A number of state and industry commenters agreed with the EPA that the use of interpretive letters to clarify perceived ambiguity in the provisions in a SIP is a permissible, and sometimes necessary, approach to approving SIP submissions under the CAA when done correctly. Those commenters who supported the EPA's proposed action on the Petition did not elaborate upon their reasoning, but generally supported it as an efficient and reasonable approach to resolve ambiguities.

Response: The EPA agrees with the commenters who expressed support of the proposal based on practical considerations such as efficiency. These commenters did not, however, base their support for the proposed action on the EPA's interpretation of the CAA in the February 2013 proposal, nor did they acknowledge the parameters that the EPA itself articulated concerning the appropriate situations for such reliance and the process by which such reliance is appropriate. Thus, the EPA reiterates that reliance on interpretive letters to resolve ambiguities or perceived ambiguities in SIP submissions must be weighed by the Agency on a case-by-case basis, and such evaluation is dependent upon the specific facts and circumstances present in a specific SIP action and would follow the process described in the proposal.

2. Comments that opposed the EPA's interpretation of the CAA to allow reliance on interpretive letters to clarify ambiguities in state SIP submissions.

Comment: Other commenters disagreed with the EPA's proposed response to the Petition on this issue. One commenter opposed the Agency's reliance on interpretive letters under any circumstances and did not draw any factual or procedural distinctions between situations in which this approach might or might not be appropriate or correctly processed. This commenter argued that citizens should not be required "to sift through a large and complex rulemaking docket in order to figure out the meaning and operation of state regulations." The commenter asserted that simply as a matter of "good government," all state regulations approved as SIP provisions should be clear and unambiguous on their face. This commenter also expressed concern that courts could not or would not accord legal weight to interpretive letters created after state regulations were adopted and submitted to the EPA, or after the EPA's approval of the SIP submission occurred, and

would view such letters as *post hoc* interpretations of no probative value. Another commenter added its view that reliance on interpretive letters is appropriate only when affected parties have the right to comment on the interpretive letters and the EPA's proposed use of them during the rulemaking in which the EPA relies on such letters to resolve ambiguities and before the Agency finally approves the SIP revision.

Response: As a general matter, the commenter opposing the EPA's reliance on interpretive letters in any circumstances because citizens would be required "to sift through" the docket did not provide specific arguments regarding the EPA's interpretation of the statute as stated in the February 2013 proposal. Consistent with the EPA's interpretation of the CAA, and as explained earlier in this document, the EPA agrees with the core principle that the language of regulations in SIPs that pertain to SSM events should be clear and unambiguous. A commenter argued that "a fundamental principle of good government is making sure that all people know what the applicable law is. Having the applicable law manifest in a letter sitting in a filing cabinet in one office clearly does not qualify as good government." The EPA generally agrees on this point as well. As explained earlier in this document, the EPA allows the use of interpretive letters to clarify perceived ambiguity in the provisions of a SIP submission only when used correctly, with adequate documentation in both the **Federal Register** and the docket for the underlying rulemaking action. Section VI.B of this document explains how interested parties can use the list or table of actions that appears in the CFR and that reflects the various components of the approved SIP, to identify the **Federal Register** document wherein the EPA has explained the basis for its decision on any individual SIP provision. As such, the EPA does not envision a scenario whereby a citizen or a court would be unable to determine how the air agency and the EPA interpreted a specific SIP provision at the time of its approval into the SIP. Assuming there is any ambiguity in the provision, the mutual understanding of the state and the EPA as to the proper interpretation of that provision would be clear at the time of the approval of the SIP revision, as reflected in the **Federal Register** document for the final rule and the docket supporting that rule, which should answer any question about the correct interpretation of the term.

The same commenter also questioned whether "courts can or will give any

legal weight to interpretative letters created after state regulations are adopted or SIP approvals occurred, in the face of industry defendant arguments that the SIP provisions do not accord with those *post hoc* interpretive letters.” This commenter asserted that by not requiring all interpretations of the SSM provisions in the “unambiguous language of the SIPs,” the EPA is accepting “great legal uncertainty” as to whether judges will consider interpretive letters in enforcement actions. As a preliminary matter, as explained earlier in this document, this action does not apply to “*post hoc*” interpretive letters, *i.e.*, to situations where a state would submit an interpretive letter after the EPA’s approval of the SIP. Through this action the EPA is confirming its view that it may use interpretive letters to clarify ambiguous SIP provisions only when those letters were submitted to the EPA during the evaluation of the SIP submission and before final approval of the SIP revision and were included in the final rulemaking docket and explicitly discussed in the **Federal Register** document announcing such final action.

In addition, as explained earlier in this document, once the EPA approves a SIP revision, it becomes part of the state’s SIP identified in the CFR and thus becomes a federally enforceable regulation. In cases where the substance of the interpretive letter is provided in the CFR itself, either by copying the interpretation *verbatim* into the regulatory text or by incorporating the letter by reference, courts need not look further for the state and the Agency’s agreed upon interpretation. The EPA’s interpretation will be clearly reflected in the CFR. The EPA recognizes that actual or perceived regulatory ambiguity may become an issue in instances where the interpretive letter is reflected in the preamble to the final rulemaking but is not copied or incorporated by reference in the CFR text itself. It is important to note, however, that once included in the preamble to the final rule, the air agency’s interpretation of the SIP provision, as reflected in the interpretive letter, becomes the EPA’s promulgated interpretation as well. While the EPA recognizes that an agency’s preamble guidance generally does not have the binding force of an agency’s regulations, courts do view it as informative in understanding an agency’s interpretation of its own regulation,¹³³ and courts accord an

agency’s interpretation of its own regulations a “‘high level of deference,’ accepting it ‘unless it is plainly wrong.’”¹³⁴ When reviewing a purportedly ambiguous agency regulation, courts have found that the agency’s interpretation of its own regulation is “controlling unless ‘plainly erroneous or inconsistent with the regulation.’”¹³⁵ Based on these settled legal principles, the EPA would expect a court in an enforcement action to look not only to the text of the regulation at issue but also to the preamble to the final rule. The preamble would contain an explanation of any interpretive letter from the state upon which the EPA relied in order to interpret any ambiguous SIP provisions.¹³⁶ As such, the EPA disagrees that it is “accepting an unreasonable amount of legal uncertainty” in future enforcement actions by allowing the use of interpretive letters to clarify SIP provisions where such letters are specifically discussed in the final rulemaking. The EPA reiterates that reliance on such interpretive letters is not appropriate in all circumstances, such as instances in which the state’s SIP submission is so significantly ambiguous that it is necessary to request that the state revise the regulatory text before the EPA can approve it into the SIP.

Finally, a commenter stated its view that reliance on interpretive letters may be appropriate, but only when affected parties have the right to comment on the letter and the EPA’s reliance on it during the rulemaking in which the letter is relied upon. The EPA has explained earlier in this document the proper circumstances under which such reliance may be appropriate and the proper process to be followed when reliance upon such letters is appropriate, but the EPA also notes that the process does not require that the letters always be made available for public comment. As explained earlier in this document, the EPA makes every attempt to identify ambiguities in state-

submitted SIPs and requests states to submit interpretive letters to explain any ambiguities, before putting the proposed action on the SIP submission out for public notice and comment. On occasion, however, ambiguous provisions may inadvertently remain and are not identified until the notice-and-comment period has begun. As explained earlier in this document, sometimes these ambiguities are so significant that the EPA requires the state to resubmit its SIP submission altogether, which would entail another notice-and-comment period. When the EPA does not deem the ambiguity to be so significant as to warrant a revision to the state’s regulatory text in the SIP submission, the Agency believes that resolution of the ambiguity through the submission of an interpretive letter, which then is incorporated into the EPA’s action, reflected in the administrative record and memorialized as the proper intended reading of the provision, is appropriate.

This approach comports with well-established principles applicable to notice-and-comment rulemaking generally. One purpose of giving interested parties the opportunity to comment is to provide these parties the opportunity to bring areas of potential ambiguity in the proposal to an agency’s attention so that the concerns may be addressed before the agency takes final action. If the APA did not allow the agency to consider comments and provide clarification when issuing its final action as necessary, this purpose would be defeated. Courts have held that so long as a final rule is a “logical outgrowth” of the proposed rule, adequate notice has been provided.¹³⁷ It is the EPA’s practice to neither require a state to resubmit a SIP submission nor repropose action on the submission, so long as the clarification provided in the interpretive letter is a logical outgrowth of the proposed SIP provision. If an interested party believes that the EPA is incorrect in not requiring the state to revise its SIP submission or that the EPA should repropose action on a submission, including the clarification provided by the interpretive letter in the plain language of the SIP submission itself, that party does have recourse. The APA gives that party the opportunity to petition the EPA for rulemaking to reconsider the decision under 5 U.S.C. 553(e). For these reasons, the EPA believes that its process for using interpretive letters to clarify SIP

Outdoor Council v. U.S. Forest Serv., 165 F.3d 43, 53 (D.C. Cir. 1999) (“Although the preamble does not ‘control’ the meaning of the regulation, it may serve as a source of evidence concerning contemporaneous agency intent.”).

¹³⁴ *Howmet* at 549 (quoting *Gen Elec. Co. v. EPA*, 53 F.3d 1324, 1327 (D.C. Cir. 1990)).

¹³⁵ *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989)).

¹³⁶ Indeed, the APA requires agencies to “incorporate in the rules adopted a concise general statement of their basis and purpose,” 5 U.S.C. 553(c), often referred to as the regulatory preamble. It would not make sense for a court to attempt to interpret the text of a regulation independently from its statutorily mandated statement of basis and purpose.

¹³³ See, e.g., *Howmet Corp. v. EPA*, 614 F.3d 544, 552 (D.C. Cir. 2010) (using preamble guidance to interpret an ambiguous regulatory provision); *Wyo.*

¹³⁷ See, e.g., *Shell Oil Co.*, 950 F.2d 741; *NRDC v. Thomas*, 838 F.2d 1224 (D.C. Cir. 1988); *South Terminal Corp. v. EPA*, 504 F.2d 646.

provisions, as articulated in this rulemaking, is appropriate.

VII. Clarifications, Reiterations and Revisions to the EPA's SSM Policy

A. Applicability of Emission Limitations During Periods of SSM

1. What the EPA Proposed

In the February 2013 proposal, the EPA reiterated its longstanding interpretation of the CAA that SIP provisions cannot include exemptions from emission limitations for excess emissions during SSM events. This has been the EPA's explicitly stated interpretation of the CAA with respect to SIP provisions since the 1982 SSM Guidance, and the Agency has reiterated this important point in the 1983 SSM Guidance, the 1999 SSM Guidance and the 2001 SSM Guidance. In accordance with CAA section 302(k), SIPs must contain emission limitations that "limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis." Court decisions confirm that this requirement for continuous compliance prohibits exemptions for excess emissions during SSM events.¹³⁸

2. What Is Being Finalized in This Action

For the reasons explained in the February 2013 proposal, in the background memorandum supporting that proposal and in the EPA's responses to comments in this document, the EPA interprets the CAA to prohibit exemptions for excess emissions during SSM events in SIP provisions. This interpretation has long been reflected in the SSM Policy. The EPA acknowledges, however, that both states and the Agency have failed to adhere to the CAA consistently with respect to this issue in some instances in the past, and thus the need for this SIP call action to correct the existing deficiencies in SIPs. In order to be clear about this important point on a going-forward basis, the EPA is reiterating that emission limitations in SIP provisions cannot contain exemptions for emissions during SSM events.

Many commenters wrongly asserted that the EPA declared in the February 2013 proposal that all emission

limitations in SIPs must be established as numerical limitations, or must be set at the same numerical level at all times. The EPA did not take this position. In the case of section 110(a)(2)(A), the statute does not include an explicit requirement that all SIP emission limitations must be expressed numerically. In practice, it may be that numerical emission limitations are the most appropriate from a regulatory perspective (e.g., to be legally and practically enforceable) and thus the limitation would need to be established in this form to meet CAA requirements. The EPA did not, however, adopt the position ascribed to it by commenters, i.e., that SIP emission limitations must always be expressed only numerically and must always be set at the same numerical level during all modes of source operation.

The EPA notes that some provisions of the CAA that govern standard-setting limit the EPA's own ability to set non-numerical standards.¹³⁹ Section 110(a)(2)(A) does not contain comparable explicit limits on non-numerical forms of emission limitation. Presumably, however, some commenters misunderstood the explicit statutory requirement for emission limitations to be "continuous" as a requirement that states must literally establish SIP emission limitations that would apply the same precise numerical level at all times. Evidently these commenters did not consider the explicit recommendations that the EPA made in the February 2013 proposal concerning creation of alternative emission limitations in SIP provisions that states may elect to apply to sources during startup, shutdown or other specifically defined modes of source operation.¹⁴⁰ As many of the commenters acknowledged, the EPA itself has recently promulgated emission limitations in NSPS and NESHAP regulations that impose different numerical levels during different modes of source operation or impose emission limitations that are composed of a combination of a numerical limitation during some modes of operation and a specific technological control requirement or work practice requirement during other modes of operation. In light of the court's

decision in *Sierra Club v. Johnson*, the EPA has been taking steps to assure that its own regulations impose emission limitations that apply continuously, including during startup and shutdown, as required.¹⁴¹

Regardless of the reason for the commenters' apparent misunderstanding on this point, many of the commenters used this incorrect premise as a basis to argue that "continuous" SIP emission limitations may contain total exemptions for all emissions during SSM events. Therefore, in this final action the EPA wishes to be very clear on this important point, which is that SIP emission limitations: (i) Do not need to be numerical in format; (ii) do not have to apply the same limitation (e.g., numerical level) at all times; and (iii) may be composed of a combination of numerical limitations, specific technological control requirements and/or work practice requirements, with each component of the emission limitation applicable during a defined mode of source operation. It is important to emphasize, however, that regardless of how the air agency structures or expresses a SIP emission limitation—whether solely as one numerical limitation, as a combination of different numerical limitations or as a combination of numerical limitations, specific technological control requirements and/or work practice requirements that apply during certain modes of operation such as startup and shutdown—the emission limitation as a whole must be continuous, must meet applicable CAA stringency requirements and must be legally and practically enforceable.¹⁴²

Another apparent common misconception of commenters was that SIP provisions may contain exemptions for emissions during SSM events, so long as there is some other generic regulatory requirement of some kind somewhere else in the SIP that coincidentally applies during those exempt periods. The other generic regulatory requirements most frequently referred to by commenters are "general duty" type requirements, such as a general duty to minimize emissions at all times, a general duty to use good engineering judgment at all times, or a

¹³⁸ See, e.g., *Sierra Club v. Johnson*, 551 F.3d 1019, 1021 (D.C. Cir. 2008) (interpreting the definition of emission limitation in section 302(k) and section 112); *Mich. Dep't of Env'tl. Quality v. Browner*, 230 F.3d 181 (6th Cir. 2000) (upholding disapproval of SIP provisions because they contained exemptions applicable to SSM events); *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1170 (10th Cir. 2012) (upholding the EPA's issuance of a SIP call to a state to correct SSM-related deficiencies).

¹³⁹ See, e.g., CAA section 112(h)(1) (authorizing design, equipment, work practice, or other operational emission limitations under certain conditions); 40 CFR 51.308(e)(1)(iii) (regulations applicable to regional haze plans).

¹⁴⁰ See February 2013 proposal, 78 FR 12459 at 12478 (February 22, 2013) (the recommended criteria for consideration in creation of SIP provisions that apply during startup and shutdown).

¹⁴¹ 551 F.3d 1019 (D.C. Cir. 2008).

¹⁴² The EPA notes that CAA section 123 explicitly prohibits certain intermittent or supplemental controls on sources. In a situation where an emission limitation is continuous, by virtue of the fact that it has components applicable during all modes of source operation, the EPA would not interpret the components that applied only during certain modes of operation, e.g., startup and shutdown, to be prohibited intermittent or supplemental controls.

general duty not to cause a violation of the NAAQS at any time. To the extent that such other general-duty requirement is properly established and legally and practically enforceable, the EPA would agree that it may be an appropriate separate requirement to impose upon sources in addition to the (continuous) emission limitation. The EPA itself imposes separate general duties of this type in appropriate circumstances.¹⁴³ The existence of these generic provisions does not, however, legitimize exemptions for emissions during SSM events in a SIP provision that imposes an emission limitation.

In accordance with the definition of section 302(k), SIP emission limitations must be continuous and apply at all times. SIP provisions may be composed of a combination of numerical limitations, specific technological control requirements and/or work practice requirements, but those must be components of a continuously applicable SIP emission limitation. In addition, the SIP emission limitation must meet applicable stringency requirements during all modes of source operation (e.g., be RACT for stationary sources located in a nonattainment area) and be legally and practically enforceable. General-duty requirements that are not clearly part of or explicitly cross-referenced in a SIP emission limitation cannot be viewed as a component of a continuous emission limitation. Even if clearly part of or explicitly cross-referenced in the SIP emission limitation, however, a given general-duty requirement may not be consistent with the applicable stringency requirements for that type of SIP provision during startup and shutdown. The EPA's recommendations for developing appropriate alternative emission limitations applicable during certain modes of source operation are discussed in section VII.B.2 of this document. In general, the EPA believes that a legally and practically enforceable alternative emission limitation applicable during startup and shutdown should be expressed as a numerical limitation, a specific technological control requirement or a specific work practice requirement applicable to affected sources during specifically defined periods or modes of operation.

3. Response to Comments

The EPA received a substantial number of comments, both supportive

and adverse, concerning the issue of exemptions in SIP provisions for excess emissions during SSM events. Many of these comments raised the same core issues, albeit using slight variations on the arguments or variations on the combination and sequence of arguments. For clarity and ease of discussion, the EPA is responding to these comments, grouped by issue, in this section of this document.

a. Comments that the EPA's proposed action on the Petition is incorrect because some of the Agency's own regulations contain exemptions for emissions during SSM events.

Comment: Many commenters argued that the EPA is misinterpreting the CAA to preclude SIP provisions with exemptions for emissions during SSM events because some of the Agency's own existing NSPS and NESHAP rules contain such exemptions. Some commenters provided a list of existing NSPS or NESHAP standards that they claimed currently contain exemptions for emissions during SSM events. Commenters also noted that the NSPS general provisions at 40 CFR 60.11(d) excuse noncompliance with many NSPS during periods of startup and shutdown. Other commenters asserted that the EPA's interpretations in the February 2013 proposal are inconsistent with its longstanding interpretation of the Act because the EPA itself has a long history of adopting exceptions to numerical emission limitations for emissions during SSM events, citing to the NSPS general provisions at 40 CFR 60.8, the NSPS for Fossil-Fuel-Fired Steam Generators and for Electric Utility Steam Generating Units (40 CFR part 60, respectively subparts D and Da) and the NSPS for Industrial-Commercial-Institutional Steam Generating Units and for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR part 60, respectively subparts Db and Dc). Commenters claimed that recent revisions to 40 CFR part 60, subpart Da excluded periods of startup and shutdown from new PM standards. The commenters pointed to these facts or alleged facts as evidence that the EPA is interpreting the term "emission limitation" or other provisions of the statute inconsistently to preclude SSM exemptions in SIP provisions.

Response: Commenters are correct that many of the EPA's existing NSPS and NESHAP standards still contain exemptions from emission limitations during periods of SSM. The exemptions in these EPA regulations, however, predated the 2008 issuance of the D.C. Circuit decision in *Sierra Club v. Johnson*, in which the court held that emission limitations must be

continuous and thus cannot contain exemptions for emissions during SSM events. Likewise, the NSPS general provisions in 40 CFR 60.8 that commenters identified as inconsistent also predate that 2008 court decision. Although these other EPA regulations that include exemptions for emissions during SSM events were not before the court in the *Sierra Club* case, the EPA's view is that the legal reasoning of the *Sierra Club* decision applies equally to these exemptions and that the exemptions are thus inconsistent with the CAA.

Consequently, since the *Sierra Club* decision, the EPA has eliminated exemptions in many existing federal emission limitations as these standards are revised or reviewed pursuant to CAA requirements, such as CAA sections 111(b)(1)(B), 112(d)(6) and 112(f)(2).¹⁴⁴ Similarly, the EPA has established emission standards that apply at all times, including during SSM events, when promulgating new NSPS and NESHAP standards to be consistent with the *Sierra Club* decision.¹⁴⁵ The EPA recognizes that the NSPS general provisions regulations also include exemptions for emissions during SSM events, but in promulgating new NSPS since the *Sierra Club* decision, the EPA has established emission limitations in the new NSPS that apply at all times thereby superseding those general provisions. Therefore, the EPA's action in this rulemaking is consistent with other actions that the EPA has taken since the *Sierra Club* decision concerning the issue of SSM exemptions.

The fact that the EPA has not completed the process of updating its own regulations to bring them into compliance with respect to CAA requirements concerning proper treatment of emissions during SSM events does not render this SIP call action arbitrary or capricious. The existence of a deficiency in an existing EPA regulation that has not yet been corrected does not alter the legal requirements imposed by the CAA upon states with respect to SIP provisions. Thus, for example, the EPA does not agree with commenters that the continued existence of SSM exemptions

¹⁴⁴ See, e.g., "New Source Performance Standards Review for Nitric Acid Plants; Final rule," 77 FR 48433 (August 14, 2012) (example of NSPS emission limitation that no longer includes exemption for periods of startup or shutdown).

¹⁴⁵ See, e.g., "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final rule," 77 FR 49489 (August 16, 2012) (consistent with *Sierra Club v. Johnson*, the EPA has established standards in both rules that apply at all times).

¹⁴³ See, e.g., "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final rule," 77 FR 49489 at 49570, 49586 (August 16, 2012) (added general standards to apply at all times).

in the general provisions applicable to the emission limitations in the Agency's own NSPS for Fossil-Fuel-Fired Steam Generators in 40 CFR part 60, subpart D, is evidence that exemptions for emissions during SSM events are permitted by the CAA.

The EPA acknowledges that correction of longstanding regulatory deficiencies by proper rulemaking procedures requires time and resources, not only for the EPA but also for states and affected sources. Hence, the EPA has elected to proceed via its authority under section 110(k)(5) and to provide states with the full 18 months allowed by statute for compliance with this action. This SIP call is intended to help assure that state SIP provisions are brought into line with CAA requirements for emission limitations, just as the EPA is undertaking a process to update its own regulations.

The EPA also specifically disagrees with the commenters' implication that 40 CFR 60.11(d) completely excuses noncompliance during periods of startup and shutdown. Rather, that provision imposes a separate affirmative obligation to maintain and operate the affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices at all times. The existence of this separate duty to minimize emissions, however, does not justify or excuse the existence of an exemption for emissions during SSM events from the emission limitations of an EPA NSPS. It is a separate obligation that sources must also meet at all times.

The EPA also disagrees with the commenters who argued that the Agency has recently created new exemptions for PM emissions during startup and shutdown events in the NSPS for Electric Utility Steam Generating Units in 40 CFR part 60, subpart Da. The EPA has not created new exemptions for emissions during startup and shutdown. To the contrary, the EPA has taken steps to assure that these regulations are consistent with the statutory definition of emission limitation and with the logic of the *Sierra Club* decision on a going-forward basis. In accordance with that decision, the revised emission limitations in subpart Da NSPS apply continuously. In revising subpart Da to establish requirements for sources on which construction, modification or reconstruction commenced after May 3, 2011, the EPA determined that it was appropriate to provide that the exemptions for emissions during SSM events in the General Provisions do not

apply.¹⁴⁶ Although the *Sierra Club v. Johnson* decision specifically addressed the validity of SSM exemptions in NESHAP regulations, the EPA concluded that the court's focus on the definition of "emission limitation" in section 302(k) applied equally to any such SSM exemptions in NSPS regulations. Thus, for affected sources on which construction, modification or reconstruction starts after May 3, 2011, the General Provisions do not provide an exemption to compliance with the applicable emission limitations during SSM events.

For such sources, the emission limitation for PM in 40 CFR 60.42Da(a) imposes a numerical level of 0.03 lb/MMBtu that applies at all times except during startup and shutdown and specific work practices that apply during startup and shutdown.¹⁴⁷ The related emission limitation for opacity from such sources in 40 CFR 60.42Da(b) is 20 percent opacity at all times, except for one 6-minute period per hour of not more than 27 percent, and it applies at all times except during periods of startup and shutdown when the work practices for PM limit opacity. Commenters alleged that the EPA created an "exemption" from the PM emission limitations in subpart Da applicable to post-May 3, 2011, affected sources. That is simply incorrect. The revised regulations in subpart Da impose a numerical emission limitation that applies at all times except during startup and shutdown and impose specific work practice requirements that apply during startup and shutdown as a component of the emission limitation. Specifically, 40 CFR 60.42Da(e)(2) explicitly requires post-May 3, 2011, affected sources to comply with specific work practice standards in part 63, subpart UUUUU. The numerical emission limitation and the work practice requirement together comprise a continuous emission limitation and there is no exemption for emissions during startup and shutdown. The fact that the EPA has established different requirements for different periods of operation does not constitute creation of an exemption. These emission

¹⁴⁶ See 40 CFR 60.48Da(a). For affected facilities for which construction, modification, or reconstruction commenced after May 3, 2011, the applicable SO₂ emissions limit under § 60.43Da, NO_x emissions limit under § 60.44Da, and NO_x plus CO emissions limit under § 60.45Da apply at all times.

¹⁴⁷ The EPA notes that the emission standards for SO₂ in 40 CFR 60.43Da and for NO_x in 40 CFR 60.44Da, applicable to sources on which construction, modification or reconstruction commenced after May 3, 2011, also apply continuously and contain no exemptions for emissions during SSM events.

limitations have numerical limitations that apply during most periods and specific technological control requirements or work practice requirements that apply during startup and shutdown, but all periods of operation are subject to controls and no periods of operation are exempt from regulation. States are similarly able to alter their regulations, in response to this SIP call, to provide for emission limitations with different types of controls applicable during different modes of source operation, so long as those controls apply at all times and no periods are exempt from controls. As explained in section VII.A of this document, the EPA interprets section 110(a)(2)(A) to permit SIP provisions that are composed of a combination of numerical limitations, specific technological control requirements and/or work practice requirements, so long as the resulting emission limitations are continuous, meet applicable stringency requirements (e.g., are RACT for sources in nonattainment areas) and are legally and practically enforceable.

The EPA also notes that the provisions of 40 CFR 60.42Da(b)(1) do not provide an "exemption" from the opacity standard. That section merely provides that the affected sources do not need to meet the opacity standard of the NSPS (at any time), if they have installed a PM continuous emission monitoring system (PM CEMS) to measure PM emissions continuously instead of relying on periodic stack tests to assure compliance with the PM emission limitation. One reason for the imposition of opacity standards on sources is to provide an effective means of monitoring for purposes of assuring source compliance with PM emission limitations and proper operation of PM emission controls on a continuous basis. If a source is subject to a sufficiently stringent PM limitation and has opted to install, calibrate, maintain and operate a PM CEMS to measure PM emissions, then it is reasonable for the EPA to conclude that an opacity emission limitation is not needed for that particular source for those purposes.¹⁴⁸ The direct measurement of PM, in conjunction with an appropriately stringent PM emission limitation that

¹⁴⁸ For example, for NSPS regulations under subparts D, Da, Db and Dc of 40 CFR part 60, the EPA has deemed 0.030 lb/MMBtu to be a sufficiently stringent PM limitation for certain sources operating PM CEMS to conclude that an opacity emission limitation is not needed, on the basis that the contribution of filterable PM to opacity at PM levels of 0.030 lb/MMBtu or less is generally negligible, and sources with mass limits at this level or less will operate with little or no visible emissions (i.e., less than 5 percent opacity). See 74 FR 5072 at 5073 (January 28, 2009).

applies continuously, is an appropriate means to assure adequate control of PM emissions on a continuous basis. States evaluating how best to replace impermissible SSM exemptions from opacity standards may wish to consider a similar approach, conditioned upon the use of PM CEMS and a sufficiently stringent PM emission limitation.

Finally, the EPA emphasizes that what is at issue in this action is the question of whether emission limitations in SIP provisions can include exemptions for emissions during SSM events. The EPA is reiterating its longstanding interpretation of the CAA with respect to this question, in the process of responding to the Petition, updating its SSM Policy and applying its current interpretations of the CAA to the specific SIP provisions at issue in this SIP call action. To the extent that commenters intend to point out that the EPA needs to address exemptions for emissions during SSM events in its own existing regulations, the Agency is already aware of that need due to recent judicial decisions and is proceeding to correct those regulations in due course.

b. Comments that the EPA's proposed action on the Petition is incorrect because the Agency has previously allowed the inclusion of exemptions for emissions during SSM events through approval of NSPS or NESHAP requirements into SIPs.

Comment: Commenters asserted that the EPA is being inconsistent because it has previously approved SIP submissions that rely on NSPS rules, including the SSM exemptions in those existing rules. The commenters argued that the EPA's current interpretation of the CAA to preclude SSM exemptions in SIP provisions is thus at odds with past guidance and practice.

Response: The EPA disagrees with the argument that past approval of SIP submissions that relied upon an NSPS or NESHAP with an SSM exemption is evidence that such exemptions should be permissible in SIP provisions in the future. In the 1999 SSM Guidance, the EPA addressed the related issue of whether states could create affirmative defenses in SIP provisions that would alter or add to the requirements of an existing EPA NSPS or NESHAP.¹⁴⁹ At that time, the EPA clearly stated that it would be inappropriate for a state to seek to "deviate" from the specific requirements of an NSPS or NESHAP when adopting that standard as a SIP provision, stating that "[b]ecause EPA set these standards taking into account technological limitations, additional

exemptions would be inappropriate." Thus, so long as a state did not alter the requirements of the existing NSPS or NESHAP by including additional affirmative defenses or exemptions, the EPA indicated that it would approve a SIP submission that included an NSPS or NESHAP.

The commenters' argument has brought to the EPA's attention that past guidance on this issue is in fact inconsistent with more recent legal developments. At the time of the 1999 SSM Guidance, the EPA was still of the belief that its own NSPS and NESHAP regulations could legitimately include exemptions for emissions during SSM events. In that light, recommending to states that they could rely on an EPA NSPS or NESHAP as an emission limitation in a SIP provision so long as they did not alter the NSPS or NESHAP in any fashion was logical. At that time, the reasoning was that NSPS and NESHAP standards were technology-based standards that, although neither designed nor intended to meet the separate legal requirements for SIP provisions, could be used to provide emission reductions creditable in SIPs. Since the 2008 D.C. Circuit decision in *Sierra Club v. Johnson*, however, it has been clear that NSPS and NESHAP standards themselves cannot contain such exemptions. The reasoning of the court was that exemptions for SSM events are impermissible because they contradict the requirement that emission limitations be "continuous" in accordance with the definition of that term in section 302(k). Although the court evaluated this issue in the context of EPA regulations under section 112, the EPA believes that this same logic extends to SIP provisions under section 110, which similarly must contain emission limitations as defined in the CAA. Section 110(a)(2)(A) requires states to have emission limitations in their SIPs to meet other CAA requirements, and any such emission limitations would similarly be subject to the definition of that term in section 302(k).

Accordingly, the EPA concludes that, prospectively, a state should not submit an NSPS or NESHAP for inclusion into its SIP as an emission limitation (whether through incorporation by reference or otherwise), unless that NSPS or NESHAP does not include an exemption for SSM events or unless the state otherwise takes action to exclude the SSM exemption from the standard as part of the SIP submission. Because SIP provisions must apply continuously, including during SSM events, the EPA can no longer approve SIP submissions that include any

emission limitations with such exemptions, even if those emission limitations are NSPS or NESHAP regulations that the EPA has not yet revised to make consistent with CAA requirements. Alternatively, states may elect to adopt an existing NSPS or NESHAP as a SIP provision, so long as the state provision excludes the SSM exemption.¹⁵⁰ States may also wish to replace the SSM exemption with appropriately developed alternative emission limitations that apply during startup and shutdown in lieu of the SSM exemption. Otherwise, the EPA's approval of the deficient SSM exemption provisions into the SIP would contravene CAA requirements for SIP provisions and would potentially result in misinterpretation or misapplication of the standards by regulators, regulated entities, courts and members of the public. The EPA emphasizes that the inclusion of an NSPS or NESHAP as an emission limitation in a state's SIP (which approach, as noted in section VII.B.3 of this document, would be at the state's option) is different and distinct from reliance on such standards indirectly, such as sources of emission reductions that may be taken into account for SIP planning purposes in emissions inventories or attainment demonstrations. For these uses (*i.e.*, other than as direct emission limitations), states may continue to rely on EPA NSPS and NESHAP regulations, even those that have not yet been revised to remove inappropriate exemptions, in accordance with the requirements applicable to those SIP planning functions.

c. Comments that the EPA is misinterpreting the *Sierra Club* case because it applies only to MACT regulations and not to SIP provisions.

Comment: Many commenters claimed that the EPA incorrectly applies the holding in the *Sierra Club* decision to preclude exemptions for emissions during SSM events in SIP provisions and that the *Sierra Club* decision does not apply in this context. The commenters argued that the *Sierra Club* decision was directly dependent on the structure of CAA section 112 and cannot be extended to the different regulatory

¹⁵⁰ Under CAA section 116, states have the explicit general authority to regulate more stringently than the EPA. Indeed, under section 116 states can regulate sources subject to EPA regulations promulgated under section 111 or section 112 so long as they do not regulate them less stringently. Accordingly, the EPA believes that states may elect to adopt EPA regulations under section 111 or section 112 as SIP provisions and expressly eliminate the exemptions for emissions during SSM events.

¹⁴⁹ See 1999 SSM Guidance at Attachment p. 3.

structure that governs SIPs under CAA section 110.

The commenters further contended that in the SIP context, the underlying air quality pollution control requirement for SIPs is to attain NAAQS and no specific level of stringency is required, unlike section 112, and Congress gave states broad discretion in the design of their SIPs. Commenters asserted that the *Sierra Club* decision held only that the general-duty requirement in the section 112 regulations did not meet the stringency requirements of CAA section 112 and that this holding does not apply in the SIP context because in the SIP context no specific level of stringency is required.

Commenters also asserted that a general-duty requirement is an appropriate alternative standard for SSM events in the SIP context because CAA sections 302(k) and 110(a)(2)(A) give states broad authority to develop the mix of controls necessary and appropriate to implement the NAAQS. Other commenters contended that the *Sierra Club* decision does not preclude states from constructing a compliance regime that uses multiple methods to limit emissions as long as the overall compliance regime to minimize emissions is enforceable.

Commenters also suggested that the decision in *Kamp v. Hernandez* relied upon in the *Sierra Club* case affirmed EPA's approval of a state emission limitation in a SIP that specifically allowed and even expected a certain number of annual exceedances of the emission limit.¹⁵¹ Some commenters argued that the *Sierra Club* decision should not be read to impose a "continuous emissions limitation" requirement and that to the extent it does, it was incorrectly decided.

Response: The EPA disagrees that the court's decision in *Sierra Club v. Johnson* has no relevance to this action. Of course that decision specifically addressed the validity of exemptions for emissions during SSM events in the Agency's own regulations promulgated under section 112. Naturally, that decision turned, in part, on the specific provisions of section 112 and the specific arguments that each of the litigants raised in that case. However, the decision also turned in large part on the explicit statutory definition of the term "emission limitation" in section 302(k), which requires such limitations to be "continuous."

In that litigation, the EPA itself had argued that the exemptions from the otherwise applicable MACT standards

during SSM events were consistent with CAA requirements because the MACT standards and the separate "general duty" requirements "together form an uninterrupted, *i.e.*, continuous" emission limitation, because either the numerical limitation or the general duty applied at all times.¹⁵² The *Sierra Club* court rejected this argument, in part because the general duty that EPA required sources to meet during SSM events was not itself consistent with section 112(d) and the EPA did not purport to act under section 112(h). Thus, the EPA agrees that the court in *Sierra Club* explicitly found that the SSM exemption in EPA's NESHAP general provision rules violated the CAA because the general duty to minimize emissions was not a section 112(d)-compliant standard and had not been justified by the EPA as a 112(h)-compliant standard. The court reasoned that when sections 112 and 302(k) are read together, there must be a continuous section 112-compliant standard. It is important to note that if the otherwise applicable numerical MACT standards had themselves applied at all times consistent with section 302(k), then there would have been no question that they were in fact continuous.

The EPA has concluded that the reasoning of the *Sierra Club* decision is correct and further supports the Agency's interpretations of the CAA with respect to SIP provisions. As explained in the February 2013 proposal, the EPA's longstanding SSM guidance has interpreted the CAA to prohibit exemptions for emissions during SSM events since at least 1982. The EPA has long explained that exemptions for emissions during SSM events are not permissible in SIP provisions, because they interfere with attainment and maintenance of the NAAQS, protection of PSD increments and improvement of visibility, and because they are inconsistent with the enforcement structure of the CAA. The EPA also noted that the definition of emission limitation in section 302(k) was part of the basis for its interpretation concerning SIP provisions.¹⁵³ In the February 2013 proposal, the EPA explained that the *Sierra Club* court's emphasis on the definition of the term emission limitation in section 302(k) further bolsters the Agency's basis for interpreting the CAA to preclude such exemptions in SIP provisions. In other

words, under the CAA and the court's decision, emission limitations in SIP provisions as well as in NSPS and NESHAP regulations must be continuous, although they can impose different levels or forms of control during different modes of source operation.

The EPA also disagrees with the argument that the *Sierra Club* decision does not apply because section 110, unlike section 112, does not impose any specific level of "stringency" for SIP provisions. In accordance with section 110(a)(1), states are required to have SIPs that provide for attainment, maintenance and enforcement of the NAAQS in general. Pursuant to section 110(a)(2), states are required to have SIP provisions that meet many specific procedural and substantive requirements, including but not limited to, the explicit requirements of section 110(a)(2)(A) for emission limitations necessary to meet other substantive CAA requirements. In addition, however, states must have SIP provisions that collectively meet a host of other statutory requirements that also impose more specific stringency requirements. Merely by way of example, section 110(a)(2)(I) requires states with nonattainment areas to have SIP provisions that collectively meet part D requirements.¹⁵⁴ In turn, the different subparts of part D applicable to each NAAQS impose many requirements that require emission limitations in SIPs that meet various levels of stringency. Again, merely by way of example, states with nonattainment areas for PM under part D subpart 4 must have SIPs that include emission limitations that meet either the RACM and RACT level of stringency (if the nonattainment area is classified Moderate) or meet the BACM and BACT level of stringency (if the area is classified Serious).¹⁵⁵ There are similar requirements for states to impose emission limitations that must meet various levels of stringency for each of the NAAQS. Likewise, states must impose SIP emission limitations that meet BART and reasonable progress levels of stringency for regional haze program purposes¹⁵⁶ and must ensure that emission limitations meet BACT or LAER levels of stringency for PSD or nonattainment NSR permitting program

¹⁵⁴ Sections 171–193 of CAA title I comprise part D.

¹⁵⁵ See CAA section 172(c)(2) (generally applicable attainment plan requirements including RACM and RACT); CAA section 189(a)(1) (requirements for areas classified Moderate); section 189(b) (requirements for areas classified Serious).

¹⁵⁶ See CAA section 169A(b)(2)(A).

¹⁵² See 551 F.3d 1019, 1026 (D.C. Cir. 2008).

¹⁵³ See 1999 SSM Guidance at 2, footnote 1 (citing the section 302(k) definition of emission limitations and emission standards).

¹⁵¹ 752 F.2d 1444 (9th Cir. 1985).

purposes.¹⁵⁷ The EPA agrees that states have broad discretion in how to devise SIP provisions under section 110, but states nevertheless are required to devise SIP provisions that meet applicable statutory stringency requirements. In short, the argument that the *Sierra Club* decision is not germane because there are no comparable “stringency” requirements applicable to SIP provisions is simply in error. While it is true that SIP provisions do not need to meet section 112 levels of stringency, they must still be continuous under section 302(k) and meet applicable NAAQS, PSD and visibility requirements and stringency levels. In short, they cannot contain exemptions for emissions during SSM events.

Finally, the EPA does not agree with the commenters’ view of the significance of the reference to the *Kamp v. Hernandez* decision by the court in the *Sierra Club* decision. The *Kamp* decision upheld the EPA’s approval of a SIP provision that imposed an SO₂ emission limitation on a specific stationary source.¹⁵⁸ To the extent that the commenters believe that the *Kamp* decision stands for the principle that SIP emission limitations can be “continuous” even if they do not restrict emissions to the same numerical limitation at all times, this point is not in dispute. As explained in section VII.A of this document, the EPA agrees with this principle. If, however, the commenters believe that the *Kamp* decision instead indicates that SIP emission limitations may contain exemptions, such that no emission standard applies during some mode of source operation, then that is simply incorrect. The EPA-approved SIP provision at issue in *Kamp* did not itself allow for a certain number of “exceedances” of the emission limitation each year. The state emission limitation rule in that case was developed to ensure attainment and maintenance of the then applicable SO₂ NAAQS and the approved emission limitation for the source fluctuated but was continuous. It was the specifications of the SO₂ NAAQS standard that allowed for a certain number of “exceedances” each year. The NAAQS themselves are not “emission limitations” governed by section 302(k) and commonly have a statistical “form” that authorizes a set number of “exceedances” of the numerical level of the NAAQS before

there is a “violation” of the NAAQS.¹⁵⁹ Thus, the EPA believes that the court in the *Sierra Club* decision properly cited the *Kamp* case as support for the fundamental proposition that emission limitations must be “continuous.” Moreover, the EPA notes that commenters did not address other reported decisions in which courts have upheld the Agency’s disapproval of SIP submissions containing SSM exemptions.¹⁶⁰

d. Comments that the EPA’s proposed action contradicts a 2009 guidance document concerning the effect of the *Sierra Club* decision on SSM exemptions in existing standards.

Comment: A number of commenters suggested that the EPA’s February 2013 proposal is inconsistent with a memorandum (in fact a public letter) issued by the Agency following the *Sierra Club* decision in which the D.C. Circuit vacated two EPA provisions that exempt sources from section 112(d) emission standards during periods of SSM (Kushner letter).¹⁶¹ The commenters noted that the Kushner letter explained that many MACT standards have SSM exemptions that were not affected by the *Sierra Club* decision. They argued that the Kushner letter should be read to mean that no emission limitations other than the ones explicitly discussed within that letter would be affected by the court’s holding that emission limitations under the CAA must be continuous.

Response: The EPA disagrees with these comments for several reasons. First, the commenters misinterpret the Kushner letter. The purpose of the Kushner letter was to explain the direct and immediate impact of the *Sierra Club* decision, which vacated the SSM exemption in EPA’s NESHAP general provisions regulations. The Kushner letter explained that the vacatur would “immediately and directly” affect only the subset of NESHAP source category standards that incorporated the general provisions’ exemption by reference, and that contain no other regulatory text exempting or excusing, in any way, compliance during SSM events, because

only the general provisions’ exemption was challenged and before the court in the *Sierra Club* case. However, the Kushner letter clearly stated that the legality of all NESHAP SSM exemption provisions was in question and that EPA would examine such provisions in light of the court’s decision. Therefore, the commenters’ suggestion that the Kushner letter supports a limited reading of the legal reasoning of the *Sierra Club* case is incorrect.

Second, the Kushner letter did not explicitly or implicitly address the issue of whether the CAA allows exemptions for emissions during SSM events in SIP provisions. That fact is unsurprising, in that at the time of the Kushner letter the EPA already had guidance in the SSM Policy (issued and reiterated in 1982, 1983, 1999 and 2001) that clearly stated the Agency’s view that such exemptions are not permissible in SIP provisions, consistent with CAA requirements. It would also have been unnecessary for the Kushner letter discussing the impact of the *Sierra Club* decision on NESHAP standards to have mentioned that the statutory definition of emission limitation also precludes exemptions for SSM provisions in SIPs. The EPA had already made this point explicitly in the 1999 SSM Guidance, when it explained the reasons why such provisions would be contrary to CAA requirements for SIPs.¹⁶² Thus, the EPA’s guidance for SIP provisions concerning emissions during SSM events had already explicitly articulated that provisions with exemptions for SSM events could not be approved pursuant to CAA section 110(l), because that would interfere with a fundamental requirement of the CAA, *i.e.*, the definition of “emission limitation” in section 302(k).

Finally, the EPA disagrees that the Kushner letter could override the applicability of the logic of the *Sierra Club* decision to SIP provisions, even if the Agency had any such intentions. The D.C. Circuit’s evaluation of the issue with respect to the EPA’s own regulations was premised not solely upon the particular requirements of section 112 but also more broadly on the meaning and specific definition of the term “emission limitation” under the CAA. That definition applies to SIP provisions as well as to the EPA’s own regulations. Because the SSM Policy in effect at the time of the *Sierra Club* decision and the time of the Kushner letter already stated that EPA interpreted the CAA to prohibit SIP provisions that exempt emissions during SSM events, there would have

¹⁵⁹ See, e.g., 40 CFR 50.18 (24-hour PM_{2.5} NAAQS met when 98th-percentile monitored value is less than or equal to 35 ug/m³).

¹⁶⁰ See, e.g., *Mich. Dep’t of Env’tl. Quality v. Browner*, 230 F.3d 181 (6th Cir. 2000) (upholding disapproval of SIP provisions because they contained exemptions applicable to SSM events); *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1170 (10th Cir. 2012) (upholding the EPA’s issuance of a SIP call to a state to correct SSM-related deficiencies).

¹⁶¹ See Letter from A. Kushner, Director, Office of Civil Enforcement, EPA/OECA, regarding “*Vacatur of Startup, Shutdown, and Malfunction (SSM) Exemption* (40 CFR 63.6(f)(1) and 63.6(h)(1)),” July 22, 2009, in the rulemaking docket.

¹⁶² See 1999 SSM Guidance at 2, footnote 1.

¹⁵⁷ See CAA section 165(a)(4) and CAA section 173(a)(2).

¹⁵⁸ 753 F.3d 1444, 1452–53 (9th Cir. 1985).

been no need for the Kushner letter to speak to this issue.¹⁶³

e. Comments that the EPA's proposed action on the Petition is incorrect because the Agency's recent MATS rule and Area Source Boiler rule regulations contain exemptions for emissions during SSM events.

Comment: Many commenters asserted that the EPA's February 2013 proposed action to find SIP provisions with exemptions for emissions during SSM events to be substantially inadequate is arbitrary and capricious because recent Agency NESHAP regulations under section 112 contain similar exemptions. Commenters pointed to recently promulgated rules such as the MATS rule¹⁶⁴ and the Area Source Boiler rule¹⁶⁵ as examples of NESHAP regulations that they claim contain similar exemptions. According to commenters, the emission limitations in EPA's own MATS rule "allow excess emissions during SSM events," suggesting that the Agency created exemptions for such emissions.¹⁶⁶ Other commenters similarly argued that the EPA created emission limitations in the Area Source Boiler rule that do not apply "continuously" because the numerical limitations do not apply during startup and shutdown.¹⁶⁷ In short, these commenters argued that the EPA is being arbitrary and capricious because it is holding emission limitations in SIPs to a different and higher standard than emission limitations under its own NSPS and NESHAP regulations.

Response: The EPA disagrees with these commenters. The recent EPA rulemaking efforts that commenters claim are at odds with EPA's SIP call are completely consistent with the Agency's action today. First, as explained in the February 2013 proposal, the EPA has not taken the position that sources must be subject to SIP emission limitations that are set at the same numerical level at all times, or that are expressed as numerical limitations at all times. As the EPA stated, "[i]f justified, the state can develop special emission

limitations or control measures that apply during startup or shutdown if the source cannot meet the otherwise applicable emission limitation in the SIP."¹⁶⁸ The EPA's 1999 SSM Guidance articulated that SIP provisions may include alternative emission limitations applicable during startup and shutdown as part of a continuously applicable emission limitation when properly developed and otherwise consistent with CAA requirements. Moreover, the EPA recommended specific criteria relevant to the creation of such alternative emission limitations. The EPA reiterated that guidance in the February 2013 proposal and is providing a clarified version of the guidance in this final action. This issue is addressed in more detail in section VII.B.2 of this document.

The EPA also disagrees with the assertion that it is holding state SIP provisions to a different standard than its own NSPS and NESHAP regulations. The EPA notes that SIP emission limitations and NSPS and NESHAP emission limitations are, of course, designed for different purposes (e.g., to meet the NAAQS versus to reduce emissions of HAPs) and have to meet some different statutory requirements (e.g., to be RACM versus be standards that are compliant with section 112). However, the EPA understands the commenters' claim to be more specifically that the Agency is applying a different interpretation of the term "emission limitation" and taking a different approach to the treatment of emissions during SSM events in its own regulations, even in recent regulations developed subsequent to the *Sierra Club* decision. The EPA believes that this argument reflects a misunderstanding of both the February 2013 proposal and what the Agency's own new regulations contain.

The MATS rule and the Area Source Boiler rule in fact illustrate how the EPA is creating emission limitations that apply continuously, with numerical limitations or combinations of numerical limitations and other specific technological control requirements or work practice requirements applicable during startup and shutdown, depending upon what is appropriate for the source category and the pollutants at issue. For example, in the MATS rule the EPA has promulgated regulations that impose emission limitations on various subcategories of sources to address HAP emissions. To do so, the EPA developed emission limitations to address the relevant pollutants using a

combination of numerical emission limitations and work practices. The work practice requirements specifically apply to sources during startup and shutdown and are thus components of the continuously applicable emission limitations.¹⁶⁹

Similarly, in the Area Source Boiler rule¹⁷⁰ the EPA has imposed emission limitations on affected sources for PM, mercury and CO. The specific emission limitations that apply vary depending upon the subcategory of boiler. The emission limitations include a combination of numerical emission limitations and work practice requirements that together apply during all modes of source operation. For some subcategories, the standards that apply during startup and shutdown differ from the standards that apply during other periods of operation. This illustrates what the EPA considers the correct approach to creating emission limitations: (i) The emission limitation contains no exemption for emissions during SSM events; (ii) the component of the emission limitation that applies during startup and shutdown is clearly stated and obviously is an emission limitation that applies to the source; (iii) the component of the emission limitation that applies during startup and shutdown meets the applicable stringency level for this type of emission limitation (in this case section 112); and (iv) the emission limitation contains requirements to make it legally and practically enforceable. In short, the Area Source Boiler rule established emission limitations that apply continuously, in accordance with the requirements of the CAA, and consistent with the court's decision in the *Sierra Club* decision. States with SIP provisions that are deficient because they contain automatic or discretionary exemptions for emissions during SSM events may wish to consider the Agency's own approach when they develop SIP revisions in response to this SIP call.

f. Comments that section 110(a)(2)(A) authorizes states to have SIP provisions with exemptions for emissions during SSM events because they are not "emission limitations" and are not

¹⁶³ See, e.g., 1999 SSM Guidance, Attachment at 1 ("any provision that allows for an automatic exemption for excess emissions is prohibited").

¹⁶⁴ The mercury and air toxics standards (MATS) rule for power plants regulates emissions from new and existing coal- and oil-fired electric utility steam generating units (EGUs) under 40 CFR part 63, subpart UUUUU.

¹⁶⁵ The Area Source Boiler rule regulates industrial, commercial and institutional boilers at area sources under 40 CFR part 63, subpart JJJJJJ.

¹⁶⁶ See MATS rule, requirements during startup, shutdown and malfunction, 77 FR 9304 at 9370 (February 16, 2012).

¹⁶⁷ See Area Source Boiler rule, notice of final action on reconsideration, periods of startup and shutdown, 78 FR 7487 at 7496 (February 1, 2013).

¹⁶⁸ See February 2013 proposal, 78 FR 12459 at 12488 (February 22, 2013).

¹⁶⁹ The EPA took final action on a petition for reconsideration concerning the MATS rule and the Utility NSPS that made certain revisions related to the emission limitations and work practices applicable during startup and shutdown. Those revisions did not, however, alter the basic structure of the emission limitations as numerical limitations, or numerical limitations with work practice components during startup and shutdown, depending upon the source category and the pollutants at issue. See 79 FR 68777 (November 19, 2014).

¹⁷⁰ 78 FR 7487 (February 1, 2013).

subject to the requirement to be “continuous.”

Comment: Section 110(a)(2)(A) requires states to have SIPs that include emission limitations for purposes of imposing restrictions on sources of emissions in order to attain and maintain the NAAQS and to meet other CAA requirements. Some commenters noted that, in addition to “emission limitations,” section 110(a)(2)(A) also explicitly refers to “other control measures, means, or techniques.” Unlike the term “emission limitation,” which is defined in section 302(k), commenters contended that these “other control[s]” need not be continuous. Accordingly, these commenters argued that emission controls in SIP provisions that either contain, or are subject to, SSM exemptions can be viewed merely as examples of these “other control measures, means, or techniques” that are validly included in SIPs and that do not have to limit emissions from sources on a continuous basis. Specifically, these commenters asserted that the plain text of section 110(a)(2)(A) does not require SIPs to include only emission limitations but rather requires that SIPs include “emission limitations,” “other control measures, means, or techniques,” or a mixture thereof. Furthermore, according to some of these commenters, an interpretation of section 110(a)(2)(A) that requires all SIP provisions to be “emission limitations,” and thus subject to the requirement that they be continuous, would render the “other control” language in the statute superfluous.

Response: The EPA agrees with the commenters that SIPs do not have to be composed solely of numerical emission limitations, that SIPs can contain other forms of controls in addition to emission limitations and that certain forms of controls other than emission limitations may not need to apply to sources continuously. However, the EPA disagrees with the commenters’ conclusion that the mere act of labeling certain SIP provisions as “control measures, means, or techniques” rather than as “emission limitations” can be a means to circumvent the requirement that emission limitations must regulate sources continuously. To the extent that there is any ambiguity in the requirements of section 110(a)(2), it is not reasonable to interpret the statute to allow the explicit requirement that emission limitations must be continuous to be negated in this fashion.

As an initial matter, the SIP provisions that contain automatic or discretionary exemptions during SSM events at issue in this SIP call excuse compliance with requirements that

presumably were submitted to the EPA as emission limitations, were intended to limit emissions on a continuous basis or were otherwise included to ensure that the SIP contained continuous emission limitations. All of the SIP provisions at issue in this action provide automatic or discretionary exemptions from emission limitations that are formulated as restrictions on the “quantity, rate, or concentration” of emissions from affected sources, just as section 302(k) describes the purpose of an emission limitation. Longstanding EPA regulations applicable to SIPs require that states have a control strategy to provide for attainment and maintenance of the NAAQS.¹⁷¹ The required “control strategy” is defined to be the combination of measures including, but not limited to, “emission limitations,” “emission control measures applicable to in use motor vehicles” and “transportation control measures” listed in section 108(f).¹⁷² The regulatory definition of “emission limitation” applicable to SIP provisions tracks the statutory definition of section 302(k) and notably also does not define the term to allow exemptions for emissions during SSM events.¹⁷³ To the EPA’s knowledge, none of the specific SIP provisions that contain or that are subject to the automatic or discretionary exemptions at issue in this SIP call action were developed by the states with the intention or expectation that absent the exemption they would not apply at all times when the source is in operation; *i.e.*, they impose restrictions on emissions that were intended to apply continuously when the source is emitting pollutants. Logically, the states intended the emission limitations to impose limits that apply continuously at all times when the affected sources are emitting pollutants or else there would have been no impetus to include any exemptions for emissions during SSM events.

However, even if the EPA were to accept the commenters’ premise *arguendo*—that inclusion of an SSM exemption in a given SIP provision turns “emission limitations” into “other control measures, means, or techniques,” this would not be a reasonable reading of the requirements of section 110(a)(2)(A) and section 302(k) for several reasons. To the extent that either section 110(a)(2)(A) or section 302(k) is ambiguous with respect to this point, the EPA does not interpret the CAA to allow exemptions for emissions during SSM events in SIP

provisions in the way advocated by the commenters.

First, section 110(a)(2)(A) explicitly requires that SIPs must contain emission limitations as necessary to meet various CAA requirements. Section 302(k) requires that such emission limitations must limit “the quantity, rate, or concentrations of emissions of air pollutants on a *continuous* basis.” Moreover, section 302(k) reiterates that the term “continuous emission limitation” also specifically includes “any requirement relating to the operation or maintenance of a source to assure *continuous* emission reduction.” Lest there be doubt, section 302(m) provides a definition for the related term “means of emission limitation” as “a system of continuous emissions reduction (including the use of specific technology or fuels with specified pollution characteristics).” In the *Sierra Club v. Johnson* decision, the D.C. Circuit concluded that the statutory definition of “emission limitation” in section 302(k) precludes exemptions for emissions during SSM events because such exemptions are inconsistent with the requirement for continuous controls.¹⁷⁴ Given the emphasis that the statute places on the requirement that sources be subject to continuous emission controls, and given the emphasis that courts have placed on the requirement that sources be subject to continuous controls on their emissions, the EPA believes that it is illogical that the statutory requirement for continuous controls on sources could be subverted merely by the act of labeling a given SIP provision a “control measure” rather than an “emission limitation.” The commenters’ argument that if a given SIP provision contains an SSM exemption, it is merely a “control measure[], mean[], or technique[]” reduces the explicit requirement for continuous controls on emissions to a semantic exercise.

Second, the EPA believes that the commenters’ reading of the statute to permit SIP provisions to contain an SSM exemption by virtue of what it is labeled is incorrect if taken to its logical extreme. The commenters’ interpretation of section 110(a)(2)(A) would theoretically allow a SIP to contain no emission limitations whatsoever, merely a collection of requirements labeled “control measures” so that sources can be excused from having to limit emissions on a continuous basis. This result is contrary to judicially approved EPA

¹⁷¹ See, e.g., 40 CFR 51.100.

¹⁷² See, e.g., 40 CFR 51.100(n).

¹⁷³ See 40 CFR 51.100(z).

¹⁷⁴ See *Sierra Club v. Johnson*, 551 F.3d 1019, 1027–28 (citing CAA sections 112(d)(2), 302(k)).

interpretations of prior versions of the CAA as requiring all SIPs to include continuously applicable emission limitations and only requiring “other” additional controls “as may be necessary” to satisfy the NAAQS.¹⁷⁵ Additionally, this result is contrary to legislative history of the 1990 Clean Air Act Amendments, which indicates that in slightly revising this portion of section 110(a)(2)(A), Congress intended to merely “combine and streamline” previously existing SIP requirements into a single provision, not to vitiate statutory requirements concerning emission limitations.¹⁷⁶

Finally, the EPA’s interpretation of the requirements of section 110(a)(2) does not render the “other control” language in the statute superfluous as claimed by the commenters. In addition to emission limitations, the EPA interprets that section to allow other “control measures, means or techniques” as contemplated by the statute. For example, the EPA’s regulations implementing SIP requirements explicitly enumerate nine separate types of measures that states may include in SIPs.¹⁷⁷ This list of nine different forms of potential SIP provisions to reduce emissions varies broadly, from measures that “impose emission charges or taxes or other economic incentives or disincentives” to “changes in schedules or methods of operation of commercial or industrial facilities” to “any transportation control measure including those transportation measures listed in section 108(f).” The EPA made clear that this list is not all-inclusive. In addition, the EPA has, when appropriate, approved SIP provisions that impose various forms of emissions controls that are not, by definition, emission limitations.¹⁷⁸

¹⁷⁵ See, e.g., *Kennecott Copper Corp. v. Train*, 526 F.2d 1149, 1153 (9th Cir. 1975). The current version of section 110(a)(2)(A) is admittedly worded differently than the 1970 version. However, for purposes of these commenters the critical distinction is not that Congress changed the location of the word “necessary” but rather that Congress changed the subject that “necessary” modifies—and thus the entire scope of 110(a)(2)(A)—from satisfying the NAAQS to meeting “applicable requirements” of the entire CAA.

¹⁷⁶ See, e.g., S. Rept. 101–228, at 20 (noting that the structure of section 110(a)(2)(A) as it appears today reflects congressional intent to “combine and streamline” previously existing SIP requirements into a single provision).

¹⁷⁷ See 40 CFR 51.100(n).

¹⁷⁸ See, e.g., 71 FR 7683 (February 14, 2006) (approving as BACM the use of “conservation management practices” to control fugitive dust emissions from agricultural sources, including techniques that limit emissions only during certain activities or times); 68 FR 56181 (September 30, 2003) (approving as BACM an “episodic wood burning curtailment” program that restricts the use

Thus, the commenters are in error in their belief that the EPA’s reading of the statute to require that SIPs contain emission limitations that apply continuously ignores the other forms of potential measures that section 110(a)(2)(A) authorizes.

Section 110(a)(2) requires SIPs to include enforceable emission limitations and other controls “as necessary or appropriate to meet the applicable requirements” of the CAA. Regardless of whether commenters’ semantic labeling arguments are valid in the abstract, they are not correct with respect to the fundamental CAA requirements for SIPs relating to continuous emission limitations. The automatic or discretionary exemptions for emissions during SSM events in the SIP provisions at issue in this SIP call authorize exemptions from statutorily required emission limitations. To the extent that such a SIP provision would functionally or legally exempt sources from regulation during SSM events, the SIP provision fails to be a continuously applicable enforceable emission limitation as required by the CAA. The fact that a SIP may also contain “other control[s]” as advocated by the commenters does not negate the statutory requirement that emission limitations must apply continuously.

g. Comments that the definition of “emission limitation” in section 302(k) does not require that all forms of emission limitations must apply continuously.

Comment: Section 110(a)(2)(A) requires that SIPs must contain emission limitations, and section 302(k) defines the term “emission limitation” to mean a limit on emissions from a source that applies continuously. A number of commenters disagreed that section 302(k) requires that *all* “emission limitations” have to be “continuous.” The commenters argued that section 302(k) establishes two distinct categories of emission limitations: (1) Requirements that “limit[] the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction,” and (2) requirements constituting a “design, equipment, work practice or operational standard promulgated under this chapter.” These commenters claimed that only the first purported category is emission limitations that must be continuous and that the second purported category is

of wood-burning stoves based on predicted particulate matter concentrations).

emission limitations that do not need to apply continuously. Accordingly, these commenters asserted that SIP provisions that are rendered noncontinuous by inclusion of exemptions for emissions during SSM events are still legally valid “emission limitations” because they fall within the second category. Other commenters separately contended that under section 302(k), SIP provisions imposing requirements “relating to the operation or maintenance of sources” do not need to be continuous, unlike those imposing requirements that limit “the quantity, rate, or concentration of emissions or air pollutants.”

Response: The EPA disagrees with the commenters’ view that section 302(k) establishes two discrete categories of emission limitations, only one of which must reduce continuous emissions on a continuous basis. The EPA acknowledges that the text of section 302(k) is ambiguous with respect to this point, but the Agency does not agree with the commenters’ interpretation of the statute. The statutory text of section 302(k) begins with a catch-all definition of the term “emission limitation” as “a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis”¹⁷⁹ The EPA believes that the rest of the first sentence in section 302(k), beginning with the word “including,” is best read as a list of examples of types of measures that satisfy this general definition. In other words, the remainder of the sentence provide examples of types of SIP provisions that could be used to limit emissions on a continuous basis, including any design standard, equipment standard, work practice standard or operational standard promulgated under the CAA, as well as “any requirement relating to the operation or maintenance of a source to assure continuous emission reduction.” However, each of these forms of emission limitation would be required to apply at all times, or be required to apply in combination at all times, in order to meet the fundamental requirement that the emission limitation serves to limit emissions from the affected sources continuously. Thus, the EPA interprets the term “emission limitation” to permit emission limitations that are composed of a combination of numerical limitations, technological control requirements and/or work practice requirements, so long as they are components of an emission limitation that applies continuously. This interpretation accords with

¹⁷⁹ CAA section 302(k).

statutory context,¹⁸⁰ the legislative history regarding the definition of “emission limitation,”¹⁸¹ judicial interpretations of section 302(k)¹⁸² and the EPA’s definition of “emission limitation” in its SIP regulations.¹⁸³ Accordingly, the EPA’s interpretation of section 302(k) is reasonable.

The EPA also disagrees with the commenters who contended that the third clause of section 302(k) authorizes exemptions for emissions during SSM events in emission limitations. The commenters argued that requirements “relating to the operation or maintenance of sources” do not have to be continuous. The EPA believes that this reading of the statute is simply in error, because section 302(k) on its face provides that these requirements must “assure continuous emission reduction.”¹⁸⁴

h. Comments that exemptions or affirmative defenses are not only not prohibited, but are actually required by the CAA because they are necessary to make an emission limitation “reasonable” or “achievable” for sources that cannot comply during SSM events.

Comment: Commenters argued that some emission limitations currently in SIPs are only “reasonable” or technologically “achievable” because they include exemptions or affirmative defenses applicable to emissions during SSM events. According to these commenters, without exemptions or affirmative defenses to excuse sources from compliance with the limits during SSM events, these emission limitations would not be reasonable or achievable as required by law. To support these contentions, commenters cited case law from the early 1970s to argue that the CAA requires emission limitations in SIP provisions to include exemptions or affirmative defenses for SSM events.

Response: The EPA agrees that SIP provisions should impose emission

limitations that are reasonable and achievable by sources, so long as they are also consistent with the applicable legal requirements for that type of provision. The EPA acknowledges that in some cases, emission limitations may need to include alternative numerical limitations, technological controls or work practices during some modes of operation, such as startup and shutdown. As explained in detail in the February 2013 proposal and in this action, the EPA interprets the CAA to allow SIP provisions to include different numerical limitations or other control requirements as components of a continuously applicable emission limitation, so long as the SIP provision meets all other applicable requirements. However, the EPA disagrees with these commenters’ conclusions that the need for “reasonable” and “achievable” emission limitations provides a legal justification for exemptions or affirmative defenses for excess emissions during SSM events.

First, many of the commenters erroneously presupposed that an emission limitation must continuously control emissions at the *same* rate, quantity, or concentration at all times. For sources or source categories that cannot comply with otherwise applicable emission limitations during certain modes of operation, such as startup and shutdown, the state may elect to develop alternative emission limitations applicable during those events as a component of the SIP provision. The EPA has provided recommended criteria for states to use in developing appropriate alternative emission limitations. Appropriate alternative emission limitations would ensure the existence of requirements that limit the quantity, rate or concentration of pollutants from the affected sources on a continuous basis, while also providing differing limitations tailored specifically to limit emissions during specified modes of source operation. As long as those differing limitations are components of a continuously applicable emission limitation that meets other applicable substantive requirements (e.g., is RACT for stationary sources in nonattainment areas) and that is legally and practically enforceable, then such alternative emission limitations are valid. States are not required to create such alternative emission limitations, but to do so is an acceptable approach.

Second, these commenters pointed to no provision of the CAA requiring or allowing exemptions or affirmative defenses for SSM events. Instead, they contend that D.C. Circuit opinions in *Portland Cement Association v.*

*Ruckelshaus*¹⁸⁵ and *Essex Chemical Corp. v. Ruckelshaus*¹⁸⁶ require SIPs to include exemptions for emissions during SSM events. As an initial matter, these cases predate amendments to the CAA that expressly defined “emission limitation” as a requirement that continuously limits emissions. Furthermore, even accepting these commenters’ interpretations of those cases (which as explained below, EPA does not), any purported holdings to that effect have been further eroded by more recent case law from the D.C. Circuit and other courts. Most importantly, the *Sierra Club v. Johnson* decision has reiterated that emission limitations must apply continuously in order to comply with section 302(k), and the logic of *NRDC v. EPA* decision indicates that affirmative defense provisions are not appropriate because they purport to alter the jurisdiction of the courts.¹⁸⁷

In addition to these more recent legal developments, however, the two earlier D.C. Circuit cases highlighted by commenters simply did not hold what commenters claim that they held. With respect to the *Portland Cement Association* decision, commenters selectively quoted from the case for the proposition that the D.C. Circuit had “acknowledged” that malfunctions are an inescapable aspect of industrial life and that EPA must make allowances for malfunctions when promulgating standards. The full sentence from the opinion, however, makes clear that the D.C. Circuit was merely summarizing the “concern of manufacturers,” not stating the court’s own position.¹⁸⁸ To the contrary, the EPA believes that *Portland Cement* stands for the broader proposition that a system incorporating flexibility is reasonable and consistent with the overall intent of the CAA, and the EPA merely “may” take such flexibility into account.¹⁸⁹ As relevant to this action, the flexibility provided states to ensure continuous controls by developing alternative emission limitations is fully consistent with that view of the CAA. SIP provisions that include alternative emission limitations provide the sort of “limited safety valve” contemplated by the courts that can serve to make SIP emission limitations more achievable without authorizing complete exemptions for

¹⁸⁰ See, e.g., CAA section 302(m) (defining “means of emission limitation” as a “system of continuous emission reduction”).

¹⁸¹ See e.g., H.R. Rep. 95–294, at 92 (1977) (explaining that the definition of “emission limitation,” like the definition of “standard of performance,” was intended to “[ma]ke clear that constant or continuous means of reducing emissions must be used to meet th[ose] requirements”); S. Rep. 95–127, at 94 (explaining that the definition of “emission limitation” was intended to “clarify the committee’s view that the only acceptable basic strategy is one based on continuous emission control,” rather than “unacceptable” “[i]ntermittent controls or dispersion techniques . . .”).

¹⁸² See, e.g., *Sierra Club v. Johnson*, 551 F.3d 1019, 1027–28 (D.C. Cir. 2008).

¹⁸³ See 40 CFR 51.100(n) (defining “emission limitation” as a requirement that limits emissions on a continuous basis).

¹⁸⁴ See CAA section 302(k).

¹⁸⁵ 486 F.2d 375 (D.C. Cir. 1973).

¹⁸⁶ 486 F.2d 427 (D.C. Cir. 1973).

¹⁸⁷ See *Sierra Club v. Johnson*, 551 F.3d 1019 (D.C. Cir. 2008); *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014).

¹⁸⁸ *Portland Cement Ass’n*, 486 F.2d at 398.

¹⁸⁹ *Id.* at 399.

emissions during SSM events in violation of statutory requirements.¹⁹⁰

Commenters also cited *Essex Chemical Corp.* for the proposition that SSM exemptions are necessary to ensure that standards are reasonable. This court decision, however, also did not hold that emission limitations must provide exemptions or affirmative defenses for excess emissions during SSM events. To the contrary, the petitioners' complaint in *Essex Chemical Corp.* was that EPA had "fail[ed] to provide that *lesser standards*, or no standards at all, should apply when the stationary source is experiencing startup, shutdown, or mechanical malfunctions through no fault of the manufacturer."¹⁹¹ It was these variant provisions that, in the court's opinion, "appear[ed] necessary" to ensure that the standards before it were reasonable.¹⁹² Again, the EPA believes that emission limitations in SIP provisions may include alternative emission limitations that can provide those "lesser standards" that apply during startup and shutdown events consistent with the court's opinion but also ensure that emissions are continuously limited as required by the 1977 CAA Amendments defining "emission limitation."

As a legal matter, the court in *Essex Chemical* was reviewing a specific "never to be exceeded" standard for new and modified sources and addressed only whether the EPA's failure to provide some form of flexibility during SSM events was supported by the record;¹⁹³ the court was not interpreting whether the CAA inherently required such exemptions (rather than alternative limits) regardless of future developments in technology. Accordingly, the D.C. Circuit ultimately remanded the challenged standards to the EPA for reconsideration, not because SSM exemptions are mandatory but rather because of comments made by the EPA Acting Administrator and deficiencies identified in the administrative record with respect to "never to be exceeded" limits for those specific standards. In short, the *Essex Chemical* court did not hold that the CAA "requires" emission limitations to include exemptions for emissions during SSM events as suggested by commenters.

Furthermore, the EPA notes that the most salient legal holding of *Essex Chemical* with respect to achievability

is not what the court said about the circumstances peculiar to the EPA's development of those specific standards but rather is the court's holding that standards of performance can be "achievable" even if there is no facility "currently in operation which can at all times and under all circumstances meet the standards" ¹⁹⁴ Thus, the decision supports the EPA's conclusion that the CAA requires appropriately drawn emission limitations that apply on a continuous basis. As explained in section IV of this document, SIP provisions also cannot include the affirmative defenses advocated by commenters, because those are inconsistent with CAA provisions concerning the jurisdiction of the courts.

i. Comments that the EPA is requiring that all SIP emission limitations must be "numerical" at all times and set at the same numerical level at all times.

Comment: Many commenters on the February 2013 proposal evidently believed that the EPA was proposing an interpretation of the term "emission limitation" under section 302(k) that would require all SIP provisions to impose numerical emission limits, and that such limits must be set at the same numerical level at all times. These commenters argued that numerical emission limitations are not required by the text of section 302(k). For example, commenters pointed to section 302(k)'s use of "work practice or operational standard[s]" as evidence that an emission limitation may be composed of more than merely numerical criteria. These commenters also reiterated their view that section 302(k) allows for or requires alternative limits during periods of SSM, including non-numerical alternative limits such as work practice or operational standards.

Response: At the outset, the EPA notes that it did not intend to imply that all emission limitations in SIP provisions must be expressed numerically, or that they must be set at the same numerical level for all modes of source operation. To the contrary, the EPA intended to indicate that states may elect to create emission limitations that include alternative emission limitations that apply during certain modes of source operation, such as startup and shutdown. This was the reason for inclusion of the recommended criteria for states to develop appropriate alternative emission limitations applicable during startup and shutdown in section VII.A of the February 2013 proposal. The EPA has provided similar

recommended criteria in this final action (see section VII.B.2 of this document). The EPA agrees that neither section 110(a)(2)(A) nor section 302(k) inherently requires that SIP emission limitations must be expressed numerically. Furthermore, section 302(k) does not itself require imposition of numerical limitations or foreclose the use of higher numerical levels, specific technological controls or work practices during certain modes of operation.

Although some CAA programs may require or impose a presumption that emission limitations be expressed numerically, the text of section 110(a)(2)(A) and section 302(k) does not expressly state a preference for emission limitations that are in all cases numerical in form.¹⁹⁵ Rather, as many commenters pointed out, the critical aspect of an emission limitation in general is that it be a "requirement . . . which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis" ¹⁹⁶ Accordingly, although other regulatory requirements may also apply, a non-numerical design standard, equipment standard, work practice standard or operational standard could theoretically meet the definition of "emission limitation" for purposes of section 302(k) if it continuously limited the quantity, rate or concentration of air pollutants.¹⁹⁷ By contrast, if a non-numerical requirement does not itself (or in combination with other components of the emission limitation) limit the quantity, rate or concentration of air pollutants on a continuous basis, then the non-numerical standard (or overarching requirement) does not meet the statutory definition of an emission limitation under section 302(k).

Finally, the EPA does not believe that section 110(a)(2)(A) or section 302(k) mandates that an emission limitation be composed of a single, uniformly applicable numerical emission limitation. As the EPA stated in the February 2013 proposal, "[i]f sources in fact cannot meet the otherwise applicable emission limitations during planned events such as startup and shutdown, then an air agency can develop specific alternative

¹⁹⁰ *Id.* (citing *International Harvester*, 478 F.2d 615, 641 (D.C. Cir. 1973)).

¹⁹¹ *Essex Chem. Corp v. Ruckelshaus*, 486 F.2d at 433 (emphasis added).

¹⁹² *See id.*

¹⁹³ *Id.* ("the record does not support the 'never to be exceeded' standard currently in force").

¹⁹⁴ *Essex Chem. Corp v. Ruckelshaus*, 486 F.2d 427, 433 (D.C. Cir. 1973).

¹⁹⁵ Numerical requirements or preferences for some emission limitations flow from substantive requirements of specific CAA programs, which are incorporated into section 110(a)(2)(A) by the requirement that SIPs "include enforceable emission limitations . . . as may be necessary or appropriate to meet the applicable requirements of" the CAA. CAA section 110(a)(2)(A).

¹⁹⁶ *See, e.g., id.*, section 112(h)(4).

¹⁹⁷ For example, emission limitations must meet the requirements of various substantive provisions of the CAA and must be legally and practically enforceable.

requirements that apply during such periods, so long as they meet other applicable CAA requirements.”¹⁹⁸ As explained in the EPA’s response in section VII.A.3 of this document regarding the meaning of the statutory term “continuous,” the critical aspect for purposes of section 302(k) is not whether the emission limitation is expressed as a static versus variable numerical limitation but rather whether as a whole it constitutes a requirement that limits emissions on a continuous basis. Furthermore, any emission limitation must also meet all other applicable CAA requirements concerning stringency and enforceability.

j. Comments that an emission limitation can be “continuous” even if it has different numerical limitations applicable during some modes of source operation or has a combination of numerical emission limitations and specific control technologies or work practices applicable during other modes of operation.

Comment: Several commenters argued that an emission limitation can be “continuous” under section 302(k) even if it provides different substantive requirements applicable during SSM events. One commenter illustrated this position with a hypothetical:

[W]hile Section 302 requires “emission limits” to be “continuous,” it does not specify . . . that the same “emission limit” must apply at all times. That is, if a state chooses to require sources to comply with a 40% opacity limit during steady-state operations, the Act does not then require the state to apply that 40% limit at all times, including startup, shutdown and malfunction events.

Commenters pointed to a number of sources as justification for this position, including the text of section 302(k), relevant case law, legislative history of the 1977 CAA Amendments, prior EPA interpretations, and practical concerns.

Response: The EPA agrees with these commenters’ conclusion that an “emission limitation” under section 302(k) does not need to be expressed as a static, inflexible limit on emissions. Rather, a SIP provision qualifying as an “emission limitation” consistent with section 302(k) must merely limit “the quantity, rate, or concentration” of emissions, and must do so “on a continuous basis.” The critical aspect for purposes of section 302(k) is that the SIP provision impose limits on emissions on a continuous basis, regardless of whether the emission limitation as a whole is expressed numerically or as a combination of

numerical limitations, specific control technology requirements and/or work practice requirements, and regardless of whether the emission limitation is static or variable. For example, so long as the SIP provision meets other applicable requirements, it may impose different numerical limitations for startup and shutdown.

The EPA also agrees that the text of section 302(k) does not require states to impose emission limitations that include a static, inflexible standard. Rather, the term “emission limitation” is merely defined as a “requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis. . . .” The continuous limits imposed by emission limitations are a fundamental distinction between emission limitations and the other control measures, means or techniques that may also limit emissions.¹⁹⁹ The text of section 302(k), however, does not distinguish between a variable or static “requirement” that continuously limits emissions—all that is required is that the emissions are limited on a continuous basis.

This interpretation is consistent with prior EPA interpretations of section 302(k), as well as relevant case law. In *Kamp v. Hernandez*, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) upheld the EPA’s interpretation of “continuous” in section 302(k), as requiring that “some limitation on emissions, although not necessarily the same limitation, is always imposed” on the source.²⁰⁰ More recently, the D.C. Circuit favorably cited *Kamp* when holding that section 302(k) requires emission standards to limit emissions on a continuous basis and precludes exemptions for emissions during SSM events.²⁰¹

Legislative history confirms that Congress was primarily concerned that there be constant or continuous means of reducing emissions—not that the nature of those controls could not be different during different modes of operation.²⁰² For example, legislative

history from the 1977 CAA Amendments states that Congress added section 302(k)’s definition of “emission limitation” to:

. . . ma[ke] clear that constant or continuous means of reducing emissions must be used to meet these requirements. By the same token, intermittent or supplemental controls or other temporary, periodic, or limited systems of control would not be permitted as a final means of compliance.²⁰³

Although this legislative history demonstrates congressional intent that any “emission limitation” would require limits on emissions at all times, this history does not necessarily indicate that the emission limitation must consist of a single static numerical limitation. Accordingly, this legislative history is consistent with the EPA’s view that section 302(k) requires continuous limits on emissions and that variable (albeit still continuous) limits on emissions can qualify as an emission limitation for purposes of section 302(k).

Finally, although the EPA agrees with these commenters’ conclusion, the EPA does not agree with these commenters’ view that practical concerns *require* states in all cases to establish alternative emission limitations for modes of operation such as startup and shutdown within any continuously applicable emission limitation. Principles of cooperative federalism incorporated into section 110 allow states great leeway in developing SIP emission limitations, provided those limitations comply with applicable legal requirements.²⁰⁴ States are thus not required to establish alternative emission limitations for any sources during startup and shutdown, but they may elect to do so. Neither the definition of “emission limitation” in section 302(k) nor the requirements of section 110(a)(2)(A) explicitly require states to develop emission limitations that include alternative emission limitations for periods of SSM, just as they do not explicitly preclude states from doing so.

requirements”); S. Rep. 95–127, at 94 (explaining that the definition of “emission limitation” was intended to “clarify the committee’s view that the only acceptable basic strategy is one based on continuous emission control,” rather than “unacceptable” “[i]ntermittent controls or dispersion techniques . . .”).

²⁰³ H.R. Rep. 95–294, at 92 (1977), as reprinted in 1977 U.S.C.C.A.N. 1077, 1170; *Sierra Club v. Johnson*, 551 F.3d at 1027 (quoting the same); *Kamp v. Hernandez*, 752 F.2d at 1453–54 (quoting the same).

²⁰⁴ As discussed above and elsewhere in this document, those requirements include satisfying the definition of “emission limitation” under CAA section 302(k), and being “enforceable” in accordance with section 110(a)(2)(A).

¹⁹⁹ See CAA section 110(a)(2)(A).

²⁰⁰ *Kamp v. Hernandez*, 752 F.2d 1444, 1452–53 (9th Cir. 1985) (citing *Chevron, U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984)) (upholding EPA’s “broader definition of ‘continuous’” under section 302(k)).

²⁰¹ *Sierra Club v. Johnson*, 551 F.3d 1019, 1027–28 (D.C. Cir. 2008) (quoting *Kamp*, 752 F.2d at 1452).

²⁰² See, e.g., H.R. Rep. 95–294, at 92 (1977) (explaining that the definition of “emission limitation,” like the definition of “standard of performance,” was intended to “ma[ke] clear that constant or continuous means of reducing emissions must be used to meet th[ose]

¹⁹⁸ 78 FR 12459 at 12471.

k. Comments that an emission limitation can be “continuous” even if it includes periods of exemptions from the emission limitation.

Comment: Commenters asserted that a requirement limiting emissions can be “continuous” even if a SIP provision includes periods of exemption from that limit. For example, some commenters contended that SSM exemptions only excuse compliance with emission limitations for a “short duration,” or “brief” period of time, and that these purportedly ephemeral interruptions should not be viewed as rendering the requirement noncontinuous. Other commenters contended that the EPA misinterpreted portions of the D.C. Circuit’s opinion in *Sierra Club v. Johnson*,²⁰⁵ interpreting section 302(k). Specifically, this group of commenters claimed that because the holding of that case was based on a combined reading of sections 112 and 302(k), the court’s interpretation of the word “continuous” in section 302(k) does not extend outside the context of section 112. This included one commenter who suggested, in a one-sentence footnote, that “[i]n the cooperative-federalism context”—presumably of section 110—“the standard of flexibility that Congress gave the States with respect to selecting the elements of their SIPs is not necessarily the same standard Congress set to govern EPA’s responsibility to establish the NAAQS or section 112 standards.” Still other commenters further argued that the EPA mischaracterized legislative history discussing “continuous” in section 302(k). According to these commenters, the context of legislative history on section 302(k) indicates that Congress did not intend for the word “continuous” to be given its plain meaning but rather intended to use “continuous” in relation only to specific types of intermittent controls.

Response: The EPA disagrees with these commenters. First, commenters’ interpretation would contravene the plain meaning of “continuous.” Section 302(k) defines “emission limitation” as a requirement that “limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis. . . .”²⁰⁶ Although the word “continuous” is not separately defined in the Act, its plain and unambiguous meaning is “uninterrupted.”²⁰⁷ Accordingly, to the extent that a SIP provision provides for any period of

time when a source is *not* subject to any requirement that limits emissions, the requirements limiting the source’s emissions by definition cannot do so “on a continuous basis.” Such a source would not be subject to an “emission limitation,” as that term is defined under section 302(k). The same principle applies even for “brief” exemptions from limits on emissions, because such exemptions nevertheless render the emission limitation noncontinuous.

Second, the EPA disagrees with commenters’ interpretation of the D.C. Circuit’s opinion in *Sierra Club*. While the court’s ultimate decision was based on “sections 112 and 302(k) . . . read together,”²⁰⁸ the court’s analysis of what makes a standard “continuous” was based on section 302(k) alone.²⁰⁹ Although the precise components of an emission limitation or standard may expand depending on which other provisions of the CAA are applicable, the bedrock definition for what it means to be an “emission limitation” under section 302(k) does not. Congress appeared to share the EPA’s view that section 302(k) provides a bedrock definition of “emission limitation” applicable “to all emission limitations under the act, not just to limitations under sections 110, 111, or 112 of the act.”²¹⁰ Accordingly, the D.C. Circuit’s interpretation of section 302(k) applies equally in the context of SIP provisions developed by states as in the context of MACT standards developed by the EPA, even if additional requirements may be different.²¹¹

Finally, the EPA rejects commenters’ contention that section 302(k)’s legislative history indicates that use of the word “continuous” in the definition of “emission limitation” was merely intended to prevent the use of

intermittent controls or, even more narrowly, only dispersion techniques. While legislative history of the 1977 Amendments discusses at length the concerns associated with these types of controls, section 302(k) was not intended to merely prevent the narrow problem of intermittent controls. To the contrary, the House Report states that under section 302(k)’s definition of emission limitation, “intermittent or supplemental controls *or other temporary, periodic, or limited systems of control* would not be permitted as a final means of compliance.”²¹²

In explaining congressional intent behind adopting a statutory definition of “emission limitation,” the House Report articulated a rationale broader than would apply if Congress had merely intended to prohibit the tall stacks and dispersion techniques that commenters claim were targeted: “Each source’s prescribed emission limitation is the fundamental tool for assuring that ambient standards are attained and maintained. Without an enforceable emission limitation which will be *complied with at all times*, there can be no assurance that ambient standards will be attained and maintained.”²¹³ By contrast, Congress criticized limitations structured in ways that could not “provide assurances that the emission limitation will be met at all times,” or that would sometimes allow the “emission limitation [to] be exceeded, perhaps by a wide margin”²¹⁴ Such flaws “would defeat the remedy provision provided by section 304 of the act which allows citizens to assure compliance with emission limitations and other requirements of the act.”²¹⁵ Exemptions for emissions during SSM events have the same effects.²¹⁶

In adopting section 302(k)’s definition of “emission limitation,” Congress did not merely intend to prohibit the use of intermittent controls as final compliance strategies—much less intermittent controls as narrowly defined by commenters to mean only dispersion techniques and certain “tall stacks.” Rather, Congress intended to eliminate the fundamental problems

²¹² H.R. 95–294, at 92 (emphasis added).

²¹³ *Id.* (emphasis added). The Senate Report expressed a similar sentiment. See S. Rep. No. 95–127, at 94–95 (1977) (explaining that the definition of “emission limitation” was intended “to clarify the committee’s view that the only acceptable *basic strategy* [for emission limitations in SIPs] is one based on continuous emission control”).

²¹⁴ See H.R. 95–294, at 92.

²¹⁵ See *id.*

²¹⁶ See, e.g., *NRDC v. EPA*, 749 F.3d 1055, 1064 (D.C. Cir. 2014) (holding that an affirmative defense for excess emissions during malfunctions contradicts the requirement that an emission limitation be “continuous”).

²⁰⁵ 551 F.3d 1019 (D.C. Cir. 2008).

²⁰⁶ CAA section 302(k).

²⁰⁷ See *Webster’s Third New International Dictionary* 493–94 (Phillip Babcock Gove ed., Merriam-Webster 1993) (defining “continuous”).

²⁰⁸ *Sierra Club*, 551 F.3d at 1027.

²⁰⁹ See *id.* (quoting H.R. Rep. 95–294, at 92 (1977), as reprinted in 1977 U.S.C.A.N. 1077, 1170); see also *Kamp v. Hernandez*, 752 F.2d at 1453–54 (quoting the same and coming to the same conclusion).

²¹⁰ See H.R. 95–294, at 92 (1977); see also section 302 (stating that the definitions appearing therein apply “[w]hen used in this chapter”).

²¹¹ The fact that CAA section 110 incorporates principles of cooperative federalism does not inevitably mean that the definition of “emission limitation” under section 302(k) changes depending on whether it is applied in the context of section 110 versus section 112. Accordingly, in the context of judicial interpretation of a statute, the U.S. Supreme Court has held that judges cannot “give the same statutory text different meanings in different cases.” *Clark v. Martinez*, 543 U.S. 371, 386 (2005). The EPA believes that the text and legislative history of section 302(k) evince congressional intent to consistently apply the definition of “emission limitation” under section 302(k) rather than to develop an inconsistent interpretation peculiar to section 110.

that were illustrated by use of those controls.²¹⁷ SSM exemptions and affirmative defenses raise many of the same problems, and addressing those problems through this action fully accords with section 302(k)'s legislative history.

1. Comments that the “as may be necessary or appropriate” language in section 110(a)(2)(A) *per se* authorizes states to create exemptions in SIP emission limitations.

Comment: Some commenters contended that section 110(a)(2)(A) merely requires states to include emission limitations and other control measures in their SIPs “as may be necessary or appropriate.” These commenters interpreted that language as a broad delegation of discretion to states to develop SIP provisions that are necessary or appropriate to satisfy the particular needs of a state, as judged solely by that state. Some of the commenters argued that the EPA’s interpretation of “as may be necessary or appropriate” would, in all circumstances, improperly substitute the EPA’s judgment for that of the state concerning what emission limitations are necessary or appropriate. One commenter highlighted the EPA’s proposal to deny the Petition with respect to a specific SIP provision of the South Carolina SIP that entirely exempts a source category from regulation.²¹⁸ According to this commenter, if the “as may be necessary or appropriate” language grants states the authority to exempt a source category from regulation entirely, then it must allow states to exempt sources selectively during SSM events.

Some commenters further argued that regardless of what the terms “emission limitations” or “other control measures, means, or techniques” mean, section 110(a)(2)(A) only requires states to include such emission controls in SIPs “as may be necessary or appropriate” to meet the NAAQS, or some requirement germane to attainment of the NAAQS, such as various technology-based standards or general principles of enforceability. Commenters also disagreed with the EPA’s purported interpretation that the statutory phrase “as may be necessary” only qualifies what “other control[s]” are required, rather than also qualifying what

emission limitations are required. According to these commenters, that interpretation is a vestige of the 1970 CAA and was foreclosed by textual changes in the 1977 CAA Amendments or, alternatively, the 1990 CAA Amendments.

Response: The EPA disagrees with the commenters’ interpretation of the “as may be necessary or appropriate” language of section 110(a)(2)(A). As an initial matter, those commenters contending that section 110(a)(2)(A) is only concerned with what is “necessary or appropriate” to attain and maintain the NAAQS (or some requirement germane to the NAAQS) ignore the plain language of section 110(a)(2)(A). While the predecessor provisions to section 110(a)(2)(A) prior to the 1990 CAA Amendments did indeed speak in terms of emissions controls “necessary to insure attainment and maintenance of [the NAAQS],”²¹⁹ the statute in effect today requires controls “necessary or appropriate to meet the applicable requirements of this chapter,”²²⁰—i.e., to meet the requirements of the CAA as a whole. Thus, at a minimum, the EPA interprets the phrase “as may be necessary or appropriate” to include what is necessary or appropriate to meet legal requirements of the CAA, including the requirement that emission limitations must apply on a continuous basis.

Regardless of whether all SIPs must always contain emission limitations, the text of the CAA is clear that the EPA is at a minimum tasked with determining whether SIPs include all emission limitations that are “necessary” (i.e., required) “to meet the applicable requirements of” that CAA. Broadly speaking, this requires that the EPA determine whether the SIP meets the basic legal requirements applicable to all SIPs (e.g., the requirements of section 110(a)(2)(A) through (M)), whether the SIP contains emission limitations necessary to meet substantive requirements of the Act (e.g., RACT-level controls in nonattainment areas) and whether all emission limitations and other controls, as well as the schedules and timetables for compliance, are legally and functionally enforceable.

In every state subject to this SIP call, the EPA has previously concluded in approving the existing SIP provisions that the emission limitations are necessary to comply with legal requirements of the CAA. The states in

question would not have developed and submitted them, and the EPA would not have approved them, unless the state and the EPA considered those emission limitations fulfilled a CAA requirement in the first instance. However, the automatic and discretionary exemptions for emissions during SSM events in the SIP provisions at issue in this action render those necessary emission limitations noncontinuous, and thus not meeting the statutory definition of “emission limitations” as defined in section 302(k). Accordingly, regardless of whether all SIPs must always include emission limitations, these specific SIP provisions fail to meet a fundamental requirement of the CAA because they do not impose the continuous emission limitations required by the Act.

The EPA also disagrees with the argument raised by commenters that its denial of the Petition with respect to a South Carolina SIP provision supports the validity of SSM exemptions in SIP emission limitations.²²¹ In that situation, the state determined that regulating the source category at issue was not a necessary or appropriate means of meeting the requirements of the CAA. The EPA’s approval of that provision indicates that the Agency agreed with that determination. This factual scenario is not the same as one in which the state has determined that regulation of the source category *is* necessary or appropriate to meet CAA requirements. Once the determination is made that the source category must or should be regulated, then the SIP provisions developed by the state to regulate the source must meet applicable requirements. These include that any limits on emissions must be consistent with CAA requirements, including the requirement that any emission limitation limit emissions on a continuous basis. The EPA agrees that a state can validly determine that regulation of a source category is not necessary, so long as this is consistent with CAA requirements. This is not the same as allowing impermissible exemptions for emissions from a source category that must be regulated.

Finally, the EPA does not agree with commenters’ allegations that that the EPA’s interpretation of section 110(a)(2)(A) eliminates the states’ discretion to take local concerns into account when developing their SIP provisions. Rather, for reasons discussed in more detail in the EPA’s response in section V.D.2 of this document regarding cooperative federalism, the EPA’s interpretation is

²¹⁷ See, e.g., H.R. 95–294, at 94 (noting that the provision was intended to overcome “objections” to such measures, not merely the measures themselves); *id.* at 92 (indicating that the problems arise from “temporary, periodic, or limited systems of control” generally, not merely dispersion techniques or tall stacks).

²¹⁸ See 78 FR 12459 at 12512 (citing S.C. Code Ann. Regs. 61–62.5 St 5.2(I)(b)(14)).

²¹⁹ See, e.g., Clean Air Act of 1970, Public Law 91–604, section 4(a), 84 Stat. 1676, 1680 (December 31, 1970).

²²⁰ Section 110(a)(2)(A).

²²¹ See 78 FR 12459 at 12512 (citing S.C. Code Ann. Regs. 61–62.5 St 5.2(I)(b)(14)).

fully consistent with the principles of cooperative federalism codified in the CAA. As courts have concluded, although Congress provided states with “considerable latitude in fashioning SIPs, the CAA ‘nonetheless subjects the States to strict minimum compliance requirements’ and gives EPA the authority to determine a state’s compliance with the requirements.”²²² This interpretation is also consistent with congressional intent that the EPA exercise supervisory responsibility to ensure that, *inter alia*, SIPs satisfy the broad requirements that section 110(a)(2) mandates that SIPs “shall” satisfy.²²³ Where the EPA determines that a SIP provision does not satisfy legal requirements, the EPA is not substituting its judgment for that of the state but rather is determining whether the state’s judgment falls within the wide boundaries of the CAA.

m. Comments that a “general duty” provision—or comparable generic provisions that require sources to “exercise good engineering judgment,” to “minimize emissions” or to “not cause a violation of the NAAQS”—inoculate or make up for exemptions in specific emission limitations that apply to the source.

Comment: Numerous commenters argued that even if some of the SIP provisions with SSM exemptions identified in this SIP call are not themselves emission limitations, they are nevertheless *components* of valid emission limitations. According to these commenters, some SIPs contain separate “general duty” provisions that are not affected by SSM exemptions and thus have the effect of limiting emissions from sources during SSM events that are explicitly exempted from the emission limitations in the SIP. These general-duty provisions vary, but most of them: (1) Instruct sources to “minimize emissions” consistent with good air pollution control practices, (2) prohibit sources from emitting pollutants that cause a violation of the NAAQS, or (3) prohibit source operators from “improperly operating or maintaining” their facilities.

Commenters contended that these general-duty provisions are requirements that—either alone or in

combination with other requirements—have the effect of limiting emissions on a continuous basis. In other words, the commenter asserted that these general-duty provisions impose limits on emissions during SSM events, when the otherwise applicable controls no longer apply. According to these commenters, SSM exemptions that excuse noncompliance with typical controls do not interrupt the continuous application of an “emission limitation,” because these general-duty provisions elsewhere in the SIP or in a separate permit are part of the emission limitation and apply even during SSM events.

Some commenters further argued that some SSM exemptions themselves demonstrate that sources remain subject to general-duty provisions during SSM events. These SSM exemptions require sources seeking to qualify for the exemption to demonstrate that, *inter alia*, they were at the time complying with certain general duties.

Accordingly, these commenters contended that the SSM exemption itself demonstrates that sources remain subject to requirements that limit their emissions during SSM events, even when the source is excused from complying with other components of the overarching emission limitation.

Finally, as evidence that these general-duty clauses must be permissible under the CAA, some commenters pointed to similar federal requirements established by the EPA under the NSPS and NESHAP programs.²²⁴ These commenters argued that the D.C. Circuit’s decision in *Sierra Club v. Johnson*²²⁵ was limited to circumstances unique to section 112 and does not support a *per se* prohibition on general-duty clauses operating as “emission limitations.”

Response: The EPA disagrees with these comments. As described elsewhere in this response to comments, all “emission limitations” must limit emissions of air pollutants on a continuous basis.²²⁶ The specific requirements of a SIP emission limitation must be discernible on the face of the provision, must meet the applicable substantive and stringency requirements of the CAA and must be legally and practically enforceable. The general-duty clauses identified by these commenters are not part of the putative emission limitations contained in these SIP provisions. To the contrary, these general-duty clauses are often located in different parts of the SIP and are often not cross-referenced or otherwise

identified as part of the putative continuously applicable emission limitation.

Furthermore, the fact that a SIP provision includes prerequisites to qualifying for an SSM exemption does not mean those prerequisites are themselves an “alternative emission limitation” applicable during SSM events. The text and context of the SIP provisions at issue in this SIP call action make clear that the conditions under which sources qualify for an SSM exemption are not themselves components of an overarching emission limitation—*i.e.*, a requirement that limits emissions of air pollutants from the affected source on a continuous basis. Rather, these provisions merely identify the circumstances when sources are exempt from emission limitations.

Reviewing an example of the SIP provisions cited by commenters is illustrative of this point. For example, several commenters pointed to provisions in Alabama’s SIP that excuse a source from complying with an otherwise applicable emission limitation only when the permittee “took all reasonable steps to minimize emissions” and the “permitted facility was at the time being properly operated.” According to commenters, the general duties in this provision—to take reasonable steps to minimize emissions, and to properly operate the facility—ensure that even during SSM events, the permittee remains subject to requirements limiting emissions.

However, a review of the provisions themselves in context—not selectively quoted—reveals that these general-duty provisions were included in the SIP not as components of an emission limitation but rather as components of an *exception* to that emission limitation. In order to qualify, the SIP requires the permittee to have taken “all reasonable steps to minimize levels of emissions that exceeded the emission standard”²²⁷—an acknowledgement that the emissions to be “minimize[d]” are those that “exceed[]” (*i.e.*, go beyond) the required limits of “the emission standard.” In case there were any doubt that the general-duty provisions identified are elements of an exemption from an emission limitation, rather than components of the emission limitation itself, the provisions apply during what the Alabama SIP calls “[e]xceedances of *emission limitations*”²²⁸ and are found within a

²²² *Michigan v. EPA*, 213 F.3d 663, 687 (D.C. Cir. 2000) (quoting *Union Elec. Co. v. EPA*, 427 U.S. 246, 256–57 (1976)).

²²³ With respect to section 110(a)(2)(A), this means that a SIP must at least contain legitimate, enforceable emission limitations to the extent they are necessary or appropriate “to meet the applicable requirements” of the Act. Likewise, SIPs cannot have enforcement discretion provisions or affirmative defense provisions that contravene the fundamental requirements concerning the enforcement of SIP provisions.

²²⁴ See, e.g., 40 CFR 63.6(e)(3).

²²⁵ 551 F.3d 1019, 1027–28 (D.C. Cir. 2008).

²²⁶ CAA section 302(k).

²²⁷ Ala. Admin. Code Rule 335–3–14–

.03(h)(2)(ii)(III) (emphasis added).

²²⁸ *Id.* at 335–3–14–.03(h)(2)(ii) (emphasis added).

broader section addressing “Exceptions to violations of emission limitations.”²²⁹ By exempting sources from compliance with “the emission standard,” these exemptions render the SIP emission limitation noncontinuous, contrary to section 302(k).²³⁰

The consequences for failing to satisfy the preconditions for an exemption further bolster the conclusion that these preconditions are not themselves part of an emission limitation. Failure to meet the “general duty” preconditions for an SSM exemption means that the source remains subject to the otherwise applicable emission limitation during the SSM event and is thus liable for violating the emission limitation. If those general duties were independent parts of an emission limitation (rather than merely preconditions for an exemption), then one would expect that periods of time could exist when the source was liable for violating those general duties rather than the default emission limitation.

The general-duty provisions that apply as part of the SSM exemption are not alternative emission limitations; they merely define an unlawful exemption to an emission limitation. States have discretion to fix this issue in a number of ways, including by removing the exceptions entirely, by replacing these exceptions with alternative emission limitations including specific control technologies or work practices that do ensure continuous limits on emissions or by reformulating the entire emission limitation.

In addition to the EPA’s fundamental disagreement with commenters that these general-duty provisions are actually components of emission limitations, the EPA has additional concerns about whether many of these provisions could operate as stand-alone emission limitations even if they were properly identified as portions of the overall emissions limitations in the SIP.²³¹ Furthermore, some of these general-duty provisions do not meet the level of stringency required to be an “emission limitation” compliant with specific substantive provisions of the CAA applicable to SIP provisions.²³² Accordingly, while states are free to include general-duty provisions in their

SIPs as separate additional requirements, for example, to ensure that owners and operators act consistent with reasonable standards of care, the EPA does not recommend using these background standards to bridge unlawful interruptions in an emission limitation.²³³

The NSPS and NESHAP emission standards and limitations that the EPA has issued since *Sierra Club* demonstrate the distinct roles played by emission limitations and general-duty provisions. The emission limitations themselves are clear and legally and functionally enforceable, and they are composed of obviously integrated requirements that limit emissions on a continuous basis during all modes of source operation. Crucially, the general-duty provisions in these post-*Sierra Club* regulations merely supplement the integrated emission limitation; they do not supplant the emission limitation, which independently requires continuous limits on emissions. As discussed elsewhere in this document, the fact that the EPA is in the process of updating its own regulations to comply with CAA requirements does not alter the legal requirements applicable to SIPs.

n. Comments that EPA’s action on the petition is a “change of policy.”

Comment: A number of commenters claimed that the EPA’s action on the Petition is illegitimate because it is based upon a “change of policy.” Some commenters claimed that the EPA’s reliance on the definition of “emission limitation” in section 302(k) and the requirements for SIP provisions in section 110(a)(2) as barring automatic exemptions are “new.” These commenters claimed that the EPA has historically relied on the fact that NAAQS are ambient-standard-based and that the EPA has relied also on the fact that SSM exemptions had potential adverse air quality impacts as the basis for interpreting the CAA to preclude exemptions. The commenters argued that this basis for the SSM Policy is evidenced by the fact that EPA itself historically included SSM exemptions in NSPS and NESHAP rules, which establish emission limitations that should be governed by section 302(k) as well.

Other commenters claimed that the EPA is changing its SSM Policy by seeking to revoke “enforcement discretion” exercised on the part of states, which the EPA specifically recognized as an acceptable approach in the 1983 SSM Guidance. A commenter asserted that “fairness principles” mean that the EPA cannot require a state to modify its SIP without substantial justification. The commenter further contended that the EPA’s claim that it has a longstanding interpretation of the CAA that automatic exemptions are not allowed in SIP provisions is false; otherwise, the commenter argued, the EPA would not have approved some of the provisions at issue in the SIP call long after 1982. As evidence for this argument, the commenter pointed to the West Virginia regulations that provide an automatic exemption.

Finally, other commenters argued that the EPA’s changed interpretation of the CAA requires an acknowledgement that the SSM Policy is being changed and a rational explanation for such change. These commenters noted that the EPA previously argued in a brief for the type of exemption provisions that it is now claiming are deficient, citing *Sierra Club v. Johnson*, No. 02–1135 (D.C. Cir. March 14, 2008). The commenters claimed that the EPA has provided no rational basis for its change in interpretation of the CAA concerning exemptions for emissions during SSM events.

Response: The EPA’s longstanding position, at least since issuance of the 1982 SSM Guidance, is that SIP provisions providing an exemption from emission limitations for emissions during SSM events are prohibited by the CAA. The EPA’s guidance documents issued in 1982 and 1983 expressly recognized that in place of exemptions, states should exercise enforcement discretion in determining whether to pursue a violation of an emission limitation. In the 1983 SSM Guidance, the EPA made recommendations for states that elected to adopt specific SIP provisions affecting their own exercise of enforcement discretion, so long as those provisions do not apply to enforcement discretion of the EPA or other parties under the citizen suit provision of the CAA. More than 15 years ago, in the 1999 SSM Guidance, the EPA reiterated its longstanding position that it is inappropriate for SIPs to exempt SSM emissions from compliance with emission limitations and repeated that instead of incorporating exemptions, enforcement discretion could be an appropriate tool. In addition, EPA clarified at that time that a narrowly tailored affirmative

²²⁹ *Id.* at 335–3–14–.03(h) (emphasis added).

²³⁰ See CAA section 302(k) (defining “emission limitation” and “emission standard”).

²³¹ See *Sierra Club*, 551 F.3d at 1026 (discussing the EPA’s prior determinations that “compliance with the general duty on its own was insufficient to prevent the SSM exemption from becoming a ‘blanket’ exemption”).

²³² See, e.g., *Sierra Club v. Johnson*, 551 F.3d at 1027–28 (so holding with respect to section 112).

²³³ For example, the EPA has concerns the some of these general-duty provisions, if at any point relied upon as the sole requirement purportedly limiting emissions, could undermine the ability to ensure compliance with SIP emission limitations relied on to achieve the NAAQS and other relevant CAA requirements at all times. See section 110(a)(2)(A), (C); *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1161–62 (10th Cir. 2012).

defense might also be an appropriate tool for addressing excess emissions in a SIP provision. However, in response to recent court decisions, and as discussed in detail in section IV of this document, the EPA no longer interprets the CAA to permit affirmative defense provisions in SIPs.

Although the EPA did not expressly rely on the definition of “emission limitation” in section 302(k) as the basis for its SSM Policy in each of these guidance documents, it did rely on the purpose of the NAAQS program and the underlying statutory provisions (including section 110) governing that program. In the 1999 SSM Guidance, however, the EPA indicated that the definition of emission limitation in section 302(k) was part of the basis for its position concerning SIP provisions.²³⁴ After the EPA issued the 1999 SSM Guidance, the D.C. Circuit issued a decision holding that the definition of emission limitation in section 302(k) does not allow for periods when sources are not subject to emissions standards.²³⁵ While the court’s decision concerned the section 112 program addressing hazardous air pollutants, the EPA believes that the court’s ruling concerning section 302(k) applies equally in the context of SIP provisions because the definition of emission limitation also applies to SIP requirements. That court’s decision is consistent with and provides support for the EPA’s longstanding position in the SSM Policy that exemptions from compliance with SIP emission limitations are not appropriate under the CAA.

Commenters claimed that by interpreting the CAA to prohibit exemptions for emissions during SSM events the EPA is revoking “enforcement discretion” exercised by the state. This is not true. As part of state programs governing enforcement, states can include regulatory provisions or may adopt policies setting forth criteria for how they plan to exercise their own enforcement authority. Under section 110(a)(2), states must have adequate authority to enforce provisions adopted into the SIP, but states can establish criteria for how they plan to exercise that authority. Such enforcement discretion provisions cannot, however, impinge upon the enforcement authority of the EPA or of others pursuant to the citizen suit provision of the CAA. The EPA notes

that the requirement for adequate enforcement authority to enforce CAA requirements is likewise a bar to automatic exemptions from compliance during SSM events.

Commenters confused the EPA’s evolution in describing the basis for its longstanding SSM Policy as a change in the SSM Policy itself. The EPA’s interpretation of the CAA in the SSM Policy has not changed with respect to exemptions for emissions during SSM events. The EPA’s discussion of the basis for its longstanding interpretation has evolved and become more robust over time as the EPA has responded to comments in rulemakings and in response to court decisions. In support of its interpretation of the CAA that exemptions for periods of SSM are not acceptable in SIPs, the EPA has long relied on its view that NAAQS are health-based standards and that exemptions undermine the ability of SIPs to attain and maintain the NAAQS, to protect PSD increments, to improve visibility and to meet other CAA requirements. By contrast, the EPA historically took the position that SSM exemptions were acceptable for certain technology-based standards, such as NSPS and NESHAP standards, and argued that position in the *Sierra Club* case cited by commenters. However, in that case, the court explicitly ruled against the EPA’s interpretation, holding that exemptions for emissions during SSM events are precluded by the definition of “emission limitation” in CAA section 302(k). The *Sierra Club* court’s rationale thus provided additional support for the EPA’s longstanding position with respect to SSM exemptions in SIP provisions, and in more recent actions the EPA has relied on the reasoning from the court’s decision as further support for its current SSM Policy. Thus, even if the EPA were proceeding under a “change of policy” here as the commenters claimed, the EPA has adequately explained the basis for its current SSM Policy, including the basis for any actual “change” in that guidance (*e.g.*, the actual change in the SSM Policy with respect to affirmative defense provisions in SIPs). Courts have upheld an agency’s authority to revise its interpretation of a statute, so long as that change of interpretation is explained.²³⁶

o. Comments that the EPA’s proposed action on the petition is based on a “changed interpretation” of the definition of “emission limitation.”

Comment: Commenters claimed that the EPA’s action on the Petition is based on a changed interpretation of the term “emission limitation” and that the Agency cannot apply that changed interpretation “retroactively.” One commenter cited several cases for the proposition that retroactivity is disfavored and that the EPA is applying this new interpretation retroactively to existing SIP provisions. The commenter claimed that the EPA approved the existing SIP provisions with full knowledge of what those provisions were and “consistent with the provisions EPA itself adopted and courts required.” The commenter characterized the SIP provisions for which the EPA is issuing a SIP call as “enforcement discretion” provisions and “affirmative defense” provisions for startup and shutdown. The commenter contended that the EPA does not have authority to issue a SIP call on the premise that the CAA is less flexible than the Agency previously thought. The commenter concluded that “[t]he factors of repose, reasonable reliance, and settled expectations favor not imposing EPA’s new interpretations.”

Response: The EPA disagrees that this SIP call action has “retroactive” effect. As recognized by the commenter, this SIP call action does not automatically change the terms of the existing SIP or of any existing SIP provision, nor does it mean that affected sources could be held liable in an enforcement case for past emissions that occurred when the deficient SIP provisions still applied. Rather, the EPA is exercising its clear statutory authority to call for the affected states to revise specific deficient SIP provisions so that the SIP provisions will comply with the requirements of the CAA prospectively and so that affected sources will be required to comply with the revised SIP provisions prospectively.

To the extent that a SIP provision complied with previous EPA interpretations of the CAA that the Agency has since determined are flawed, or to the extent that the EPA erroneously approved a SIP provision that was inconsistent with the terms of the CAA, the EPA disagrees that it is precluded from requiring the state to modify its SIP now so that it is consistent with the Act. In fact, that is precisely the type of situation that the SIP call provision of the CAA is designed to address. Specifically, section 110(k)(5) begins, “[w]hensoever” the EPA determines that an applicable implementation plan is inadequate to attain or maintain the NAAQS, to mitigate adequately interstate pollutant transport, or “to otherwise comply with

²³⁴ See 1999 SSM Guidance at 2, footnote 1. The EPA included section 302(k) among the statutory provisions that formed the basis for its interpretations of the CAA in that document.

²³⁵ *Sierra Club*, 551 F.3d 1019 (D.C. Cir. 2008).

²³⁶ The EPA emphasized this important point in the SNPR. See 79 FR 55919 at 55931.

any requirement” of the Act, the EPA must call for the SIP to be revised. The commenter does not question that sections 110(a)(2) and 302(k) are requirements of the Act. Thus, the EPA has authority under section 110(k)(5) to call on states to revise their SIP provisions to be consistent with those requirements.

The EPA disagrees that the doctrines of “repose,” “reasonable reliance” and “settled expectations” preclude such an action. The CAA is clear that “whenever” the EPA determines that a SIP provision is inconsistent with the statute, “the Administrator shall” notify the state of the inadequacies and establish a schedule for correction. This language does not provide the Agency with discretion to consider the factors cited by the commenter in deciding whether to call for a SIP revision once it is determined to be flawed. Here, the EPA has determined that the SIP provisions at issue are flawed and thus the Agency was required to notify the states to correct the inadequacies.

p. Comments that the EPA should not encourage states to rely on enforcement discretion because this will inevitably lead to states’ creating emission limitations that some sources cannot meet.

Comment: Commenters claimed that it is not appropriate for the EPA to encourage states to exercise enforcement discretion rather than to encourage them either to define periods when numerical emission limitations do not apply or to develop alternative emission limitations or other control measures. The commenters contended that inclusion of an enforcement discretion provision in a SIP is superfluous. The commenter cited to *Portland Cement*, where the D.C. Circuit court stated that “an excessively broad theory of enforcement discretion might endanger securing compliance with promulgated standards.”²³⁷ The commenter also cited the *Marathon Oil* case in the Ninth Circuit in which the court rejected an approach that relied heavily on enforcement discretion. The commenter then asserted that sources are liable for violations and that “[s]ources should not be required to litigate remedy for violations they cannot avoid.”²³⁸ The commenter concluded that it is “unreasonable for EPA to subject itself to claims that it must exercise its federal enforcement authority in the event a state refuses to enforce unachievable standards, or for states to put source owners and operators in jeopardy of

criminal prosecution for starting up a source with knowledge that a numerical emission limitation might be exceeded. In summary, the commenter appeared to argue that the EPA should require states to establish alternative numerical emission limitations or other control requirements during SSM events, rather than merely eliminating SSM exemptions and relying on enforcement discretion to address SSM emissions.

Response: The EPA disagrees with the commenter’s suggestion that the EPA should discourage states from relying on enforcement discretion. Enforcement discretion is a valid state prerogative, long recognized by courts. However, the EPA agrees with the commenter that states should not adopt overly broad enforcement discretion provisions for inclusion in their SIPs. Section 110(a)(2) requires states to have adequate enforcement authority, and overly broad enforcement discretion provisions would run afoul of this requirement if they have the effect of precluding adequate state authority to enforce SIP requirements. The EPA also agrees that states may elect to include alternative emission limitations, whether expressed numerically or otherwise, for certain periods of normal operations, including startup and shutdown.

It is unclear precisely what the commenters are advocating when they suggest that sources should not be subject to litigating a remedy for violations they cannot avoid. The likely interpretation is that the commenters believe that excess emissions during unavoidable events should be automatically exempted (*i.e.*, not considered a violation). This approach was rejected by the court in *Sierra Club v. Johnson*, because it was not consistent with the definition of emission limitation in section 302(k).²³⁹ As previously explained in the February 2013 proposal and in this document, the EPA believes that definition, and thus the court’s holding in *Sierra Club*, is equally relevant for the SIP program.

With respect to a commenter’s concerns about criminal enforcement, the EPA disagrees that sources will be unable to start operations because they will automatically be subject to criminal prosecution if an emission limitation is exceeded during a malfunction. Under CAA section 113(c), criminal enforcement for violation of a SIP can occur when a person knowingly violates a requirement or prohibition of an implementation plan “during any period of federally assumed enforcement or more than 30 days after having been notified” under the

provisions governing notification that the person is violating that specific requirement of the SIP. The EPA is unaware of any jurisdictions where federally assumed enforcement is in force, and the EPA does not anticipate that this situation would arise often. Thus, in almost every case, criminal enforcement would not occur in the absence of a pending notification of a civil enforcement case and could then apply only for repeated violation of the activity at issue in that civil action. Moreover, the concern raised by the commenter is one that would exist if there is any requirement that applies during a period of malfunction beyond the owner’s control. The commenter’s preferred way to address this concern would be to exempt these periods from compliance with any requirements, an approach rejected by the *Sierra Club* court as inconsistent with the definition of “emission limitation” and an approach that the EPA’s longstanding SSM Policy has explained is inconsistent with the purpose of the NAAQS program, which is to ensure public health is protected through attainment and maintenance of the NAAQS, protection of PSD increments, improvement of visibility and compliance with other requirements of the CAA.

Finally, to the extent that the commenter was advocating that the EPA should require states to develop SIP provisions that impose alternative emission limitations during certain modes of source operation such as startup and shutdown to replace SSM exemptions, the EPA notes that to require states to do so would not be consistent with the principles of cooperative federalism and could be misconstrued as the Agency’s imposing a specific control requirement in contravention of the *Virginia* decision.²⁴⁰ As the commenter elsewhere itself argued, states have broad discretion in how to develop SIP provisions to meet the objectives of the CAA, so long as those provisions also meet the legal requirements of the CAA. To the extent that a state would prefer to have emission limitations that apply continuously, without higher numerical levels or specific technological controls or work practice standards applicable during modes of operation such as startup and shutdown, that is the prerogative of the state, so long as the revised SIP provision otherwise meets

²³⁷ 486 F.2d at 399 n.91.

²³⁸ *Marathon Oil Co. v. Environmental Protection Agency*, 564 F.2d 1253 (9th Cir. 1977).

²³⁹ 551 F.3d 1019 (D.C. Cir. 2008).

²⁴⁰ See *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997) (SIP call remanded and vacated because, *inter alia*, the EPA had issued a SIP call that required states to adopt a particular control measure for mobile sources).

CAA requirements. If a state determines that it is reasonable to require a source to meet a specific emission limitation on a continuous basis and also decides to rely on its own enforcement discretion to determine whether a violation of that emission limit should be subject to enforcement, then the EPA believes that to do so is within the discretion of the state.

q. Comments that the EPA's action on the Petition is inconsistent with the Credible Evidence Rule.

Comment: A number of commenters raised concerns based upon how the EPA's statements in the February 2013 proposal relate to the Credible Evidence Rule issued in 1997.²⁴¹ For example, one commenter argued that throughout the February 2013 proposal, when the EPA stated that excess emissions during SSM events should be treated as "violations" of the applicable SIP emission limitations, the Agency was contradicting the Credible Evidence Rule and other provisions of law. The commenter emphasized that the determination of whether excess emissions during an SSM event are in fact a "violation" of the applicable SIP provisions must be made using the appropriate reference test method. In addition, the commenter asserted that whether any other form of information may be used as "credible evidence" of a violation must be evaluated by the trier of fact in a specific enforcement action. Another commenter raised a different argument based on the Credible Evidence Rule, claiming that the EPA's statements in the preamble to that rulemaking contradict the EPA's statements in the February 2013 proposal and support the need for exemptions for emissions during SSM events. The implication of the commenter is that any such EPA statements in connection with the Credible Evidence Rule would negate the Agency's interpretation of the statutory requirements for SIP provisions as interpreted in the SSM Policy since at least 1982, the decision of the court in the *Sierra Club* case or any other actions such as the recent issuance of EPA regulations with no such SSM exemptions.

Response: The EPA agrees, in part, with the commenters who expressed concern that the Agency's statements in the February 2013 proposal could be misconstrued as a definitive determination that the excess emissions during any and all SSM events are automatically a violation of the applicable emission limitation, without

factual proof of that violation, and without the existence and scope of that violation being decided by the appropriate trier of fact. The EPA agrees that the alleged violation of the applicable SIP emission limitation, if not conceded by the source, must be established by the party bearing the burden of proof in a legal proceeding. The degree to which evidence of an alleged violation may derive from a specific reference method or any other credible evidence must be determined based upon the facts and circumstances of the exceedance of the emission limitations at issue.²⁴² This is a basic principle of enforcement actions under the CAA, but the EPA wishes to make this point clearly in this final action to avoid any unintended confusion between the legal standard creating the enforceable obligation and the evidentiary standard for proving a violation of that obligation.

The EPA's general statements in the February 2013 proposal, the SNPR and this final action about treatment of SSM emissions as a violation pertain to another basic principle, *i.e.*, that SIP provisions cannot treat emissions during SSM events as exempt, because this is inconsistent with CAA requirements. Thus, when the EPA explains that these emissions must be treated as "violations" in SIP provisions, this is meant in the sense that states with SSM exemptions need to remove them, replace them with alternative emission limitations that apply during startup and shutdown or eliminate them by revising the emission limitation as a whole. Once impermissible SSM exemptions are removed from the SIP, then any excess emissions during such events may be the subject of an enforcement action, in which the parties may use any appropriate evidence to prove or disprove the existence and scope of the alleged violation and the appropriate remedy for an established violation. To be clear, the fact that these emissions are currently exempt through inappropriate SIP provisions is a deficiency that the EPA is addressing in this action. Thus, the EPA disagrees with the commenters' suggestion that these emissions are never to be treated as violations simply because a deficient SIP provision currently includes an

SSM exemption. Once the SIP provisions are corrected, the excess emissions may be addressed through the legal structure for establishing an enforceable violation, which then may be proven using appropriate evidence, including test method evidence or other credible evidence. This means that excess emissions that occur during an SSM event will be treated for enforcement purposes in exactly the same manner as excess emissions that occur outside of SSM events. The EPA acknowledges that the limitation that applies during a startup or shutdown event might ultimately be different (whether higher or lower) than the limitation that applies at other times, if the state elects to replace the SSM exemption with an appropriate alternative emission limitation in response to this SIP call action.

The EPA also disagrees with commenters who claimed that statements by the Agency in the Credible Evidence Rule final rule preamble support the inclusion of exemptions for SSM events in SIP provisions. The commenter is correct that at that time, the EPA held the view that emission limitations in its own NSPS could be considered "continuous," notwithstanding the fact that they contained "specifically excused periods of noncompliance" (*i.e.*, exemptions from emission limitations during SSM events).²⁴³ Similarly, at that time the EPA relied on a number of reported court decisions discussed in the preamble for the Credible Evidence Rule for determining at that time that NSPS could contain such exemptions in order to make the emission limitations "reasonable." However, after the court's decision in the *Sierra Club* case interpreting the definition of emission limitation in section 302(k), these EPA statements in the preamble for the Credible Evidence Rule are no longer correct and thus do not apply to the EPA's action in this document.

First, the EPA notes that these prior statements related to the Credible Evidence Rule specifically addressed not SIP provisions but rather the provisions of the Agency's own technologically based NSPS. The statements in the document make no reference to SIP provisions, which is unsurprising given that EPA's SSM Policy at the time indicated that no such SSM exemptions are appropriate in SIP provisions. Second, the EPA's justification for exemptions from emission limitations during SSM events in NSPS was made prior to the 2008

²⁴² For example, the degree to which data from continuous opacity monitoring systems (COMS) is evidence of violations of SIP opacity or PM mass emission limitations is a factual question that must be resolved on the facts and circumstances in the context of an enforcement action. *See, e.g., Sierra Club v. Pub. Ser. v. Co. of Colorado, Inc.*, 894 F.Supp. 1455 (D. Colo. 1995) (allowing use of COMS data to prove opacity limit violations).

²⁴³ *Id.*, 62 FR 8314, 8323–24.

²⁴¹ *See* "Credible Evidence Revisions; Final rule," 62 FR 8314 (February 24, 1997).

decision of the court in the *Sierra Club* case. The EPA's interpretation of the statute and the case law to justify exemptions for emissions during SSM events in that 1997 document is no longer correct. Finally, the EPA in its own new NESHAP and NSPS regulations is now providing no exemptions for emissions during SSM events and is imposing specific numerical limitations or other control requirements on sources that apply to affected sources at all times, including during SSM events.²⁴⁴ Thus, the statements in the 1997 Credible Evidence Rule preamble relied upon by commenters do not render the EPA's interpretation of the CAA with respect to SSM exemptions in SIP provisions in this action incorrect.

For clarity, the EPA emphasizes that it is in no way reopening, revising or otherwise amending the Credible Evidence Rule in this action. The EPA is merely responding to commenters who characterized the relationship between Agency statements in that rulemaking action and this SIP call action. The EPA also emphasizes that no changes to the Credible Evidence Rule should be necessary as a result of this rulemaking.

r. Comments that exemptions in opacity standards should be permissible because opacity is not a NAAQS pollutant.

Comment: Many state and industry commenters argued that the EPA should interpret the CAA to allow SIP provisions that impose opacity emission limitations to contain exemptions for SSM events or for other modes of source operation. The reasons given by commenters ranged broadly, but they included assertions that opacity is not a criteria pollutant, that opacity limitations serve no purpose other than as a tool to monitor PM control device performance, that there is no reliable correlation between opacity and PM mass, that there are circumstances during which sources may not be capable of meeting the otherwise applicable SIP opacity standards and that opacity is not an "air pollutant." Commenters also argued that because SIP opacity standards were originally established when the NAAQS applied to "total suspended particles" (TSP), rather than the current PM₁₀ and PM_{2.5}, this alone should be a reason to allow SSM exemptions now that the NAAQS have been revised and the indicator

species changed. Some of the commenters acknowledged that their underlying concern is that requirements for COMS on certain sources have rendered it much easier to monitor exceedances of SIP opacity limits and to bring enforcement actions for alleged violations.

Response: The EPA agrees with many of the points made by commenters but not with the conclusion that the commenters drew from these points, *i.e.*, that exemptions for SSM events are appropriate in SIP provisions that impose opacity emission limitations.

First, although the EPA agrees that opacity itself is not a criteria pollutant and that there is thus no NAAQS for opacity, this does not mean that SIP opacity limitations are not "emission limitations" subject to the requirements of section 110(a)(2)(A) and do not need to be continuous. As the commenters often conceded, opacity is a surrogate for PM emissions for which there are NAAQS, and opacity has served this purpose since the beginning of the SIP program in the 1970s. SIP provisions that impose opacity emission limitations often date back to the earliest phases of the SIP program. From the outset, such opacity limitations have provided an important regulatory tool for implementing the PM NAAQS and for limiting PM emissions from sources. To this day, states continue to use opacity limitations in SIP provisions and the EPA continues to use opacity limitations in its own NSPS and NESHAP regulations, as necessary, for specific source categories.²⁴⁵ EPA regulations applicable to SIPs explicitly define the term "emission limitation" to include opacity limits.²⁴⁶ It is also important to note that these SIP provisions impose opacity emission limitations that sources must meet independently; *i.e.*, opacity limitations are independent "emission limitations" under section 110(a)(2)(A) that must, consistent with section 302(k), "limit[] the quantity, rate, or concentration of emissions of air pollutants on a continuous basis." These opacity emission limitations in SIP provisions are not stated conditionally as opacity limits that sources do not need to meet if they are otherwise in compliance with

PM mass emission limitations or with any other CAA requirements. Thus, the fact that opacity is not itself a criteria pollutant is irrelevant.

Second, although the EPA agrees that SIP opacity limitations also provide an important means of monitoring control device performance and thus indirectly provide a means to monitor compliance with PM emission limitations as well, this does not mean that opacity limits do not need to meet the statutory requirements for SIP emission limitations. Historically, opacity limits have been an important tool for implementation of the PM NAAQS, and in particular for the implementation and enforcement of PM mass limitations on sources to help attain and maintain the PM NAAQS. The EPA agrees that opacity is a useful tool to indicate overall operation and maintenance of a source and its emission control devices, such as electrostatic precipitators or baghouses. SIP opacity limitations provided this tool even before modern instruments that measure PM emissions on a direct, continuous basis existed. At a minimum, elevated opacity indicates potential problems with source design, operation or maintenance, or potential problems with incorrect operation of pollution control devices, especially at the elevated levels of many existing opacity standards. Well-run sources should be in compliance with typical SIP opacity limits. Opacity exceeding the applicable limitations can be indicative of problems that justify further investigation by sources and regulators, such as conducting a stack test to determine compliance with PM mass emission limitations. Not all sources have or will have PM CEMS, or have PM CEMS at all emission points, to monitor PM emissions directly, nor do PM CEMS necessarily obviate the need for opacity standards to regulate condensables, and thus there is a continued need for opacity emission limitations in SIPs. The continued need for SIP opacity limitations for this and other purposes contradicts the commenters' arguments concerning the validity of SSM exemptions.

Third, the EPA agrees that the precise correlation between opacity and PM mass emissions is not always known for a specific source under all operating conditions, unless there is parallel testing and measurement of the opacity and the PM emissions to determine the correlation at that particular source. Similarly, parametric monitoring can be used to establish such a correlation. Nevertheless, there is commonly a positive correlation between PM and opacity and thus elevated opacity is often indicative of additional PM

²⁴⁴ See, *e.g.*, 40 CFR 60.42Da, where paragraph (e)(1) applies a numerical PM emission limitation at all times except during periods of startup and shutdown, and paragraph (e)(2) applies work practice standards during periods of startup and shutdown.

²⁴⁵ See, *e.g.*, 40 CFR 60.42Da(b). The EPA's revised NSPS for this category imposes an opacity limit of 20 percent at all times, except for one 6-minute period per hour when the opacity may rise to 27 percent. Notably, as an option, sources may elect to install PM CEMS and be subject only to the revised particulate matter emission limitation.

²⁴⁶ See 40 CFR 51.100(z) (defining the term "emission limitation" as limits on "the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity").

emissions from a source. Even in those instances where a precise correlation is not available, however, the use of opacity as a means to assure the reduction of PM emissions and to monitor source compliance remains a valid approach to regulation of PM from sources. In any event, the absence of a precise correlation between opacity and PM does not justify the complete exemptions from SIP opacity limitations during SSM events that the commenters advocate and instead suggests that it may be appropriate to replace such exemptions with valid and enforceable alternative numerical limitations or other control requirements as a component of the SIP opacity emission limitation that applies during startup and shutdown. Opacity emission limitations in SIPs must meet the statutory requirements for emission limitations.

Fourth, the EPA agrees with commenters that for some sources some PM controls cannot operate, or operate at full effectiveness and ideal efficiency, during startup and shutdown. Accordingly, as the commenters implicitly recognized, the resulting increases in PM emissions can result in elevated opacity and thus exceedances of the applicable SIP opacity emission limitations. In those situations where it is true that no additional emissions controls are available or would function more effectively to reduce PM emissions, and hence to reduce opacity, it may be appropriate for states to consider imposing an alternative opacity emission limitation applicable during startup and shutdown. As discussed in section VII.B.2 of this document, the EPA provides recommendations to states concerning how to develop such alternative emission limitations. To the extent that sources believe that a SIP provision with a higher opacity level for startup and shutdown may be justified, they may seek these alternative limitations from the state and they can presumably advocate for opacity standards that are tailored to reflect the correlation between PM mass and opacity at a specific source. Significantly, however, even if it is appropriate to impose a somewhat higher opacity limitation for some sources during specifically defined modes of operation such as startup and shutdown, that does not justify the total exemptions from SIP opacity emission limitations during SSM events that the commenters advocated. To provide total exemptions from SIP opacity emission limitations during SSM events does not provide any incentive for sources to be better

designed, operated, maintained and controlled to reduce emissions, nor does it comply with the most basic requirement that SIP emission limitations be continuous in accordance with section 302(k). As explained in section X.B of this document, the SIP revisions in response to this SIP call action will need to be consistent with the requirements of sections 110(k)(3), 110(l) and 193 as well as any other applicable requirements.

Fifth, the EPA notes that few commenters seriously argued that SIP provisions for opacity do not fit within the plain language of section 110(a)(2)(A) or the definition of “emission limitation” in section 302(k) or in EPA regulations applicable to SIP provisions. Section 110(a)(2)(A) requires SIPs to contain such enforceable emission limitations “as may be necessary and appropriate to meet the applicable requirements of” the CAA. Opacity limitations in SIP provisions are necessary and appropriate for a variety of reasons already described, including as a means to reduce PM emissions, as a means to monitor source compliance and to provide for more effective enforcement. Opacity limitations in SIP provisions also easily fit within the concept of a limit on the “quantity, rate or concentration of air pollutants” that relates to the “operation or maintenance of a source to assure continuous emission reduction and any design, equipment, work practice or operational standard” under the CAA, as provided in section 302(k). The term “air pollutant” is defined broadly in section 302(g) to mean “any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air.” Even if opacity is not itself an air pollutant, it is clearly a means of monitoring and limiting emissions of PM from sources and is thus encompassed within the definition of “emission limitation” in section 302(k).²⁴⁷ Significantly, existing EPA regulations applicable to SIP provisions already explicitly define the term “emission limitation” to include opacity limitations.²⁴⁸

Finally, the EPA does not agree with commenters who argued that because SIP opacity limitations were often originally imposed when the PM NAAQS was for TSP, it is legally acceptable to have exemptions for emissions during SSM events now that

the PM NAAQS use PM₁₀ and PM_{2.5} as the indicator species. On a factual level, it is obvious that SIP provisions for opacity limitations are expressed in terms of percentage “opacity” unrelated to the size of the particles. Opacity represents the degree to which emissions reduce the transmission of light and obscures the view of an object in the background. In general, the more particles which scatter or absorb light that passes through an emissions point, the more light will be blocked, thus increasing the opacity percentage of the emissions plume. The EPA agrees that variables such as the size, number and composition of the particles in the emissions can result in variations in the percentage of opacity. Notwithstanding the changes in the NAAQS, however, both states and the EPA have continued to rely on opacity limitations because they serve the same purposes for the current PM₁₀ and PM_{2.5} NAAQS (and other purposes such as the regulation of HAPs under section 112) that they previously did for the TSP NAAQS. Indeed, as the PM NAAQS have been revised to provide better protection of public health, the need for such opacity limitations continues unless there is a better means to monitor source compliance, such as PM CEMS. As with other SIP emission limitations, the EPA interprets the CAA to preclude SSM exemptions in opacity standards.

s. Comments that exemptions from SIP opacity limitations for excess emissions during SSM events should be allowed because such emissions are difficult to monitor or to control.

Comment: Several commenters argued that the EPA’s proposal of a SIP call for SIP opacity emission limitations that include an SSM exemption is arbitrary and capricious because it is difficult or impossible to monitor or measure opacity during SSM events. According to commenters, there is no compliance methodology to determine whether opacity limitations are met during SSM events and this is the reason that the EPA’s own general provisions for NSPS and NESHAP exclude emissions during SSM events as “not representative” of source operation. In the absence of a specific methodology to demonstrate compliance, the commenters argued that expecting sources to comply with any opacity emission limitations during SSM events is arbitrary and capricious. The commenters asserted that in light of this, the EPA must interpret the CAA to allow exemptions for SSM events in SIP opacity provisions.

A number of commenters also argued that because emission controls for PM do not function, or do not function as effectively or efficiently, during certain

²⁴⁷ See *Sierra Club v. TVA*, 430 F.3d 1337, 1340 (11th Cir. 2005).

²⁴⁸ See 40 CFR 51.100(z).

modes of source operation, the EPA should interpret the CAA to permit exemptions for SSM events in opacity emission limitations. Many commenters explained that certain types of emission controls at certain types of sources only operate at specific temperatures or under specific conditions. For example, many commenters stated that existing pollution control devices on certain categories of stationary sources do not operate, or do not operate as effectively or efficiently, during startup and shutdown. Based upon this assertion, the commenters argued that the EPA should interpret the CAA to allow total exemptions from SIP opacity emission limitations during such periods.

Commenters also characterized the EPA's February 2013 proposal as "particularly unreasonable" with respect to SSM exemptions in SIP opacity limitations, because those limitations should be allowed to exclude elevated opacity during periods when PM emissions controls devices are "not expected to operate correctly." According to commenters, treating the higher opacity during SSM events "as a violation simply because it is indicating something that is expected is ridiculous." As an example, the commenters specifically mentioned occurrences such as when a source's electrostatic precipitator (ESP) is not functioning or is not functioning properly as periods during which there should be an exemption from SIP opacity emission limitations.

Response: The EPA agrees with some of the points made by commenters but does not agree with the conclusions that the commenters drew from these points, *i.e.*, that alleged difficulties in monitoring, measuring or controlling opacity during some modes of source operation in general justify complete exemptions from opacity emission limitations during SSM events.

First, the EPA does not agree with the argument that there is no "compliance methodology" available for purposes of verifying compliance with SIP opacity limitations. Since the earliest phases of the SIP program, Reference Method 9 has been available as a means of verifying a source's compliance with applicable SIP opacity emission limitations. Whatever concerns the commenters may have with this test method, it is a valid method and it continues to be used as a means of verifying source compliance with opacity limitations and a source of evidence for determining whether there are violations of such emission

limitations.²⁴⁹ Sources routinely monitor and certify to their compliance with SIP opacity limitations based upon Method 9. In addition, COMS have been available, and in some cases are required, as another means of monitoring emissions and verifying compliance with opacity emission limitations. With respect to COMS, commenters expressed concerns that they are not always accurate, are not always properly calibrated or are not always the reference test method for SIP opacity emission limitations, and other similar arguments. In this rulemaking, the EPA is not addressing these allegations concerning COMS but merely noting that COMS are an available means of monitoring opacity from sources and in appropriate circumstances can provide data meeting the EPA's criteria as credible evidence to be used to determine compliance with emission limitations.

Second, the EPA does not agree that the fact that its regulations concerning performance tests in 40 CFR 63.7(e) for NESHAP and in 40 CFR 60.8(c) for NSPS exclude SSM emissions for purposes of evaluation of emissions under normal operating conditions provides a justification for SSM exemptions from opacity emission limitations in SIP provisions. The D.C. Circuit decision in *Sierra Club* has already indicated that such exemptions are not permissible in emission limitations and vacated the general provisions applicable to NESHAP. In the case of the exemption language in 40 CFR 60.8(c) relevant to NSPS, the EPA acknowledges that it has not yet taken action to revise the language to eliminate that exemption. However, in promulgating new NSPS regulations subsequent to the *Sierra Club* decision, the EPA is including emission limitations for newly constructed, reconstructed and modified sources that apply continuously and including provisions expressly stating that the SSM exemptions in the General Provisions do not apply. The EPA notes that the commenter is also in error because the performance tests are intended to be a means of evaluating

²⁴⁹ The EPA notes that one commenter characterized SIP opacity limits as "archaic" and suggested that the Agency should issue a SIP call requiring their removal from SIPs entirely. Unless and until regulators and sources have a better means of monitoring compliance with PM emission limitations on a continuous basis, such as through installation of PM CEMS, the EPA believes that opacity limits will continue to be a necessary part of emission limitations. There will continue to be sources of emissions for which it will not be cost-effective or technologically viable to require the installation of PM CEMS or for which opacity standards will be needed as a means of regulating condensables.

emissions from sources during periods that are representative of source operation.

Third, the EPA does not agree with the premise that because certain forms or types of emission controls do not work, or do not work as effectively or efficiently, during certain modes of operation at some sources, it necessarily follows that sources should be totally exempt from emission limitations during such periods. The EPA interprets the CAA to require that SIP emission limitations be continuous. As explained in section VII.A of this document, emission limitations do not necessarily need to be expressed numerically, can have higher numerical levels during certain modes of operation, and may be composed of a combination of numerical limitations, specific technological control requirements and/or work practice requirements during certain modes of operation, so long as these emission limitations meet applicable CAA stringency requirements and are legally and practically enforceable. If it is factually accurate that a given source category requires a higher opacity limit during periods such as startup and shutdown, then the state may elect to develop one consistent with other CAA requirements. The EPA has provided guidance to states with criteria to consider in revising their SIP provisions to replace exemptions with an appropriate alternative emission limitation for such purposes. The EPA emphasizes that even if it is the case that existing control measures cannot operate, or cannot operate as effectively or efficiently, during startup and shutdown at a particular source, this does not legally justify a complete exemption from SIP emission limitations and may merely indicate that additional emission controls or work practices are necessary when the existing control measures are insufficient to meet the applicable SIP emission limitation. The EPA is taking this approach with its own recent NSPS and NESHAP regulations, when appropriate, in order to ensure that its own emission limitations are consistent with CAA requirements.

Finally, the EPA also disagrees with the logic of commenters that argued in favor of exemptions from SIP opacity limitations during periods when a source is most likely to violate them, *e.g.*, when the source's control devices are not functioning. Even if exemptions from SIP opacity emission limitations were legally permissible under the CAA, which they are not, it would be illogical to excuse compliance with the standards during the precise periods when opacity standards are most

needed to monitor source compliance with SIP emission limitations and provide incentives to avoid and promptly correct malfunctions; *i.e.*, it would be illogical to require no legal restriction on emissions when the sources are most likely to be emitting the most air pollutants. Inclusion of exemptions for exceedances of SIP opacity limitations during such periods would remove incentives to design, maintain and operate the source correctly, and to promptly correct malfunctions, in order to assure that it meets the applicable SIP emission limitations. By exempting excess emissions during such events, the provision would undermine the enforcement structure of the CAA in section 113 and section 304, through which the air agency, the EPA and citizens are authorized to assure that sources meet their obligations. The EPA emphasizes that while exemptions from SIP limitations are not permissible in SIP provisions, states may elect to impose appropriate alternative emission limitations. They may include alternative numerical limitations, control technologies or work practices that apply during modes of operation such as startup and shutdown, so long as all components of the SIP emission limitation meet all applicable CAA requirements.

t. Comments that exemptions in SIP opacity limitations should be permissible for “maintenance,” “soot-blowing” or other normal modes of source operation.

Comment: A number of industry commenters argued that the EPA should interpret the CAA to allow exemptions from SIP opacity limitations for “maintenance.” The commenters stated that during maintenance, sources must shut down operations and control devices while the source is cleaned or repaired. During such periods, the commenters explained, a ventilation system operated to protect workers at the source could result in monitored exceedances of a SIP opacity limitation. Commenters specifically argued that although COMS data may suggest violations of opacity standards during such periods, the fact that the source is not combusting fuel during maintenance should mean that the opacity emission limitation does not apply at such times. According to commenters, opacity limitations are only intended to reflect the performance of pollution control equipment while the source is operating and thus have no relevance during periods of maintenance. Other commenters made comparable arguments with respect to soot-blowing, asserting that the high opacity levels

during this activity are “indicative of normal ESP operation, not poor performance.” In other words, the commenters argued that opacity limitations should contain complete exemptions for opacity emitted during soot-blowing on the theory that the elevated emissions during this mode of operation show that the control measure on a source is functioning properly. The commenters further argued that considering emissions during soot-blowing for purposes of PM limitations is appropriate, but not for purposes of opacity limitations, because of the way in which regulators developed the respective emission limitations.

Response: The EPA does not agree that exemptions from SIP opacity limitations are appropriate for any mode of source operation, whether during SSM events or during other normal, predictable modes of source operation. To the extent that there are legitimate technological reasons why sources are able to meet only a higher opacity limitation during certain modes of operation, it does not follow that this constraint justifies complete exemption from any standard or any alternative technological control or work practice in order to reduce opacity during such periods. Providing a complete exemption for opacity during these modes of source operation, and no specific alternative emission limitation during such periods, removes incentives for sources to be properly designed, maintained and operated to reduce emissions during such periods.

With respect to maintenance, the EPA does not agree with commenters that total exemptions from opacity emission limitations during such activities are consistent with CAA requirements for SIP provisions. As the EPA has stated repeatedly in its interpretation of the CAA in the SSM Policy, maintenance activities are predictable and planned activities during which sources should be expected to comply with applicable emission limitations.²⁵⁰ The premise of the commenters advocating for such exemptions for all emissions during maintenance is evidently that nothing can be done to limit PM emissions and thus limit opacity during maintenance activities, and the EPA disagrees with that general premise. To the extent appropriate, however, states may elect

²⁵⁰ See 1982 SSM Guidance at Attachment p. 2; 1983 SSM Guidance at Attachment p. 3. The EPA notes that it also did not interpret the CAA to permit affirmative defense provisions for planned events under its prior 1999 SSM Guidance on the grounds that sources should be expected to operate in accordance with applicable SIP emission limitations during maintenance. This interpretation was upheld in *Luminant Generation v. EPA*, 714 F.3d 841 (5th Cir. 2013).

to create alternative emission limitations applicable to opacity during maintenance periods, so long as they are consistent with CAA requirements. The EPA provides recommendations for alternative emission limitations in section VII.B.2 of this document.

With respect to soot-blowing, the EPA likewise does not agree that total exemptions from opacity limitations during such periods are consistent with CAA requirements. As with maintenance in general, soot-blowing is an intentional, predictable event within the control of the source. The commenters’ implication is that nothing whatsoever could be done to limit opacity during such activities, and the EPA believes that this is both inaccurate and not a justification for sources’ being subject to no standards whatsoever during soot-blowing. In addition, the EPA disagrees with the commenters’ claim that exemptions from opacity emission limitations during soot-blowing are legally permissible because this allegedly shows that the control devices for opacity and PM are in fact performing correctly. This argument incorrectly presupposes that the sole reason for SIP opacity emission limitations is as a means of better evaluating control measure performance. This is but one reason for SIP opacity limitations. Moreover, the EPA notes, excusing opacity during soot-blowing has the diametrically opposite effect of the actual purpose of the control devices and can result in much higher emissions as opposed to encouraging limiting these emission with other forms of controls.

Finally, the EPA notes, the commenters’ argument that whether opacity limitations should apply during soot-blowing depends upon whether the emissions were or were not accounted for in the applicable PM emissions is also based upon an incorrect premise. Even if the PM emission limitation applicable to a source was developed to include the emissions during soot-blowing specifically, it does not follow that sources should be completely exempted from opacity limitations during such periods. As the commenters themselves frequently acknowledged, when compared to other enforcement tools, SIP opacity provisions often provide a much more effective and continuous means of determining source compliance with SIP PM limitations and control measure performance. A typical SIP opacity provision imposes an emission limitation such as 20 percent opacity at all times, except for 6 minutes per hour when those emissions may rise to 40 percent opacity. Well-maintained and

well-operated sources should be able to meet such SIP opacity limitations. Given that properly designed, maintained and operated sources should typically have opacity substantially below these levels, elevated opacity at a source is a good indication that the source may not be in compliance with its applicable PM limitations.

u. Comments that elimination of exemptions from SIP opacity emission limitations during SSM events will compel states to alter the averaging period of opacity limitations so as to allow sources to have elevated emissions during SSM events.

Comment: Commenters argued that if exemptions for excess emissions during SSM events are not legally permissible in SIP opacity emission limitations, then states will have no option but to alter the existing opacity limitations. The commenters argued that if the SSM exemptions are removed, then the averaging time should be “greatly extended” and the numerical limits “should be significantly increased.”

Response: The EPA agrees that SIP provisions for opacity that contain exemptions for SSM events at issue in this action must be revised to eliminate the exemptions. States may elect to do this by merely removing the exemptions, by replacing the exemptions with appropriate alternative emission limitations that apply in place of the exemptions or, as the commenters evidently advocate, by a total overhaul of the emission limitation. The EPA disagrees, however, with the commenters’ contentions that removal of the SSM exemptions would necessarily result in extensions of the averaging time or increases of the numerical levels in the existing SIP opacity emission limitations. In some cases, extension of the averaging period and elevation of the numerical limitations may in fact be appropriate. In other cases, however, it may instead be appropriate to reduce the existing numerical opacity limitations, given improvements in control technology since the original imposition of the limits and the need for additional PM emission reductions from the affected sources due to more recent revisions to the PM NAAQS. Thus, the EPA notes, a total revision of some of the SIP opacity limitations at issue in this action may indeed be the proper course for states to consider. The implications of the commenters’ argument, however, are that existing opacity limitations will automatically need to be revised in order to allow sources to continue to emit as usual and that states and sources may ignore improvements that have been made in source design, operation,

maintenance or controls to reduce emissions. The EPA emphasizes that the removal of impermissible SSM exemptions should not be perceived as an opportunity to provide new *de facto* exemptions for these emissions by manipulation of the averaging time and the numerical level of existing opacity emission limitations.

In any event, the EPA is not in this final action deciding how states must revise SIP opacity emission limitations but is merely issuing a SIP call directing the affected states to eliminate existing automatic and discretionary exemptions for excess emissions during SSM events. The affected states will elect how best to respond to this SIP call, whether by simply removing the exemptions, by replacing the exemptions with appropriate alternative emission limitations applicable to startup and shutdown or other normal modes of operation or by a complete overhaul of the SIP provision in question. In particular, where the affected sources are located in designated nonattainment areas, there may be a need to evaluate additional controls that are needed for attainment planning purposes that were not necessary when the emission limitation was first adopted. Whichever approach a state determines to be most appropriate, the resulting SIP submission to revise the existing deficient provisions will be subject to review by the EPA pursuant to sections 110(k)(3), 110(l) and 193. Considerations relevant to this issue are discussed in section X.B of this document.

B. Alternative Emission Limitations During Periods of Startup and Shutdown

1. What the EPA Proposed

In the February 2013 proposal, the EPA reiterated its longstanding interpretation of the CAA that SIP provisions cannot include exemptions from emission limitations for emissions during SSM events but may include different requirements that apply to affected sources during startup and shutdown. Since the 1982 SSM Guidance, the EPA has clearly stated that startup and shutdown are part of the normal operation of a source and should be accounted for in the design and operation of the source. Thus, the EPA has long concluded that sources should be required to meet the applicable SIP emission limitations during normal modes of operation including startup and shutdown.²⁵¹ In

the 1983 SSM Guidance, the EPA explained that it may be appropriate to exercise enforcement discretion for violations that occur during startup and shutdown under proper circumstances. In the 1999 SSM Guidance, the EPA further explained that it interprets the CAA to permit SIP emission limitations that include alternative emission limitations specifically applicable during startup and shutdown. In the context of making recommendations to states for how to address emissions during startup and shutdown, the EPA provided seven criteria for states to evaluate in establishing appropriate alternative emission limitations. The specific purpose for these recommendations was to take into account technological limitations that might prevent compliance with the otherwise applicable emission limitations. As explained in detail in the February 2013 proposal, the EPA did not intend these criteria to be the basis for the creation of exemptions from SIP emission limitations during startup and shutdown, because the Agency interprets the CAA to prohibit such exemptions.

In the February 2013 proposal, the EPA also repeated its guidance concerning establishment of alternative emission limitations that apply to sources during startup and shutdown, in those situations where the sources cannot meet the otherwise applicable SIP emission limitations. As explained in section VII.A of the February 2013 proposal, the EPA interprets the CAA to require that SIP emission limitations must be continuous and thus to prohibit exemptions for emissions during startup and shutdown. This does not, however, mean that every SIP emission limitation must be expressed as a numerical limitation or that it must impose the same limitations during all modes of source operation. The EPA’s interpretation of the CAA with respect to SIP provisions is that SIP emission limitations: (i) Do not need to be numerical in format; (ii) do not have to apply the same limitation (*e.g.*, numerical level) at all times; and (iii) may be composed of a combination of numerical limitations, specific technological control requirements and/

operation. The EPA assumes that every source is designed, maintained and operated with the expectation that the source will at least occasionally start up and shut down, and thus these modes of operation are “normal” in the sense that they are to be expected. The EPA used this term in the ordinary sense of the word to distinguish between such predictable modes of source operation and genuine “malfunctions,” which are by definition supposed to be unpredictable and unforeseen events that could not have been precluded by proper source design, maintenance and operation.

²⁵¹ Some commenters on the February 2013 proposal focused great attention on whether startup and shutdown are modes of “normal” source

or work practice requirements, with each component of the emission limitation applicable during a defined mode of source operation. Regardless of how an air agency elects to express the emission limitation, however, the emission limitation must limit emissions from the affected sources on a continuous basis. Thus, if there are different numerical limitations or other control requirements that apply during startup and shutdown, those must be clearly stated components of the emission limitation, must meet the applicable level of control required for the type of SIP provision (e.g., be RACT for sources located in nonattainment areas) and must be legally and practicably enforceable.

2. What Is Being Finalized in This Action

The EPA is reiterating its interpretation of the CAA to allow SIP emission limitations to include components that apply during specific modes of source operation, such as startup and shutdown, so long as those components together create a continuously applicable emission limitation that meets the relevant substantive requirements and requisite level of stringency for the type of SIP provision at issue and is legally and practically enforceable. In addition, the EPA is updating the specific recommendations to states for developing such alternative emission limitations described in the February 2013 proposal, by providing in this document some additional explanation and revisions to the text of its recommended criteria regarding alternative emission limitations.

The EPA's longstanding position is that the CAA does not allow SIP provisions that include exemptions from emission limitations for excess emissions that occur during startup and shutdown. The EPA reiterates that exemptions from SIP emission limitations are also not permissible for excess emissions that occur during other periods of normal source operation. A number of SIP provisions identified in the Petition create automatic or discretionary exemptions from otherwise applicable emission limitations during periods such as "maintenance," "load change," "soot-blowing," "on-line operating changes" or other similar normal modes of operation. Like startup and shutdown, the EPA considers all of these to be modes of normal operation at a source, for which the source can be designed, operated and maintained in order to meet the applicable emission limitations and during which the source should be

expected to control and minimize emissions. Accordingly, exemptions for emissions during these periods of normal source operation are not consistent with CAA requirements. Excess emissions that occur during planned and predicted periods should be treated as violations of any applicable emission limitations.

However, the EPA interprets the CAA to allow SIPs to include alternative emission limitations for modes of operation during which an otherwise applicable emission limitation cannot be met, such as may be the case during startup or shutdown. The alternative emission limitation, whether a numerical limitation, technological control requirement or work practice requirement, would apply during a specific mode of operation as a component of the continuously applicable emission limitation. For example, an air agency might elect to create an emission limitation with different levels of control applicable during specifically defined periods of startup and shutdown than during other normal modes of operation. All components of the resulting emission limitation must meet the substantive requirements applicable to the type of SIP provision at issue, must meet the applicable level of stringency for that type of emission limitation and must be legally and practically enforceable. The EPA will evaluate a SIP submission that establishes a SIP emission limitation that includes alternative emission limitations applicable to sources during startup and shutdown consistent with its authority and responsibility pursuant to sections 110(k)(3), 110(l) and 193 and any other CAA provision substantively germane to the SIP revision. Absent a properly established alternative emission limitation for these modes of operation, a source should be required to comply with the otherwise applicable emission limitation.

In addition, the EPA is providing in this document some additional explanation and clarifications to its recommended criteria for developing alternative emission limitations applicable during startup and shutdown. The EPA continues to recommend that, in order to be approvable (i.e., meet CAA requirements), alternative requirements applicable to the source during startup and shutdown should be narrowly tailored and take into account considerations such as the technological limitations of the specific source category and the control technology that is feasible during startup and shutdown. Accordingly, the EPA continues to recommend the seven specific criteria

enumerated in section III.A of the Attachment to the 1999 SSM Guidance as appropriate considerations for SIP provisions that establish alternative emission limitations that apply to startup and shutdown. The EPA repeated those criteria in the February 2013 proposal as guidance to states for developing components of emission limitations that apply to sources during startup, shutdown or other specific modes of source operation to meet CAA requirements for SIP provisions.

Comments received on the February 2013 proposal suggested that the purpose of the recommended criteria may have been misunderstood by some commenters. The criteria were phrased in such a way that commenters may have misinterpreted them to be criteria to be applied by a state retrospectively (i.e., after the fact) to an individual instance of emissions from a source during an SSM period, in order to establish whether the source had exceeded the applicable emission limitation. This was not the intended purpose of the recommended criteria at the time of the 1999 SSM Guidance, nor is it the intended purpose now.

The EPA seeks to make clear in this document that the recommended criteria are intended as guidance to states developing SIP provisions that include emission limitations with alternative emission limitations applicable to specifically defined modes of source operation such as startup and shutdown. A state may choose to consider these criteria in developing such a SIP provision. The EPA will use these criteria when evaluating whether a particular alternative emission limitation component of an emission limitation meets CAA requirements for SIP provisions. Any SIP revision establishing an alternative emission limitation that applies during startup and shutdown would be subject to the same procedural and substantive review requirements as any other SIP submission.

Based on comment on the February 2013 proposal, the EPA is updating the criteria to make clear that they are recommendations relevant for development of appropriate alternative emission limitations in SIP provisions. Thus, in this document, the EPA is providing a restatement of its recommended criteria that reflects clarifying but not substantive changes to the text of those criteria. One clarifying change is removal of the word "must" from the criteria, to better convey that these are recommendations to states concerning how to develop an approvable SIP provision with alternative requirements applicable to

startup and shutdown and to make clear that other approaches might also be consistent with the CAA in particular circumstances.

The clarified criteria for developing and evaluating alternative emission limitations applicable during startup and shutdown are as follows:

(1) The revision is limited to specific, narrowly defined source categories using specific control strategies (e.g., cogeneration facilities burning natural gas and using selective catalytic reduction);

(2) Use of the control strategy for this source category is technically infeasible during startup or shutdown periods;

(3) The alternative emission limitation requires that the frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable;

(4) As part of its justification of the SIP revision, the state analyzes the potential worst-case emissions that could occur during startup and shutdown based on the applicable alternative emission limitation;

(5) The alternative emission limitation requires that all possible steps are taken to minimize the impact of emissions during startup and shutdown on ambient air quality;

(6) The alternative emission limitation requires that, at all times, the facility is operated in a manner consistent with good practice for minimizing emissions and the source uses best efforts regarding planning, design, and operating procedures; and

(7) The alternative emission limitation requires that the owner or operator's actions during startup and shutdown periods are documented by properly signed, contemporaneous operating logs or other relevant evidence.

It may be appropriate for an air agency to establish alternative emission limitations that apply during modes of source operation other than during startup and shutdown, but any such alternative emission limitations should be developed using the same criteria that the EPA recommends for those applicable during startup and shutdown.

3. Response to Comments

The EPA received a number of comments, both supportive and adverse, concerning the issue of how air agencies may replace existing exemptions for emissions during SSM events with alternative emission limitations that apply during startup, shutdown or other normal modes of source operation. The majority of these comments were critical of the EPA's position but did not base this criticism on an interpretation of

specific CAA provisions. For clarity and ease of discussion, the EPA is responding to these comments, grouped by issue, in this section of this document.

a. Comments that as a technical matter sources cannot meet emission limitations (or cannot be accurately monitored) during startup and shutdown.

Comment: Several commenters claimed that as a technical matter, SIP emission limitations cannot be met or that monitoring to ensure compliance with emission limitations cannot occur during startup and shutdown. Commenters raised "practical concerns" with the EPA's proposal as it applies to emissions during SSM at electric generating units (EGUs). The commenters claimed that it is incorrect to treat periods of startup and shutdown as part of "normal source operation" and claimed that it is fundamentally incorrect to characterize all periods of startup and shutdown as planned events. The commenters claimed that many air pollution control devices (APCDs) are subject to technical, operational or safety constraints that prevent use or optimization during startup and shutdown periods. The commenters requested the EPA to continue the practice of allowing states to provide "protection" from enforcement for excess emissions during startup and shutdown. The commenters claimed that the EPA's premise for this action is that startup and shutdown events are planned and sources should be able to meet limits applicable during these normal operations. The commenters asserted that the proposal does not recognize technical and operational limits and that it conflicts with the EPA's own acknowledgement in the proposal that there are sometimes technical, operational and safety limits that may prevent compliance with emission limitations during startup and shutdown. The commenters also noted that the type of equipment that a control device is attached to may affect the time it takes for a control device to reach optimization. Further, the commenters identified control technologies that cannot achieve reductions until specific temperatures are reached and other technologies that cannot be used during startup and/or shutdown because of technical limitations or safety concerns. Finally, the commenters noted that the geographical location and/or weather can have an effect on the operation of a source and control devices during startup and shutdown.

Commenters raised specific concerns regarding pollution controls for EGUs. The commenters claimed that startup

and shutdown events are unavoidable at EGUs even though they may be planned. The commenters also attached appendices providing an explanation of why emissions are higher for startup and shutdown for certain types of EGUs. The commenters claimed that the "EPA's proposal to eliminate the States' SSM provisions, and prohibit them from adopting any provisions for startups and shutdowns, could force sources to comply with emission limitations during periods when they were never meant to apply, thus rendering those emissions limitations unachievable." The commenters also noted that the permits for their sources all require that the sources minimize the magnitude and duration of emissions during SSM. The implication of this latter comment is that a general duty to minimize emissions is sufficient to justify the exemption of all emissions during SSM events in the underlying SIP provisions.

Response: Although intended as criticism of the EPA's proposed action, these comments in fact support the Agency's position that states should consider startup and shutdown events as they promulgate standards for specific industries or even for specific sources. The commenters seem to suggest that because some equipment or sources cannot during startup and shutdown meet the emission limits that apply during "regular" operation, no limit or standards should apply during startup and shutdown. The EPA disagrees. As the court in *Sierra Club* held, emission limitations must apply at "all times." That is not to say that the emission limitation must impose the same numerical limitation or impose the same other control requirement at all times. As explained at length in section VII.A of this document, the EPA interprets the CAA to allow SIP emission limitations that may be a combination of numerical limitations, technological control measures and/or work practice requirements, so long as the resulting emission limitations are properly developed to meet CAA requirements and are legally and practically enforceable. As the commenters noted, the EPA does recognize that some control equipment cannot be operated at all or in the same manner during every mode of normal operations.

In its 1999 SSM Guidance, the EPA expressly recognized that an appropriate way for a state to address such technological limitations is to set alternative emission limitations that apply during periods of startup and shutdown as part of the SIP emission

limitation.²⁵² In these cases the state should consider how the control equipment works in determining what standards should apply during startup and shutdown. In addition, as noted by commenters, such standards may vary based on location (e.g., standards in a hot and humid area may differ from those adopted for a cool and dry area). Some equipment during startup and shutdown may be unable to meet the same emission limitation that applies during steady-state operations and so alternative limitations for startup and shutdown may be appropriate.²⁵³

However, for many sources, it should be feasible to meet the same emission limitation that applies during steady-state operations also during startup and shutdown.²⁵⁴ These are issues for the state to consider in developing specific regulations as they revise the deficient SIP provisions identified in this action. The EPA emphasizes that the state has discretion to determine the best means by which to revise a deficient provision to eliminate an automatic or discretionary SSM exemption, so long as that revision is consistent with CAA requirements. The EPA will work with the states as they consider possible revisions to deficient provisions.

The EPA recognizes that a malfunction may cause a source to shut down in a manner different than in a planned shutdown, and in that case, such a shutdown would typically be considered part of the malfunction event. However, as part of the normal operation of a facility, sources typically will also have periodic or otherwise scheduled startup and shutdown of equipment, and steps to limit emissions during this type of event are or can be planned for. The EPA disagrees with the suggestion of commenters that because some startup or shutdown events may be unplanned, all startup and shutdown events should be exempt from compliance with any requirements. For those events that are planned, the state

should be able to establish requirements to regulate emissions, such as a numerical limitation, technological control measure or work practice standard that will apply as a part of the revised emission limitation. When unplanned startup or shutdown events are part of a malfunction, they should be treated the same as a malfunction; however, as with malfunctions, startup and shutdown events cannot be exempted from compliance with SIP requirements. Questions of liability and remedy for violations that result from malfunctions are to be resolved in the context of an enforcement action, if such an action occurs.

b. Comments that it is impossible, unreasonable or impractical for states to develop emission limitations that apply during startup and shutdown to replace existing exemptions.

Comment: A number of commenters suggested that it will be difficult for states to develop emission limits that apply during startup and shutdown. One state commenter reasoned that alternative emission limits are applied to facilities in that state through individual permits on a case-by-case basis and claimed that there are 500 permitted facilities in the state. The commenter contended that “non-steady-state” limits would need to be set for startup and shutdown for all 500 permitted facilities and that such an effort would be “time, resource, and data intensive.” The state commenter further contended that it would be unreasonable to require the state to include such limits “for every source” in the SIP because “permit modifications would need to occur every time there is a new emission source, a source ceases to operate, or an emission-related regulation is changed.”

A local government commenter stated that to establish limits for startup and shutdown that also demonstrate compliance with the NSR regulations (including protection of the NAAQS and PSD increments and maintenance of BACT or LAER) would be a difficult, time-consuming task that was mostly impractical.

An industry commenter claimed that the EPA is encouraging states to adopt numerical alternative emission limitations in their SIP provisions that would apply during startup and shutdown. The commenter claimed that adequate and accurate emissions data are necessary to do so and that such information is not generally available for existing equipment or, in many cases, for new equipment. Furthermore, the commenter asserted, even if an emission limit could be established for startup and shutdown, there are no

current approved test measures to verify compliance during such modes of operation. Even where data are available, the commenter alleged, the data may not be representative of actual conditions because of limitations related to low-load conditions. If a state lacks information to conclude that a limit can be met, the commenter argued, the state should not be required to establish numerical limits but should instead be allowed “to specify that numerical standards do not apply to those conditions or that those conditions are exempt, or should be allowed to establish work practice standards.”

Response: The comments of the state commenter seem to be based on the premise that all sources will be unable to meet otherwise applicable SIP emission limitations during periods of startup and shutdown. The EPA anticipates that many types of sources should be able during startup and shutdown to meet the same emission limitation that applies during full operation. Additionally, even where a specific type of operation may not during startup and/or shutdown be able to meet an emission limitation that applies during full operation, the state should be able to develop appropriate limitations that would apply to those types of operations at all similar types of facilities. The EPA believes that there will be limited, if any, cases where it may be necessary to develop source-specific emission requirements for startup and/or shutdown. In any event, this is a question that is best addressed by each state in the context of the revisions to the SIP provisions at issue in this action. To the extent that there are appropriate reasons to establish an emission limitation with alternative numerical, technological control and/or work practice requirements during startup or shutdown for certain categories of sources, this SIP call action provides the state with the opportunity to do so.

As to the commenter’s concern that such alternative emission limitations should not be included in a state’s SIP, the EPA disagrees. The SIP needs to reflect the control obligations of sources, and any revision or modification of those obligations should not be occurring through a separate process, such as a permit process, which would not ensure that “alternative” compliance options do not weaken the SIP. The SIP is a combination of state statutes, regulations and other requirements that the EPA approves for demonstrating attainment and maintenance of the NAAQS, protection of PSD increments, improvement of visibility and compliance with other

²⁵² See 1999 SSM Guidance, Attachment at 4–5.

²⁵³ The EPA notes that it has taken this approach in its own recent actions establishing emission limitations for sources. See, e.g., “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final rule; notice of final action on reconsideration,” 78 FR 7137 (January 31, 2013) (example of work practice requirement for startup as a component of a continuous emission limitation).

²⁵⁴ The EPA notes that it has taken this approach in its own recent actions establishing emission limitations for sources. See, e.g., “National Emission Standards for Hazardous Air Pollutants Residual Risk and Technology Review for Flexible Polyurethane Foam Production; Final rule,” 79 FR 48073 (August 15, 2014) (example of NESHAP emission limitation that is continuous and does not include a different component for periods of startup or shutdown).

CAA requirements. As discussed in section X.B of this document, any revisions to obligations in the SIP need to occur through the SIP revision process and must comply with sections 110(k)(3), 110(l) and 193 and any other applicable substantive requirements of the CAA.

As to concerns that a SIP revision will be necessary every time a new source comes into existence, an existing source is permanently retired or a new regulation is promulgated, the EPA does not see these as significant concerns. Unless the startup or shutdown process for an individual source is truly unique to that source, then existing SIP provisions for sources within the same industrial category should be able to apply to any new source. Moreover, assuming any new source is subject to permitting obligations, then any applicable startup and shutdown issues should already be resolved in developing the permit for such source. The state could choose to incorporate that permit by reference into the SIP at the time it next modifies its SIP. Further, assuming that there is a source-specific regulation for a source in the SIP (a circumstance that the EPA believes would occur only rarely), the state is not obligated to remove such provision when the source is retired. Rather, the state could leave the provision in its rules or remove such a provision the next time it submits another SIP revision or when it chooses to do a "cleanup" of the SIP, an activity that numerous states have taken from time to time. Finally, whenever a new regulation is promulgated is precisely the time that a state should be considering the appropriate provisions that would apply during startup and shutdown, as that is the time when the state is considering what is necessary to comply with the CAA and what is necessary to meet attainment, maintenance or other requirements of the CAA.

The local government commenter contended that establishing limits for startup and shutdown that also demonstrate compliance with the NSR regulations (including protection of the NAAQS and PSD increments and imposition of BACT- or LAER-level controls) would be a difficult, time-consuming task that was impractical. The commenter did not provide an explanation of how this would be difficult. The implication of the comment is that a SIP provision that provides an exemption or an affirmative defense for emissions during startup and shutdown would be compliant with the statutory requirements and NSR regulations (including attainment of the

NAAQS and protecting PSD increments). That is incorrect because the EPA does not interpret the CAA to allow such exemptions or affirmative defenses for purposes of NSR regulations. The suggestion that a SIP provision that does not regulate emissions during startup and shutdown would be more likely to address NAAQS attainment and to protect PSD increments than would a SIP provision that does regulate such emissions is illogical. The EPA further notes that the Agency's interpretation of the CAA, explicitly set forth in a 1993 guidance document, has been that periods of startup and shutdown must be addressed in any new source permit.²⁵⁵ Moreover, the EPA explained in the February 2013 proposal, in the SNPR and in the background memorandum accompanying the February 2013 proposal concerning the legal basis for this action why exemptions and affirmative defenses applicable to emissions during SSM events are not consistent with CAA requirements for SIP provisions.

c. Comments that the EPA should "authorize" states to replace SSM exemptions with "work practice" standards developed by the EPA in its own recent NESHAP and NSPS rules.

Comment: Commenters suggested that the EPA should allow states to use work practice standards to address emissions during startup and shutdown. The NESHAP rules cited by commenters included the Industrial Boiler MACT rule²⁵⁶ and the MATS rule, and the NSPS rules cited by the commenters included the NSPS for Electric Utility Steam Generating Units (40 CFR part 60, subpart Da) and the gas turbine NSPS as examples of where the EPA itself has established work practice standards rather than numerical emission limitations for periods of startup and shutdown. The commenters suggested that where these work practice standards are already in place, states should be able to rely on the work practice standards rather than having to create new SIP provisions.

Response: The EPA agrees that states may adopt work practice standards to address periods of startup and shutdown as a component of a SIP emission limitation that applies continuously. Adoption of work practice standards from a NESHAP or NSPS as a component of an emission

limitation to satisfy SIP requirements is addressed in this document not as a requirement or even as a recommendation but rather as an approach that a state may use at its option. The EPA cannot foretell the extent to which this optional approach of adopting other existing standards to satisfy SIP requirements may benefit an individual state. For a state choosing to use this approach, such work practice standards must meet the otherwise applicable CAA requirements (e.g., be a RACT-level control for the source as part of an attainment plan requirement) and the necessary parameters to make it legally and practically enforceable (e.g., have adequate recordkeeping, reporting and/or monitoring requirements to assure compliance). However, it cannot automatically be assumed that emission limitation requirements in recent NESHAP and NSPS are appropriate for all sources regulated by SIPs. The universe of sources regulated under the federal NSPS and NESHAP programs is not identical to the universe of sources regulated by states for purposes of the NAAQS. Moreover, the pollutants regulated under the NESHAP (i.e., HAPs) are in many cases different than those that would be regulated for purposes of attaining and maintaining the NAAQS, protecting PSD increments, improving visibility and meeting other CAA requirements.²⁵⁷ Thus, the EPA cannot say as a matter of law that those federal regulations establish emission limitation requirements appropriate for all of the sources that states are regulating in their SIPs or for the purpose for which they are being regulated. The EPA believes, however, that those federal regulations and the technical materials in the public record for those rules may provide assistance for states as they develop and consider regulations for sources in their states and may be appropriate for adoption by the state in certain circumstances. In particular, the NSPS regulations should provide very relevant information for sources of the same type, size and control equipment type, even if the sources were not constructed or modified within a date range that would make them subject to the NSPS. The EPA therefore encourages states to explore these approaches, as well as any other relevant information available, in

²⁵⁵ See Memorandum from John B. Rasnic, EPA/OAQPS, January 28, 1993, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0022.

²⁵⁶ The Industrial Boiler MACT rule regulates industrial, commercial and institutional boilers and process heaters at major sources under 40 CFR part 63, subpart DDDDD.

²⁵⁷ While some HAPs are also VOCs or particulate matter, many HAPs are not. Moreover, there are many VOCs and types of particulate matter that are not HAPs and thus are not regulated under the MACT standards. The MACT standards also do not address other criteria pollutants or pollutant precursors from sources that may be relevant for SIP purposes.

determining what is appropriate for revised SIP provisions.

d. Comments that if states remove existing SSM exemptions and replace them with alternative emission limitations that apply during startup and shutdown events, this would automatically be consistent with the requirements of CAA section 193.

Comment: Commenters stated that section 193 was included in the CAA to prohibit states from modifying regulations in place prior to November 15, 1990, unless the modification ensures equivalent or greater reductions of the pollutant. The commenters asserted that to the extent a state replaces “general excess emissions exclusions and/or affirmative defense provisions” such amendments would *per se* be more stringent than the provisions they replace. The commenters also contended that any replacement SIP provision that spells out more clearly how a source will operate ensures equivalent or greater emission reductions. The commenters urged the EPA to clarify that any revisions pursuant to a final SIP call would not be considered “backsliding.”

Response: The EPA agrees with the commenters that any SIP submission made by a state in response to this SIP call action will need to comply with the requirements of section 193 of the CAA, if that section applies to the SIP provision at issue. In addition, such SIP provision will also need to comply with section 110(l), which requires that SIP revisions do not interfere with attainment, reasonable progress or any other applicable requirement of the CAA. However, it is premature to draw the conclusion that any SIP revision made by a state in response to this SIP call will automatically meet the requirements of section 110(l) and section 193. Such a conclusion could only be made in the context of reviewing the actual SIP revision. The EPA will address this issue, for each SIP revision in response to this SIP call action, at the time that it proposes and finalizes action on the SIP revision, and any comments on this issue can be raised during those individual rulemaking actions. The EPA provides additional guidance to states on the analysis needed to comply with section 110(l) and section 193 in section X.B of this document.

C. Director's Discretion Provisions Pertaining to SSM Events

1. What the EPA Proposed

In the February 2013 proposal, the EPA stated and explained in detail the reasons for its belief that the CAA

prohibits unbounded director's discretion provisions in SIPs, including those provisions that purport to authorize unilateral revisions to, or exemptions from, SIP emission limitations for emissions during SSM events.²⁵⁸

2. What Is Being Finalized in This Action

The EPA is reiterating its interpretation of the CAA with respect to unbounded director's discretion provisions applicable to emissions during SSM events, which is that SIP provisions cannot contain director's discretion to alter SIP requirements, including those that allow for variances or outright exemptions for emissions during SSM events. This interpretation has been clear with respect to emissions during SSM events in the SSM Policy since at least 1999. In the 1999 SSM Guidance, the EPA stated that it would not approve SIP revisions “that would enable a State director's decision to bar EPA's or citizens' ability to enforce applicable requirements.”²⁵⁹ Director's discretion provisions operate to allow air agency personnel to make just such unilateral decisions on an *ad hoc* basis, up to and including the granting of complete exemptions for emissions during SSM events, thereby negating any possibility of enforcement for what would be violations of the otherwise applicable emission limitation. Given that the EPA interprets the CAA to bar exemptions from SIP emission limitations for emissions during SSM events in the first instance, the fact that director's discretion provisions operate to authorize these exemptions on an *ad hoc* basis compounds the problem. The EPA acknowledges, however, that both states and the Agency have, in some instances, failed to adhere to the requirements of the CAA with respect to this issue consistently in the past, and thus the need for this SIP call to correct existing deficiencies in SIPs.²⁶⁰ In order to be clear about its interpretation of the CAA with respect to this point on a going-forward basis, the EPA is reiterating in this action that SIP provisions cannot contain unbounded director's discretion provisions, including those that operate to allow for variances or outright exemptions from

SIP emission limitations for excess emissions during SSM events.

Many commenters on the February 2013 proposal opposed the EPA's interpretation of the CAA with respect to director's discretion provisions simply on the grounds that states are *per se* entitled to have unfettered discretion with respect to the content of their SIP provisions. Other commenters argued that any director's discretion provision is merely a manifestation of an air agency's general “enforcement discretion.” Some commenters simply asserted that recent court decisions by the Fifth Circuit definitively establish that the CAA does not prohibit SIP provisions that include director's discretion, regardless of whether those provisions contain any limitations whatsoever on the exercise of that discretion.²⁶¹ The commenters did not, however, address the specific statutory interpretations that the EPA set forth in the February 2013 proposal to explain why SIP provisions that authorize unlimited director's discretion are prohibited by CAA provisions applicable to SIP revisions.

As explained in detail in the February 2013 proposal and in section VII.C of this document, the EPA interprets the CAA to prohibit SIP provisions that include unlimited director's discretion to alter the SIP emission limitations applicable to sources, including those that operate to allow exemptions for emissions from sources during SSM events. The EPA believes that such provisions that operate to authorize total exemptions from emission limitations on an *ad hoc* basis are especially problematic. Given that the EPA interprets section 110(a)(2)(A) and section 302(k) to preclude exemptions for emissions during SSM events in emission limitations in the first instance, it is also impermissible for states to have SIP provisions that authorize such exemptions on an *ad hoc* basis. These provisions functionally allow the air agency to impose its own enforcement discretion decisions on the EPA and other parties by granting exemptions for emissions that should be treated as violations of the applicable SIP emission limitations. Provisions that functionally allow such exemptions are also inconsistent with requirements of the CAA related to enforcement

²⁵⁸ See February 2013 proposal, 78 FR 12459 at 12485–86.

²⁵⁹ See 1999 SSM Guidance at 3.

²⁶⁰ In this action, the EPA is addressing the specific SIP provisions with director's discretion provisions that the Petitioner listed in the Petition. In the event that there are other such impermissible director's discretion provisions in existing SIPs, the EPA will address those provisions in a later action.

²⁶¹ For example, commenters on the February 2013 proposal cited two decisions of the Fifth Circuit within which the court cited a prior EPA approval of a SIP revision in Georgia that contained director's discretion provisions supposedly comparable to those at issue in the Fifth Circuit cases. These provisions were not included in the Petition and the EPA is not reexamining those provisions as part of this action.

including: (i) The general requirements of section 110(a)(1) that SIPs provide for enforcement; (ii) the section 110(a)(2)(A) requirement that the specific emission limitations and other contents of SIPs be enforceable; and (iii) the section 110(a)(2)(C) requirement that SIPs contain a program to provide for enforcement. Moreover, these provisions operate to interfere with the enforcement structure of the CAA provided in section 113 and section 304, through which the EPA and other parties have authority to seek enforcement for violations of CAA requirements, including SIP emission limitations.

There are two ways in which such a provision can be consistent with CAA requirements: (1) When the exercise of director's discretion by the state agency to alter or eliminate the SIP emission limitation can have no effect for purposes of federal law unless and until the EPA ratifies that state action with a SIP revision; or (2) when the director's discretion authority is adequately bounded such that the EPA can ascertain in advance, at the time of approving the SIP provision, how the exercise of that discretion to alter the SIP emission limitations for a source could affect compliance with other CAA requirements. If the provision includes director's discretion that could result in violation of any other CAA requirement for SIPs, then the EPA cannot approve the provision consistent with the requirements of section 110(k)(3) and section 110(l). For example, a director's discretion provision that authorizes state personnel to excuse source compliance with SIP emission limitations during SSM events could not be approved because the provision would run afoul of the requirement that sources be subject to emission limitations that apply continuously, consistent with section 302(k).

3. Response to Comments

The EPA received a number of comments, both supportive and adverse, concerning the issue of director's discretion provisions in SIPs. The majority of these comments were critical of the EPA's position but did not base this criticism on an interpretation of specific CAA provisions. For clarity and ease of discussion, the EPA is responding to these comments, grouped by issue, in this section of this document.

a. Comments that broad state discretion in how to develop SIP provisions includes the authority to create provisions that include director's discretion variances or exemptions for excess emission during SSM events.

Comment: A number of state and industry commenters argued that because states have great discretion when developing SIP provisions in general, this necessarily includes the ability to create director's discretion provisions in SIPs that authorize state personnel to grant unilateral variances or exemptions for emissions during SSM events. According to commenters, the overarching principle of "cooperative federalism" and court decisions concerning the division of regulatory responsibilities between the states and the EPA support their view that states can create SIP provisions that provide authority to alter the SIP emission limitations or other requirements via director's discretion provisions without restriction.

Response: The EPA disagrees with the commenters' view that director's discretion provisions in SIPs are *per se* permissible because of the principles of cooperative federalism. As explained in more detail in section V.D.2 of this document, states and the EPA each have authorities and responsibilities under the CAA. With respect to SIPs, under section 107(a) the states have primary responsibility for assuring attainment of the NAAQS within their borders. Under section 110(a) the states have a statutory duty to develop and submit a SIP that provides for the attainment, maintenance and enforcement of the NAAQS, as well as meeting many other CAA requirements and objectives. The specific procedural and substantive requirements that states must meet for SIPs are set forth in section 110(a)(1) and section 110(a)(2) and in other more specific requirements throughout the CAA (e.g., the attainment plan requirements for each of the NAAQS as specified in part D). By contrast, the EPA has its own statutory authorities and responsibilities, including the obligation to review new SIP submissions for compliance with CAA procedural and substantive requirements pursuant to sections 110(k)(3), 110(l) and 193. In addition, the EPA has authority to assure that previously approved SIP provisions continue to meet CAA requirements, whether through the SIP call authority of section 110(k)(5) or the error correction authority of section 110(k)(6).

As the EPA explained in detail in the February 2013 proposal, SIP provisions that include unbounded director's discretion to alter the otherwise applicable emission limitations are inconsistent with CAA requirements. Such provisions purport to authorize air agency personnel unilaterally to change or to eliminate the applicable SIP emission limitations for a source

without meeting the requirements for a SIP revision. Pursuant to the EPA's own responsibilities under sections 110(k)(3), 110(l) and 193 and any other CAA provision substantively germane to the specific SIP provision at issue, it would be inappropriate for the Agency to approve a SIP provision that automatically preauthorized the state unilaterally to revise the SIP emission limitation without meeting the applicable procedural and substantive statutory requirements for a SIP revision. Section 110(i) prohibits modification of SIP requirements for stationary sources by either the state or the EPA, except through specified processes. The EPA's implementing regulations applicable to SIP provisions likewise impose requirements for a specific process for the approval of SIP revisions.²⁶² In addition, section 116 explicitly prohibits a state from adopting or enforcing regulations for sources that are less stringent than what is required by the emission limitations in its SIP, *i.e.*, the emission limitation previously approved by the EPA as meeting the requirements of the CAA applicable to that specific SIP provision. It is a fundamental tenet of the CAA that states cannot unilaterally change SIP provisions, including the emission limitations within SIP provisions, without the EPA's approval of the change through the appropriate process. This core principle has been recognized by multiple courts.²⁶³

b. Comments that director's discretion provisions are an exercise of "enforcement discretion."

Comment: Several state and industry commenters asserted that the EPA was wrong to interpret the CAA to preclude director's discretion provisions, because such provisions are merely an exercise of a state's traditional "enforcement discretion."

Response: The EPA disagrees that a director's discretion provision in a SIP is a valid exercise of enforcement discretion. Normally, the concept of enforcement discretion is understood to mean that a regulator has discretion to determine whether a specific violation

²⁶² See, e.g., 40 CFR 51.104(d) and 40 CFR 51.105.

²⁶³ See, e.g., *Sierra Club v. TVA*, 430 F.3d 1337, 1346 (11th Cir. 2005) ("If a state wants to add, delete, or otherwise modify a SIP provision, it must submit the proposed change to EPA for approval"); *Duquesne Light Co. v. EPA*, 698 F.2d 456, 468 n.12 (D.C. Cir. 1983) ("with certain enumerated exceptions, states do not have the power to take any action modifying any requirement of their SIPs, without approval from EPA"); *Train v. NRD*, 421 U.S. 60, 92 (1975) ("[A] polluter is subject to existing requirements until such time as he obtains a variance, and variances are not available under the revision authority until they have been approved by both the State and the Agency").

of the law by a source warrants enforcement and to determine the nature of the remedy to seek for any such violation. The EPA of course agrees that states have enforcement discretion of this type and that the states may exercise such enforcement discretion as they see fit, as does the Agency itself. However, the EPA does not agree that air agencies may create SIP provisions that operate to eliminate the ability of the EPA or citizens to enforce the emission limitations of the SIP. The EPA stated clearly in the 1999 SSM Guidance that it would not approve SIP provisions that “would enable a State director’s decision to bar EPA’s or citizens’ ability to enforce applicable requirements.”²⁶⁴ The Agency explained at that time that such an approach is inconsistent with the requirements of the CAA applicable to the enforcement of SIPs.

The commenters’ argument was that states may create SIP provisions through which they may unilaterally decide that the emissions from a source during an SSM event should be exempted, such that the emissions cannot be treated as a violation by anyone. A common formulation of such a provision provides only that the source needs to notify the state regulatory agency that an exceedance of the emission limitations occurred and to report that the emissions were the result of an SSM event. If those minimal steps occur, then such provisions commonly authorize state personnel to make an administrative decision that the emissions in question were not a “violation” of the applicable emission limitation. It may be entirely appropriate for the state agency to elect not to bring an enforcement action based on the facts and circumstances of a given SSM event, as a legitimate exercise of its own enforcement discretion. However, by creating a SIP provision that in effect authorizes the state agency to alter or suspend the otherwise applicable SIP emission limitations unilaterally through the granting of exemptions, the state agency would functionally be revising the SIP with respect to the emission limitations on the source. This revision of the applicable emission limitation would have occurred without satisfying the requirements of the CAA for a SIP revision. As a result of this *ad hoc* revision of the SIP emission limitation, the EPA and other parties would be denied the ability to exercise their own enforcement discretion. This is contrary to the fundamental enforcement structure of the CAA, as provided in

section 113 and section 304, through which the EPA and other parties are authorized to bring enforcement actions for violations of SIP emission limitations. The state’s decision not to exercise its own enforcement discretion cannot be a basis on which to eliminate the legal rights of the EPA and other parties to seek to enforce.

The commenters also suggested that the director’s discretion provisions authorizing exemptions for SSM events are nonsegregable parts of the emission limitations, *i.e.*, that states have established the numerical limitations at overly stringent levels specifically in reliance on the existence of exemptions for any emissions during SSM events. Although commenters did not provide facts to support the claims that states set more stringent emission limitations in reliance on SSM exemptions, in general or with respect to any specific emission limitation, the EPA acknowledges that this could possibly have been the case in some instances. Even if a state had taken this approach, however, it does not follow that SIP provisions containing exemptions for SSM events are legally permissible. Emission limitations in SIPs must be continuous. When a state takes action in response to this SIP call to eliminate the director’s discretion provisions or otherwise to revise them, the state may elect to overhaul the emission limitation entirely in order to address this concern. So long as the resulting revised SIP emission limitation is continuous and meets the requirements of sections 110(k)(3), 110(l) and 193 and any other sections that are germane to the type of SIP provision at issue, the state has discretion to revise the provision as it determines best.

c. Comments that the EPA’s having previously approved a SIP provision that authorizes the granting of variances or exemptions for SSM events through the exercise of director’s discretion renders the provision consistent with CAA requirements.

Comment: Several state and industry commenters argued that the EPA’s past approval of a SIP provision with a director’s discretion feature automatically means that the exercise of that authority (whether to revise the applicable SIP emission limitations unilaterally or to grant *ad hoc* exemptions from SIP emission limitations) is valid under the CAA. One commenter asserted that because the EPA has previously approved such a provision, “that discretion is itself part of the SIP, and the exercise of discretion in no way modifies SIP requirements.” Another commenter argued that director’s discretion provisions in SIPs

are *per se* valid because “[a]ll of the SIP provisions went through a public procedure at the time of their initial SIP approval.”

Response: First, the EPA disagrees with the theory that a SIP provision that includes director’s discretion authority for state personnel to modify or grant exemptions from SIP emission limitations unilaterally is valid merely by virtue of the fact that the Agency previously approved it. By definition, when the EPA makes a finding of substantial inadequacy and issues a SIP call, that signifies that the Agency previously approved a SIP provision that does not meet CAA requirements, whether that deficiency existed at the time of the original approval or arose later. The EPA has explicit authority under section 110(k)(5) to require that a state eliminate or revise a SIP provision that the Agency previously approved, whenever the EPA finds an existing SIP provision to be substantially inadequate to meet CAA requirements. The fact that the EPA previously approved it does not mean that a deficient provision may remain in the SIP forever once the Agency determines that it is deficient.

Second, the EPA disagrees that the fact that a SIP provision underwent public process at the time of its original creation by the state, or at the time of its approval by EPA as part of the SIP, means *per se* that the provision is consistent with CAA requirements. If an existing SIP provision is deficient because it in effect allows a state to revise existing SIP emission limitations without meeting the many explicit statutory requirements for a SIP revision, the fact that the revision that created the impermissible provision itself met the proper procedural requirements for a SIP revision is irrelevant. Even perfect compliance with the procedural requirements for a SIP revision at the time of its development by the state or its approval by the EPA does not override a substantive deficiency in the provision, nor does it preclude the later issuance of a SIP call to correct a substantive deficiency.

Third, the EPA disagrees with the circular logic that because a deficient provision with director’s discretion currently exists in a SIP, it means that exercise of the director’s discretion to grant variances or outright exemptions to sources for emissions during SSM events is therefore consistent with CAA requirements for SIPs. An unbounded director’s discretion provision that authorizes an air agency to alter or eliminate the otherwise applicable SIP emission limitation functionally allows the state to revise the SIP emission

²⁶⁴ 1999 SSM Guidance at 3.

limitation without meeting the requirements for a SIP revision. In particular, when such provisions authorize state personnel to grant outright exemptions from the SIP emission limitations, this is tantamount to a revision of the SIP emission limitation without complying with the procedural and substantive requirements of the CAA applicable to SIP revisions, including section 110(l), section 193 and any other substantive requirements applicable to the particular SIP emission limitation in question.

d. Comments that director's discretion provisions in SIPs are not prohibited by the CAA, based on recent judicial decisions.

Comment: A number of state and industry commenters argued that nothing in the CAA explicitly prohibits states from having SIP provisions that include director's discretion authorization for state personnel to modify or eliminate existing SIP provisions unilaterally, with or without any process or within any limiting parameters. In support of this proposition, the commenters cited recent decisions of the Fifth Circuit in two cases concerning the EPA's disapproval of SIP submissions from the state of Texas. Commenters argued that the EPA's interpretation of the CAA to prohibit director's discretion provisions in SIPs is incorrect in light of the decision of the court in *Texas v. EPA*.²⁶⁵ According to commenters, the court's decision establishes that no provision of the CAA bars such provisions. To support this contention, one commenter quoted the court's decision extensively, highlighting the statement, "... the EPA has invoked the term 'director discretion' as if that term were an independent and authoritative standard, and has not linked the term to the language of the CAA." Similarly, the commenters cited another decision of that court in the *Luminant* director's discretion case.²⁶⁶ From that decision, commenters quoted the court's statement that the "EPA had no legal basis to demand 'replicable' limitations on the Director's discretion" and the succeeding sentence, "[n]ot once in its proposed or final disapproval, or in its argument before this court, has the EPA pointed to any applicable provision of the Act or its regulations that includes a 'replicability' standard." These

commenters did not, however, address the specific statutory provisions identified by the EPA in the February 2013 proposal and the explanation that the Agency provided with respect to this issue.

Response: The EPA disagrees that either decision cited by commenters stands for the definitive proposition they assert, *i.e.*, that director's discretion provisions in SIPs are not precluded by the CAA. In *Luminant Generation Co. v. EPA* (the *Luminant* director's discretion case), the court evaluated the EPA's disapproval of a SIP submission from the state of Texas that created SIP provisions to implement minor source permitting requirements. The EPA disapproved the SIP submission for several reasons, one of which was based on the director's discretion provision prohibiting use of the standard permit for a pollution control project that the director determines raises health concerns or threatens the NAAQS. The EPA was concerned that this provision gave the director of the state agency discretion to make case-by-case decisions about what the specific permit terms would be for each source, without sufficient parameters or limitations on the exercise of that authority. Thus, the EPA reasoned that without any boundaries on the exercise of this authority for director's discretion, it would be impossible for the Agency to know in advance (*i.e.*, at the time of acting on the SIP submission) whether the state agency would only use that discretion in a way that would result in permits with terms consistent with meeting CAA requirements.²⁶⁷ As the EPA explained in the rulemaking at issue in the *Luminant* director's discretion case, "[t]here are no replicable conditions in the PCP Standard Permit that specify how the [TCEQ] Director's discretion is to be implemented" for the individual case-by-case determinations.²⁶⁸ In other

words, the EPA was being asked to approve a SIP provision without knowing how the SIP provision would actually be implemented and thus without knowing whether the results would be consistent with applicable CAA requirements.

As the commenters stated, the court in the *Luminant* director's discretion case vacated the EPA's disapproval of the SIP submission for several reasons, including the rejection of the Agency's argument that it could not approve the SIP submission due to the director's discretion feature of the SIP provisions and the resulting lack of "replicability."²⁶⁹ The court found that the EPA "failed to identify a single provision of the Act that Texas's program violated, let alone explain its reasons for reaching its conclusion."²⁷⁰ With respect to the director's discretion issue, phrased in terms of "replicability," the court found that "[n]ot once in its proposed or final disapproval, or in its argument before this court, has the EPA pointed to any applicable provision of the Act or its regulations that include a 'replicability' standard."

The EPA believes that the court's decision in the *Luminant* director's discretion case is distinguishable on several important grounds. Most importantly, the court rejected the EPA's disapproval of the SIP submission because the Agency had not provided an adequate explanation of why the director's discretion provision at issue was inconsistent with the requirements of the CAA for SIP provisions. The court emphasized the absence of any explanation in the administrative record for the proposed or final actions that

Nonattainment NSR (NNSR) for the 1997 8-Hour Ozone Standard, NSR Reform, and a Standard Permit; Proposed rule," 74 FR 48467 at 48476 (September 23, 2009).

²⁶⁹ The term "replicable" was taken from EPA guidance concerning SIP provisions for attainment plans. As a "fundamental principle" for SIP provisions and permits, the EPA explained that the requirements imposed upon sources should be "replicable"; *i.e.*, if they contain "procedures for changing the rule, interpreting the rule, or determining compliance with the rule, the procedures are sufficiently specific and nonsubjective so that two independent entities applying the same procedures would obtain the same result." See General Preamble, 57 FR 13498 at 13568 (April 16, 1992). The EPA's intent in using this term, although not clearly expressed in the rulemaking record, has been to indicate that a properly constructed SIP provision with an appropriate degree of discretion and flexibility would contain sufficient specifications and limits on the exercise of that discretion such that the Agency could adequately evaluate the provision at the time of its submission. Absent sufficient limits on the discretion, the EPA could not properly evaluate how exercise of the discretion could affect compliance with CAA requirements.

²⁷⁰ 675 F.3d 917, 924 (5th Cir. 2012).

²⁶⁷ The EPA notes that the court in the *Luminant* director's discretion case focused on the fact that the director's discretion provision included the discretion to require more of sources, if there "are health effects concerns or the potential to exceed the [NAAQS]," and the court expressed that it did not understand why that requirement was not alone adequate to allay the Agency's concerns. *Luminant Generation Co. v. EPA*, 675 F.3d 917, 929 n.11. The EPA's primary concern, although not clearly articulated in the rulemaking record, was that at the time of acting on the SIP submission, there was no way for the Agency to know in advance what the state would require of any source in the first instance, let alone what additional things the state might require in situations where it unilaterally decided that more might be necessary in any given permit.

²⁶⁸ See "Approval and Promulgation of Implementation Plans; Texas; Revisions to the New Source Review (NSR) State Implementation Plan (SIP); Prevention of Significant Deterioration (PSD),

²⁶⁵ 690 F.3d 670 (5th Cir. 2012).

²⁶⁶ *Luminant Generation Co. v. EPA*, 675 F.3d 917 (5th Cir. 2012). Throughout this document, the EPA refers to this as the *Luminant* director's discretion case, to distinguish it from another *Luminant* case cited in this document, *Luminant Generation v. EPA*, 714 F.3d 841 (5th Cir. 2013).

explained which specific provisions of the CAA preclude such a provision and why. In the February 2013 proposal and in this document, the EPA has identified and explained the specific CAA provisions that operate to preclude unbounded director's discretion provisions in SIPs.

Second, the court in the *Luminant* director's discretion case based its decision in part on the view that the specific director's discretion provision at issue in that case would always result in more stringent regulation of affected sources and always entail exercise of the discretion in a way that would protect the NAAQS.²⁷¹ Although its view was not articulated clearly in the record, the EPA did not agree with that assessment because it was not possible to evaluate in advance how the director's discretion authority would in fact be exercised. By contrast, the SIP provisions at issue in this action are not structured in such a way as to allow the exercise of discretion only to make the emission limitations *more stringent*. To the contrary, the director's discretion provisions at issue in this action authorize the state agencies to excuse sources from compliance with the otherwise applicable SIP emission limitation during SSM events. Were the sources seeking these discretionary exemptions meeting the applicable SIP emission limitations, they would not need an exemption. It logically follows that sources are seeking these exemptions because their emissions during such events are higher than the otherwise applicable emission limitation allows. Unlike the specific director's discretion provision at issue in the *Luminant* director's discretion case, which the court said "can only serve to protect the NAAQS," the exercise of the director's discretion authority in the SIP provisions at issue in this action can operate to make the emission limitations less stringent and can thereby undermine attainment and maintenance of the NAAQS, protection of PSD increments, improvement of visibility and achievement of other CAA objectives.

In the *Texas* decision, the court evaluated the EPA's disapproval of another SIP submission from the state of Texas that pertained to requirements for the permitting program for minor sources. The EPA had disapproved the submission for several different reasons,

including that the Agency believed the specific provisions at issue provided the state agency with too much director's discretion authority to decide what, if any, monitoring, recordkeeping and reporting requirements should be imposed on any individual affected source in its permit. The EPA concluded that if at the time it was evaluating the SIP provision for approval it could not reasonably anticipate how the state agency would exercise the discretion authorized in the provision, this made the submission unapprovable "for being too vague and not replicable."²⁷² The *Texas* court disagreed. The court concluded that the "degree of discretion conferred on the TCEQ director cannot sustain the EPA's rejection of the MRR requirements" and that the EPA insisted on "some undefined limit on a director's discretion . . . based on a standard that the CAA does not empower the EPA to enforce."²⁷³

The EPA believes that the decision of the court in *Texas v. EPA* is also distinguishable with respect to the issue of whether director's discretion provisions are consistent with CAA requirements. First, the *Texas* court based its decision primarily on the conclusion that the EPA had failed to identify and explain the provisions of the CAA that (i) preclude approval of SIP provisions that include unbounded director's discretion or (ii) impose a requirement for "replicability" in the exercise of director's discretion. The *Texas* court emphasized that although the EPA disapproved the SIP submission for failure to meet CAA requirements, the court found that the EPA "is yet to explain why."²⁷⁴ The court further reasoned that "the EPA has invoked the term 'director discretion' as if that term were an independent and authoritative standard, and has not linked the term to language of the CAA."²⁷⁵ Later in the opinion the court explicitly emphasized that because it was reviewing the EPA's decisionmaking process in the disapproval action, the court could not consider any basis for the disapproval that was not articulated by the EPA in the rulemaking record.²⁷⁶ The EPA is explaining its interpretation of the relevant CAA provisions in this action.

Second, the *Texas* court also asserted its own conclusion that there is nothing in the CAA that pertains to director's discretion in SIP provisions or to any

limitations on the exercise of such discretion. As the court stated it:

There is, in fact, no independent and authoritative standard in the CAA or its implementing regulations requiring that a state director's discretion be cabined in the way that the EPA suggests. Therefore, the EPA's insistence on some undefined limit on a director's discretion is . . . based on a standard that the CAA does not empower the EPA to enforce.

However, the court reached this conclusion based upon the administrative record before it and reiterated that it could not consider any basis for the disapproval not articulated by the EPA in the rulemaking record: "We are reviewing an agency's decisionmaking process, so the agency's action must be upheld, if at all, on the basis articulated by the agency itself."²⁷⁷ Given the court's conclusion that the EPA had failed to provide any explanation as to why the CAA precludes director's discretion provisions in the challenged rulemaking, the EPA believes that the court did not have the opportunity to consider the Agency's rationale that is provided in this action. In the February 2013 proposal and in this document, the EPA is heeding the court's admonishment to explain in the rulemaking record the statutory basis for the Agency's interpretation of the CAA to prohibit director's discretion provisions that are inadequately bounded. As explained in this action, SIP provisions that functionally authorize a state agency to amend existing SIP emission limitations applicable to a source unilaterally without a SIP revision are contrary to multiple specific provisions of the CAA that pertain to SIP revisions.

Third, the *Texas* court emphasized that, notwithstanding the apparent flexibility that the director's discretion provision provided to the state agency with respect to deciding on the level of monitoring, recordkeeping and reporting to be imposed on each source by permit, the state's regulations explicitly prohibited relaxations of the level of control. The court gave weight to the explicit wording of the specific provision at issue in the case which provided that "[t]he existing level of control may not be lessened for any facility."²⁷⁸ The EPA does not agree that the specific requirements for monitoring, recordkeeping and reporting for a given source are unrelated to the level of control. In any event, the director's discretion provisions of the type at issue in this

²⁷¹ *Luminant Generation Co. v. EPA*, 675 F.3d 917, 929 n.11 ("The provision at issues states: 'This standard permit must not be used [if] the executive director determines there are health effects concerns or the potential to exceed a [NAAQS] . . . until those concerns are addressed to the satisfaction of the executive director.'").

²⁷² *Id.*, 690 F.3d 670, 680.

²⁷³ *Id.*, 690 F.3d 670, 682.

²⁷⁴ *Id.*, 690 F.3d 670, 681.

²⁷⁵ *Id.*

²⁷⁶ *Id.*, 690 F.3d 670, 682.

²⁷⁷ *Id.*, 690 F.3d 670, 682.

²⁷⁸ *Id.*, 690 F.3d 670, 681.

action are not limited to those that would not “lessen” the level of control. To the contrary, the provisions at issue in this SIP call action authorize state agency personnel to grant outright exemptions from otherwise applicable SIP emission limitations during SSM events. Thus, the EPA concludes that this portion of the reasoning of the *Texas* decision would not apply to the current action.

Finally, the *Texas* court viewed the fact that the EPA had previously approved similar director’s discretion provisions in Texas and in Georgia as evidence that such provisions must be consistent with CAA requirements. The EPA acknowledges that it has, from time to time, approved SIP submissions that it should not have, whether through failure to recognize an issue, through a misunderstanding of the facts, through a mistaken interpretation of the law or as a result of other such circumstances. Congress itself clearly recognized that the EPA may occasionally take incorrect action on SIP submissions, whether incorrect at the time of the action or as a result of later events. Section 110(k)(5) and section 110(k)(6) both provide the EPA with explicit authority to address past approvals of SIP submissions that turn out to have been mistakes, whether at the time of the original approval or as a result of later developments. The fact that the EPA has explicit authority to issue a SIP call establishes that Congress anticipated that the Agency may at some point approve a SIP provision that it should not have approved because the provision is substantially inadequate to meet CAA requirements. The EPA does not agree, however, that its approval of a comparable SIP provision at some time in the past negates the Agency’s authority to disapprove a current SIP submission that fails to meet applicable procedural or substantive requirements. A challenger of the disapproval can always argue that the inconviction between the prior approval and the later disapproval is evidence that the EPA is being arbitrary and capricious in its interpretation of the statute—but at bottom the correct question is whether the Agency is correctly interpreting the CAA in the disapproval action currently being challenged. The fact that the EPA may have approved another SIP submission with a comparable defect in the past does not override the requirements of the CAA.

Significantly, the commenters apparently make the same mistake as the EPA did in the rulemakings at issue in the cited court decisions, by not adequately addressing the relevant statutory provisions that apply to SIP provisions in general and apply to

revisions of existing EPA-approved SIP provisions in particular. The commenters failed to consider the core problem with unbounded director’s discretion provisions (*i.e.*, that such provisions allow for unilateral revision, relaxation or exemption from SIP emission limitations, without adequate evaluation by the EPA and the public). As a result, the commenters do not address the proper application of CAA provisions that govern SIP revisions and the rationale for requiring that such SIP revisions be reviewed by the EPA in accordance with the explicit requirements of sections 110(k)(3), 110(l) and 193 and the other requirements germane to the SIP provision at issue (*e.g.*, RACT-level controls for sources located in nonattainment areas). Indeed, the commenters did not acknowledge the inherent problem with director’s discretion provisions, which is that such provisions have the potential to undermine SIP emission limitations dramatically through *ad hoc* exemptions for excess emissions during SSM events. By allowing for exemptions for emissions during SSM events, these provisions also remove the incentives for sources to be properly designed, maintained and operated so that they will comply continuously with SIP emission limitations during all modes of source operation.

The EPA notes that the commenters did not acknowledge or address the specific explanation that the Agency provided in the February 2013 proposal, including the EPA’s identification of the specific statutory provisions applicable to the revision of SIP provisions. Because these commenters did not address the EPA’s explanation of the CAA provisions that it interprets to preclude director’s discretion provisions in SIPs, the commenters have not provided substantive comment concerning the EPA’s interpretation of the CAA on this issue. The commenters did not dispute the EPA’s interpretation of the CAA on this particular point on statutory grounds. Rather, the commenters argued based on their own policy preferences for an approach to director’s discretion provisions that would allow sources to receive *ad hoc* exemptions for excess emissions during SSM events without the need for imposition of an appropriate alternative SIP emission limitation, for adequate public process for development of such an alternative SIP emission limitation or for oversight by the EPA of any revision to the applicable SIP emission limitations as required by the CAA.

e. Comments opposed to the EPA’s approach on the premise that there is no

“director’s discretion” concern if the SIP provision creates a permit program through which state officials grant sources variances or exemptions from otherwise applicable SIP provisions.

Comment: State commenters argued that they have imposed sufficient boundaries on the exercise of director’s discretion provisions in their SIPs, by virtue of the fact that they grant sources variances or exemptions from SIP emission limitations through a permitting program. Commenters stated that their permitting program provides a more structured process and an opportunity for public input into the decisions concerning variances or exemptions. Moreover, they argued that state law does provide preconditions to the granting of variances or exemptions and thus these are not granted automatically. Based upon these procedural requirements, the commenters contended that their exercise of director’s discretion is not “unbounded” as the EPA suggested in the February 2013 proposal.

Response: The EPA acknowledges that a permitting program can provide a more structured and consistent process than may be provided in a SIP for granting variances and exemptions from SIP emission limitations and related requirements and may provide more opportunity for public participation in those decisions. However, to the extent that the end result of this permitting process is that a given source is given a less stringent emission limitation than the otherwise applicable SIP emission limitation or is given an outright exemption from the SIP emission limitation, this result still functionally constitutes a revision of the SIP emission limitation without meeting the statutory requirements for a SIP revision. The EPA is not authorized to approve a program that in essence allows a SIP revision without compliance with the applicable statutory requirements in sections 110(k)(3), 110(l) and 193 and any other provision that is germane to the particular SIP emission limitation at issue.

The EPA emphasizes that air agencies always retain the ability to regulate sources more stringently than required by the provisions in its SIP. Section 116 explicitly provides, with certain limited exceptions, that states retain the authority to regulate emissions from sources. Unless preempted from controlling a particular source, nothing precludes states from regulating sources more stringently than otherwise required to meet CAA requirements, so long as they meet CAA requirements. However, if there is an applicable

emission limitation in a SIP provision (or an EPA regulation promulgated pursuant to sections 111 or 112), section 116 explicitly stipulates, “such State or political subdivision may not adopt or enforce any emission standard or emission limitation which is less stringent than the standard or limitation under such plan or limitation.” Thus, a state could elect to regulate a source more stringently than required by a specific SIP emission limitation (e.g., by imposing a more stringent numerical emission limitation on a particular source or by imposing additional recordkeeping, reporting and monitoring requirements in addition to those of the SIP provision), but the state cannot weaken or eliminate the SIP emission limitation (e.g., by granting exemptions from applicable SIP emission limitations for emissions during SSM events). If a state elects to alter an emission limitation in a SIP provision, the state must do so in accordance with the statutory provisions applicable to SIP revisions.

Finally, the EPA notes, if a state elects to use a permitting process as a source-by-source means of imposing more stringent emission limitations or additional requirements on sources, doing so can be an acceptable approach. So long as the underlying SIP provisions are adequate to provide the requisite level of control or requirements to assure enforceability, a state is free to use a permitting program to impose additional requirements above and beyond those provided in the SIP.

D. Enforcement Discretion Provisions Pertaining to SSM Events

1. What the EPA Proposed

In the February 2013 proposal, the EPA explained in detail that it believes that the CAA allows states to adopt SIP provisions that impose reasonable limits upon the exercise of enforcement discretion by air agency personnel, so long as those provisions do not apply to the EPA or other parties. The EPA believes that its interpretation of the CAA with respect to enforcement discretion provisions applicable to emissions during SSM events has been clear in the SSM Policy. In the 1982 SSM Guidance and the 1983 SSM Guidance, the EPA indicated that states could elect to adopt SIP provisions that include criteria that apply to the exercise of enforcement discretion by state personnel. In the 1999 SSM Guidance, the EPA emphasized that it would not approve such provisions if they would operate to impose the state’s enforcement discretion decisions upon the EPA or other parties because this

would be inconsistent with requirements of title I of the CAA.²⁷⁹ The EPA acknowledged, however, that both the states and the Agency have failed to adhere to the CAA with respect to this issue in the past, and thus the need for this SIP call action to correct the existing deficiencies in SIPs.

2. What Is Being Finalized in This Action

In order to be clear about this important point on a going-forward basis, the EPA is reiterating that SIP provisions cannot contain enforcement discretion provisions that would bar enforcement by the EPA or citizens for any violation of SIP requirements if the state elects not to enforce.

The EPA has previously issued a SIP call to a state specifically for purposes of clarifying an existing SIP provision to assure that regulated entities, regulators and courts will not misunderstand the correct interpretation of the provision.²⁸⁰ As the EPA stated in that action:

... SIP provisions that give exclusive authority to a state to determine whether an enforcement action can be pursued for an exceedance of an emission limit are inconsistent with the CAA’s regulatory scheme. EPA and citizens, and any court in which they seek to file an enforcement claim, must retain the authority to independently evaluate whether a source’s exceedance of an emission limit warrants enforcement action.²⁸¹

The EPA has explained in previous iterations of its SSM Policy that a fundamental principle of the CAA with respect to SIP provisions is that the provisions must be enforceable not only by the state but also by the EPA and others pursuant to the citizen suit authority of section 304. Accordingly, the EPA has long stated that SIP provisions cannot be structured such that a decision by the state not to enforce may bar enforcement by the EPA or other parties.

3. Response to Comments

The EPA received a small number of comments concerning the issue of ambiguous enforcement discretion provisions in SIPs. For clarity and ease of discussion, the EPA is responding to these comments, grouped by issue, in this section of this document.

²⁷⁹ See 1999 SSM Guidance at 3.

²⁸⁰ See “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision,” 75 FR 70888 at 70892–93 (November 19, 2010) (proposed SIP call, *inter alia*, to rectify an enforcement discretion provision that in fact appeared to bar enforcement by the EPA or citizens if the state decided not to enforce).

²⁸¹ See *id.*

a. Comments that supported the clarification of ambiguous enforcement discretion provisions in general but opposed the EPA’s views with respect to specific SIP provisions.

Comment: Environmental group commenters disagreed with the EPA’s proposed denial of the Petition with respect to specific enforcement discretion provisions in the SIPs of several states. The commenters contended that the SIP provisions are too ambiguous for courts to recognize that the exercise of enforcement discretion by state personnel did not preclude enforcement by the EPA or others.

Response: The EPA disagrees with these comments. In the February 2013 proposal, the EPA explained how it reads the specific enforcement discretion provisions in the SIPs of each of these states. The EPA explained its evaluation of these provisions in detail. In comments submitted on the February 2013 proposal, the states in question agreed with the EPA’s reading of the provisions. Each state agreed that these provisions only applied to air agency personnel and not to the EPA or any other party. Thus, the EPA believes that there should be no dispute about the proper interpretation of these SIP provisions in any potential future enforcement action.

b. Comments that opposed the EPA’s issuing SIP calls to obtain state agency clarification of ambiguous enforcement discretion provisions in SIPs.

Comment: One commenter asserted that requiring states to correct an ambiguous “enforcement discretion” provision in its SIP in order to eliminate “perceived ambiguity” is a “waste of resources.” Although agreeing that a state’s exercise of enforcement discretion cannot affect enforcement by the EPA or other parties under the citizen suit provision, the commenter believed that the existence of ambiguous provisions that could be misconstrued by a court to bar enforcement by the EPA or others if the state elects not to enforce is not a significant concern.

Response: The EPA agrees with the commenter that a state’s legitimate exercise of enforcement discretion not to enforce in the event of violations of SIP provisions should have no bearing whatsoever on whether the EPA or others may seek to enforce for the same violations. However, the Agency disagrees with the commenter concerning whether some SIP provisions need to be clarified in order to assure that this principle is adhered to in practice in enforcement actions. For example, if on the face of an approved SIP provision the state

appears to have the unilateral authority to decide that a specific event is not a “violation” or if it otherwise appears that if the state elects not to pursue enforcement for such violation then no other party may do so, then that SIP provision fails to meet fundamental legal requirements for enforcement under the CAA. If the SIP provision appears to provide that the decision of the state not to enforce for an exceedance of the SIP emission limit bars the EPA or others from bringing an enforcement action, then that is an impermissible imposition of the state’s enforcement discretion decisions on other parties. The EPA has previously issued a SIP call to resolve just such an ambiguity, and its authority to do so has been upheld.²⁸² Given that the commenter agrees with the underlying principle that a state’s exercise of enforcement discretion should have no bearing on the exercise of enforcement authority of the EPA or citizens, the Agency presumes that the commenter would not in fact oppose a SIP revision to clarify that point. Moreover, the commenter would not be harmed by such a SIP revision and would have no basis upon which to challenge it. As the clarification of the ambiguous SIP provision should be in the interest of all involved, including the regulated entities, the regulators and the public, the EPA does not believe that resources used to eliminate such ambiguities would be wasted.

E. Affirmative Defense Provisions in SIPs During Any Period of Operation

As explained in detail in the SNPR, the EPA believes that the CAA prohibits affirmative defense provisions in SIPs. The EPA acknowledges that since the 1999 SSM Guidance, the Agency had interpreted the CAA to allow narrowly tailored affirmative defense provisions. However, the EPA’s interpretation of the statute was based on arguments that have since been rejected by the DC Circuit in the *NRDC v. EPA* decision. The EPA received a substantial number of comments, both supportive and adverse, concerning the issue of affirmative defense provisions in SIPs. These comments and the EPA’s responses to them are discussed in section IV.D of this document.

F. Relationship Between SIP Provisions and Title V Regulations

As the EPA explained in the February 2013 proposal, the SIP provisions

identified in the Petition highlighted an area of potential ambiguity or conflict between the SSM Policy applicable to SIP provisions and the EPA’s regulations applicable to CAA title V operating permit provisions. The EPA has promulgated regulations in 40 CFR part 70 applicable to state operating permit programs and in 40 CFR part 71 applicable to federal operating permit programs.²⁸³ Under each set of regulations, the EPA has provided that permits may contain, at the permitting authority’s discretion, an “emergency provision.”²⁸⁴

The regulatory parameters applicable to such emergency provisions in operating permits are the same for state operating permit program regulations and the federal operating permit program regulations. The definition of emergency is identical in the regulations for each program.²⁸⁵

Thus, if there is an emergency event meeting the regulatory definition, then the EPA’s regulations for operating permit programs provide for an “affirmative defense” to enforcement for noncompliance with technology-based standards during the emergency event, provided the source can demonstrate through specified forms of evidence that the event and the permittee’s actions during and after the event met a number of specific requirements.²⁸⁶

The Petitioner did not directly request that the EPA evaluate the existing regulatory provisions applicable to operating permits in 40 CFR part 70 and 40 CFR part 71, and the EPA is not revising those provisions in this action. In its February 2013 proposal, the EPA explained that while it was proposing to allow narrowly drawn affirmative defense provisions for malfunctions in SIPs, SIP provisions that were modeled after the regulations in 40 CFR part 70 and 40 CFR part 71 were still in conflict with the EPA’s interpretation of the CAA for SIP provisions and thus could not be allowed.²⁸⁷ However, as explained in the SNPR, the reasoning in the subsequent *NRDC v. EPA* court decision is that even narrowly defined affirmative defense provisions in SIPs are no longer consistent with the

CAA.²⁸⁸ Accordingly, regardless of whether affirmative defense provisions in SIPs were defined more narrowly than were the provisions applicable to operating permits under 40 CFR part 70 and 40 CFR part 71, they cannot be included in SIPs. For these reasons, the EPA has evaluated the specific SIP provisions identified in the Petition and is taking final action to find substantial inadequacy and to issue a SIP call for those SIP provisions that include features that are inappropriate for SIPs, regardless of whether those provisions contain terms found in other regulations.

Additionally, we are not taking action in this rulemaking to alter the emergency provisions found in 40 CFR part 70 and 40 CFR part 71. Those regulations, which are applicable to title V operating permits, may only be changed through appropriate rulemaking to revise parts 70 and 71. Further, any existing permits that contain such emergency provisions may only be changed through established permitting procedures. The EPA is considering whether to make changes to 40 CFR part 70 and 40 CFR part 71, and if so, how best to make those changes. In any such action, EPA would also intend to address the timing of any changes to existing title V operating permits. Until that time, as part of normal permitting process, the EPA encourages permitting authorities to consider the discretionary nature of the emergency provisions when determining whether to continue to include permit terms modeled on those provisions in operating permits that the permitting authorities are issuing in the first instance or renewing.

G. Intended Effect of the EPA’s Action on the Petition

As in the 2001 SSM Guidance, the EPA is endeavoring to be particularly clear about the intended effect of its final action on the Petition, of its clarifications and revisions to the SSM Policy and of its application of the updated SSM Policy to the specific existing SIP provisions discussed in section IX of this document.

First, the EPA only intends its actions on the larger policy or legal issues raised by the Petitioner to inform the public of the EPA’s current views on the requirements of the CAA with respect to SIP provisions related to SSM events. Thus, for example, the EPA’s proposed grant of the Petitioner’s request that the EPA interpret the CAA to disallow all affirmative defense provisions is intended to convey that the EPA has

²⁸³ See 40 CFR 70.1–70.12; 40 CFR 71.1–71.27.

²⁸⁴ See 40 CFR 70.6(g); 40 CFR 71.6(g). The EPA also notes that states are not required to adopt the “emergency provision” contained in 40 CFR 70.6(g) into their state operating permit programs, and many states have chosen not to do so. See, e.g., “Clean Air Act Full Approval of Partial Operating Permit Program; Allegheny County; Pennsylvania; Direct final rule,” 66 FR 55112 at 55113 (November 1, 2001).

²⁸⁵ See 40 CFR 70.6(g)(1); 40 CFR 71.6(g)(1).

²⁸⁶ 40 CFR 70.6(g)(3); 40 CFR 71.6(g)(3).

²⁸⁷ See February 2013 proposal, 78 FR 12459 at 12481–82.

²⁸⁸ See SNPR, 79 FR 55919 at 55929–30.

²⁸² See “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision; Proposed rule,” 76 FR 21639 (April 18, 2011).

changed its views about such provisions and that its prior views expressed in the 1999 SSM Guidance and related rulemakings on SIP submissions were incorrect. In this fashion, the EPA's action on the Petition provides updated guidance relevant to future SIP actions.

Second, the EPA only intends its actions on the specific existing SIP provisions identified in the Petition to be applicable to those provisions. The EPA does not intend its action on those specific provisions to alter the current status of any other existing SIP provisions relating to SSM events. The EPA must take later rulemaking actions, if necessary, in order to evaluate any comparable deficiencies in other existing SIP provisions that may be inconsistent with the requirements of the CAA. Again, however, the EPA's actions on the Petition provide updated guidance on the types of SIP provisions that it believes would be consistent with CAA requirements in future rulemaking actions.

Third, the EPA does not intend its action on the Petition to affect immediately any existing permit terms or conditions regarding excess emissions during SSM events that reflect previously approved SIP provisions. The EPA's finding of substantial inadequacy and a SIP call for a given state provides the state time to revise its SIP in response to the SIP call through the necessary state and federal administrative process. Thereafter, any needed revisions to existing permits will be accomplished in the ordinary course as the state issues new permits or reviews and revises existing permits. The EPA does not intend the issuance of a SIP call to have automatic impacts on the terms of any existing permit.

Fourth, the EPA does not intend its action on the Petition to alter the emergency defense provisions at 40 CFR 70.6(g) and 40 CFR 71.6(g), *i.e.*, the title V regulations pertaining to "emergency provisions" permissible in title V operating permits. The EPA's regulations applicable to title V operating permits may only be changed through appropriate rulemaking procedures and existing permit terms may only be changed through established permitting processes.

Fifth, the EPA does not intend its interpretations of the requirements of the CAA in this action on the Petition to be legally dispositive with respect to any particular current enforcement proceedings in which a violation of SIP emission limitations is alleged to have occurred. The EPA handles enforcement matters by assessing each situation, on a case-by-case basis, to determine the appropriate response and resolution.

For purposes of alleged violations of SIP provisions, however, the terms of the applicable SIP provision will continue to govern until that provision is revised following the appropriate process for SIP revisions, as required by the CAA.

Finally, the EPA does intend this final action, developed through notice and comment, to be the statement of its most current SSM Policy, reflecting the EPA's interpretation of CAA requirements applicable to SIP provisions related to excess emissions during SSM events. In this regard, the EPA is adding to and clarifying its prior statements in the 1999 SSM Guidance and making the specific changes to that guidance as discussed in this action. Thus, this final notice for this action will constitute the EPA's SSM Policy on a going-forward basis.

VIII. Legal Authority, Process and Timing for SIP Calls

A. SIP Call Authority Under Section 110(k)(5)

1. General Statutory Authority

The CAA provides a mechanism for the correction of flawed SIPs, under CAA section 110(k)(5), which provides that "[w]henver the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standards, to mitigate adequately the interstate pollutant transport described in section [176A] of this title or section [184] of this title, or to otherwise comply with any requirement of [the Act], the Administrator shall require the State to revise the plan as necessary to correct such inadequacies. The Administrator shall notify the State of the inadequacies and may establish reasonable deadlines (not to exceed 18 months after the date of such notice) for the submission of such plan revisions."

By its explicit terms, this provision authorizes the EPA to find that a state's existing SIP is "substantially inadequate" to meet CAA requirements and, based on that finding, to "require the State to revise the [SIP] as necessary to correct such inadequacies." This type of action is commonly referred to as a "SIP call."²⁸⁹

²⁸⁹ The EPA also has other discretionary authority to address incorrect SIP provisions, such as the authority in CAA section 110(k)(6) for the EPA to correct errors in prior SIP approvals. The authority in CAA section 110(k)(5) and CAA section 110(k)(6) can sometimes overlap and offer alternative mechanisms to address problematic SIP provisions. In this instance, the EPA believes that the mechanism provided by CAA section 110(k)(5) is the better approach, because using the mechanism of the CAA section 110(k)(6) error correction would

Significantly, CAA section 110(k)(5) explicitly authorizes the EPA to issue a SIP call "whenever" the EPA makes a finding that the existing SIP is substantially inadequate, thus providing authority for the EPA to take action to correct existing inadequate SIP provisions even long after their initial approval, or even if the provisions only become inadequate due to subsequent events.²⁹⁰ The statutory provision is worded in the present tense, giving the EPA authority to rectify any deficiency in a SIP that currently exists, regardless of the fact that the EPA previously approved that particular provision in the SIP and regardless of when that approval occurred.

It is also important to emphasize that CAA section 110(k)(5) expressly directs the EPA to take action if the SIP provision is substantially inadequate, not just for purposes of attainment or maintenance of the NAAQS but also for purposes of "any requirement" of the CAA. The EPA interprets this reference to "any requirement" of the CAA on its face to authorize reevaluation of an existing SIP provision for compliance with those statutory and regulatory requirements that are germane to the SIP provision at issue. Thus, for example, a SIP provision that is intended to be an "emission limitation" for purposes of a nonattainment plan for purposes of the 1997 PM_{2.5} NAAQS must meet various applicable statutory and regulatory requirements, including requirements of CAA section 110(a)(2)(A) such as enforceability, the definition of the term "emission limitation" in CAA section 302(k), the level of emissions control

eliminate the affected emission limitations from the SIP potentially leaving no emission limitation in place, whereas the mechanism of the CAA section 110(k)(5) SIP call will keep the provisions in place during the pendency of the state's revision of the SIP and the EPA's action on that revision. In the case of provisions that include impermissible automatic exemptions or discretionary exemptions, the EPA believes that retention of the existing SIP provision is preferable to the absence of the provision in the interim.

²⁹⁰ See, e.g., *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000) (upholding the "NO_x SIP Call" to states requiring revisions to previously approved SIPs with respect to ozone transport and section 110(a)(2)(D)(i)(I)); "Action to Ensure Authority To Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call; Final rule," 75 FR 77698 (December 13, 2010) (the EPA issued a SIP call to 13 states because the endangerment finding for GHGs meant that these previously approved SIPs were substantially inadequate because they did not provide for the regulation of GHGs in the PSD permitting programs of these states as required by CAA section 110(a)(2)(C) and section 110(a)(2)(I)); "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 74 FR 21639 (April 18, 2011) (the EPA issued a SIP call to rectify SIP provisions dating back to 1980).

required to constitute a “reasonably available control measure” in CAA section 172(c)(1) and the other applicable statutory requirements for the implementation of the 1997 PM_{2.5} NAAQS. Failure to meet any of those applicable requirements could constitute a substantial inadequacy suitable for a SIP call, depending upon the facts and circumstances. By contrast, that same SIP provision should not be expected to meet specifications of the CAA that are completely irrelevant for its intended purpose, such as the unrelated requirement of CAA section 110(a)(2)(G) that the state have general legal authority comparable to CAA section 303 for emergencies.

Use of the term “any requirement” in CAA section 110(k)(5) also reflects the fact that SIP provisions could be substantially inadequate for widely differing reasons. One provision might be substantially inadequate because it fails to prohibit emissions that contribute to violations of the NAAQS in downwind areas many states away. Another provision, or even the same provision, could be substantially inadequate because it also infringes on the legal right of members of the public who live adjacent to the source to enforce the SIP. Thus, the EPA has previously interpreted CAA section 110(k)(5) to authorize a SIP call to rectify SIP inadequacies of various kinds, both broad and narrow in terms of the scope of the SIP revisions required.²⁹¹ On its face, CAA section 110(k)(5) authorizes the EPA to take action with respect to SIP provisions that are substantially inadequate to meet any CAA requirements, including requirements relevant to the proper treatment of excess emissions during SSM events.

An important baseline question is whether a given deficiency renders the SIP provision “substantially inadequate.” The EPA notes that the term “substantially inadequate” is not defined in the CAA. Moreover, CAA section 110(k)(5) does not specify a particular form of analysis or methodology that the EPA must use to evaluate SIP provisions for substantial inadequacy. Thus, under *Chevron* step

2, the EPA is authorized to interpret this provision reasonably, consistent with the provisions of the CAA. In addition, the EPA is authorized to exercise its discretion in applying this provision to determine whether a given SIP provision is substantially inadequate. To the extent that the term “substantially inadequate” is ambiguous, the EPA believes that it is reasonable to interpret the term in light of the specific purposes for which the SIP provision at issue is required, and thus whether the provision meets the fundamental CAA requirements applicable to such a provision.

The EPA does not interpret CAA section 110(k)(5) to require a showing that the effect of a SIP provision that is facially inconsistent with CAA requirements is causally connected to a particular adverse impact. For example, the plain language of CAA section 110(k)(5) does not require direct causal evidence that excess emissions have occurred during a specific malfunction at a specific source and have literally caused a violation of the NAAQS in order to conclude that the SIP provision is substantially inadequate.²⁹² A SIP provision that purports to exempt a source from compliance with applicable emission limitations during SSM events, contrary to the requirements of the CAA for continuous emission limitations, does not become legally permissible merely because there is not definitive evidence that any excess emissions have resulted from the exemption and have literally caused a specific NAAQS violation.²⁹³

Similarly, the EPA does not interpret CAA section 110(k)(5) to require direct causal evidence that a SIP provision that improperly undermines enforceability of the SIP has resulted in a specific failed enforcement attempt by any party. A SIP provision that has the practical effect of barring enforcement by the EPA or through a citizen suit, either because it would bar enforcement if an air agency elects to grant a discretionary exemption or to exercise its own enforcement discretion, is inconsistent

with fundamental requirements of the CAA.²⁹⁴ Such a provision also does not become legally permissible merely because there is not definitive evidence that the state’s action literally undermined a specific attempted enforcement action by other parties. Indeed, the EPA notes that these impediments to effective enforcement likely have a chilling effect on potential enforcement in general. The possibility for effective enforcement of emission limitations in SIPs is itself an important principle of the CAA, as embodied in CAA sections 113 and 304.

The EPA’s interpretation of CAA section 110(k)(5) is that the fundamental integrity of the CAA’s SIP process and structure are undermined if emission limitations relied upon to meet CAA requirements related to protection of public health and the environment can be violated without potential recourse. For example, the EPA does not believe that it is authorized to issue a SIP call to rectify an impermissible automatic exemption provision only after a violation of the NAAQS has occurred, or only if that NAAQS violation can be directly linked to the excess emissions that resulted from the impermissible automatic exemption by a particular source on a particular day. If the SIP contains a provision that is inconsistent with fundamental requirements of the CAA, that renders the SIP provision substantially inadequate.

The EPA notes that CAA section 110(k)(5) can also be an appropriate tool to address ambiguous SIP provisions that could be read by a court in a way that would violate the requirements of the CAA. For example, if an existing SIP provision concerning the state’s exercise of enforcement discretion is sufficiently ambiguous that it could be construed to preclude enforcement by the EPA or through a citizen suit if the state elects to deem a given SSM event not a violation, then that could render the provision substantially inadequate by interfering with the enforcement structure of the CAA.²⁹⁵ If a court could

²⁹¹ See, e.g., “Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone,” 63 FR 57356 (October 27, 1998) (the EPA issued a SIP call to 23 states requiring them to rectify the failure to address interstate transport of pollutants as required by section 110(a)(2)(D); “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision,” 74 FR 21639 (April 18, 2011) (the EPA issued a SIP call to one state requiring it to rectify several very specific SIP provisions).

²⁹² See *US Magnesium, LLC v. EPA*, 690 F.3d 1157 (10th Cir. 2012) (upholding the EPA’s interpretation of section 110(k)(5) to authorize a SIP call when the SIP provisions are inconsistent with CAA requirements).

²⁹³ The EPA notes that the GHG SIP call did not require “proof” that the failure of a state to address GHGs in a given PSD permit “caused” particularized environmental impacts; it was sufficient that the state’s SIP failed to meet the current fundamental legal requirements for regulation of GHGs in accordance with the CAA. See “Action to Ensure Authority To Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call; Final rule,” 75 FR 77698 (December 13, 2010).

²⁹⁴ See “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision,” 74 FR 21639 at 21641 (April 18, 2011); see also *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1168 (10th Cir. 2012) (upholding the EPA’s interpretation of section 110(k)(5) to authorize a SIP call when the state’s SIP provision worded so that state decisions whether a given excess emissions event constituted a violation interfered with enforcement by the EPA or citizens for such event).

²⁹⁵ Courts have on occasion interpreted SIP provisions to limit the EPA’s enforcement authority as a result of ambiguous SIP provisions. See, e.g., *U.S. v. Ford Motor Co.*, 736 F.Supp. 1539 (W.D. Mo. 1990) and *U.S. v. General Motors Corp.*, 702 F.Supp. 133 (N.D. Texas 1988) (the EPA could not pursue enforcement of SIP emission limitations

construe the ambiguous SIP provision to bar enforcement, then the EPA believes that it may be appropriate to take action to eliminate that uncertainty by requiring the state to revise the ambiguous SIP provision. Under such circumstances, it may be appropriate for the EPA to issue a SIP call to assure that the SIP provisions are sufficiently clear and consistent with CAA requirements on their face.²⁹⁶

In this instance, the Petition raised questions concerning the adequacy of existing SIP provisions that pertain to the treatment of excess emissions during SSM events. The SIP provisions identified by the Petitioner generally fall into four major categories: (i) Automatic exemptions; (ii) exemptions as a result of director's discretion; (iii) provisions that appear to bar enforcement by the EPA or through a citizen suit if the state decides not to enforce through exercise of enforcement discretion; and (iv) affirmative defense provisions that purport to limit or eliminate a court's jurisdiction to assess liability and impose remedies for exceedances of SIP emission limitations. The EPA believes that each of these types of SIP deficiency potentially justifies a SIP call pursuant to CAA section 110(k)(5), if the Agency determines that a SIP call is the proper means to rectify an existing deficiency in a SIP.

2. Substantial Inadequacy of Automatic Exemptions

The EPA believes that SIP provisions that provide an automatic exemption from otherwise applicable emission limitations are substantially inadequate to meet CAA requirements. A typical SIP provision that includes an impermissible automatic exemption would provide that a source has to meet a specific emission limitation, except during startup, shutdown and malfunction, and by definition any excess emissions during such events would not be violations and thus there could be no enforcement based on those excess emissions. The EPA's interpretation of CAA requirements for

where states had approved alternative emission limitations under procedures the EPA had approved in the SIP); *Florida Power & Light Co. v. Costle*, 650 F.2d 579, 588 (5th Cir. 1981) (the EPA to be accorded no discretion in interpreting state law). The EPA does not agree with the holdings of these cases, but they illustrate why it is reasonable to eliminate any uncertainty about enforcement authority by requiring a state to remove or revise a SIP provision that could be read in a way inconsistent with the requirements of the CAA.

²⁹⁶ See *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1170 (10th Cir. 2012) (upholding the EPA's use of SIP call authority in order to clarify language in the SIP that could be read to violate the CAA, even if a court has not yet interpreted the language in that way).

SIP provisions has been reiterated multiple times through the SSM Policy and actions on SIP submissions that pertain to this issue. The EPA's longstanding view is that SIP provisions that include automatic exemptions for excess emissions during SSM events, such that the excess emissions during those events are not considered violations of the applicable emission limitations, do not meet CAA requirements. Such exemptions undermine the attainment and maintenance of the NAAQS, protection of PSD increments and improvement of visibility, and SIP provisions that include such exemptions fail to meet these and other fundamental requirements of the CAA.

The EPA interprets CAA sections 110(a)(2)(A) and 110(a)(2)(C) to require that SIPs contain "emission limitations" to meet CAA requirements. Pursuant to CAA section 302(k), those emission limitations must be "continuous." Automatic exemptions from otherwise applicable emission limitations thus render those limits less than continuous as required by CAA sections 302(k), 110(a)(2)(A) and 110(a)(2)(C), thereby inconsistent with a fundamental requirement of the CAA and thus substantially inadequate as contemplated in CAA section 110(k)(5).

This inadequacy has far-reaching impacts. For example, air agencies rely on emission limitations in SIPs in order to provide for attainment and maintenance of the NAAQS. These emission limitations are often used by air agencies to meet various requirements including: (i) In the estimates of emissions for emissions inventories; (ii) in the determination of what level of emissions meets various statutory requirements such as "reasonably available control measures" in nonattainment SIPs or "best available retrofit technology" in regional haze SIPs; and (iii) in critical modeling exercises such as attainment demonstration modeling for nonattainment areas or increment use for PSD permitting purposes.

Because the NAAQS are not directly enforceable against individual sources, air agencies rely on the adoption and enforcement of these generic and specific emission limitations in SIPs in order to provide for attainment and maintenance of the NAAQS, protection of PSD increments and improvement of visibility, and to meet other CAA requirements. Automatic exemption provisions for excess emissions eliminate the possibility of enforcement for what would otherwise be clear violations of the relied-upon emission limitations and thus eliminate any

opportunity to obtain injunctive relief that may be needed to protect the NAAQS or meet other CAA requirements. Likewise, the elimination of any possibility for penalties for what would otherwise be clear violations of the emission limitations, regardless of the conduct of the source, eliminates any opportunity for penalties to encourage appropriate design, operation and maintenance of sources and to encourage efforts by source operators to prevent and to minimize excess emissions in order to protect the NAAQS or to meet other CAA requirements. Removal of this monetary incentive to comply with the SIP reduces a source's incentive to design, operate, and maintain its facility to meet emission limitations at all times.

3. Substantial Inadequacy of Director's Discretion Exemptions

The EPA believes that SIP provisions that allow discretionary exemptions from otherwise applicable emission limitations are substantially inadequate to meet CAA requirements for the same reasons as automatic exemptions, but for additional reasons as well. A typical SIP provision that includes an impermissible "director's discretion" component would purport to authorize air agency personnel to modify existing SIP requirements under certain conditions, e.g., to grant a variance from an otherwise applicable emission limitation if the source could not meet the requirement in certain circumstances.²⁹⁷ If such provisions are sufficiently specific, provide for sufficient public process and are sufficiently bounded, so that it is possible to anticipate at the time of the EPA's approval of the SIP provision how that provision will actually be applied and the potential adverse impacts thereof, then such a provision might meet basic CAA requirements. In essence, if it is possible to anticipate and evaluate in advance how the exercise of enforcement discretion could impact compliance with other CAA requirements, then it may be possible to determine in advance that the preauthorized exercise of director's discretion will not interfere with other CAA requirements, such as providing for attainment and maintenance of the

²⁹⁷ The EPA notes that problematic "director's discretion" provisions are not limited only to those that purport to authorize alternative emission limitations from those required in a SIP. Other problematic director's discretion provisions could include those that purport to provide for discretionary changes to other substantive requirements of the SIP, such as applicability, operating requirements, recordkeeping requirements, monitoring requirements, test methods, and alternative compliance methods.

NAAQS. Most director's discretion-type provisions cannot meet this basic test.

Unless it is possible at the time of the approval of the SIP provision to anticipate and analyze the impacts of the potential exercise of the director's discretion, such provisions functionally could allow *de facto* revisions of the approved emission limitations required by the SIP without complying with the process for SIP revisions required by the CAA. Sections 110(a)(1) and (2) of the CAA impose procedural requirements on states that seek to amend SIP provisions. The elements of CAA section 110(a)(2) and other sections of the CAA, depending upon the subject of the SIP provision at issue, impose substantive requirements that states must meet in a SIP revision. Section 110(i) of the CAA prohibits modification of SIP requirements for stationary sources by either the state or the EPA, except through specified processes.²⁹⁸ Section 110(k) of the CAA imposes procedural and substantive requirements on the EPA for action upon any SIP revision. Sections 110(l) and 193 of the CAA both impose additional procedural and substantive requirements on the state and the EPA in the event of a SIP revision. Chief among these many requirements for a SIP revision would be the necessary demonstration that the SIP revision in question would not interfere with any requirement concerning attainment and reasonable further progress or "any other applicable requirement of" the CAA to meet the requirements of CAA section 110(l).

²⁹⁸ Section 110(i) of the Act states that "no order, suspension, plan revision or other action modifying any requirement of an applicable implementation plan may be taken with respect to any stationary source by the State or by the Administrator" except in compliance with the CAA's requirements for promulgation or revision of a plan, with limited exceptions. *See, e.g., "Approval and Disapproval and Promulgation of Air Quality Implementation Plans; Colorado; Revisions to Regulation 1; Notice of proposed rulemaking,"* 75 FR 42342 at 42344 (July 21, 2010) (proposing to disapprove "director discretion" provisions as inconsistent with CAA requirements and noting that "[s]ection 110(i) specifically prohibits States, except in certain limited circumstances, from taking any action to modify any requirement of a SIP with respect to any stationary source, except through a SIP revision"), finalized as proposed at 76 FR 4540 (January 26, 2011); "Corrections to the California State Implementation Plan," 69 FR 67062 at 67063 (November 16, 2004) (noting that "a state-issued variance, though binding as a matter of State law, does not prevent EPA from enforcing the underlying SIP provisions unless and until EPA approves that variance as a SIP revision"); *Industrial Environmental Association v. Browner*, No. 97-71117 at n.2 (9th Cir. May 26, 2000) (noting that the EPA has consistently treated individual variances granted under state variance provisions as "modifications of the SIP requiring independent EPA approval").

Congress presumably imposed these many explicit requirements in order to assure that there is adequate public process at both the air agency and federal level for any SIP revision and to assure that any SIP revision meets the applicable substantive requirements of the CAA. Although no provision of the CAA explicitly addresses whether a "director's discretion" provision by that term is acceptable, the EPA interprets the statute to prohibit such provisions unless they would be consistent with the statutory and regulatory requirements that apply to SIP revisions.²⁹⁹ A SIP provision that purports to give broad and unbounded director's discretion to alter the existing legal requirements of the SIP with respect to meeting emission limitations would be tantamount to allowing a revision of the SIP without meeting the applicable procedural and substantive requirements for such a SIP revision. The EPA's approval of a SIP provision that purported to allow unilateral revisions of the emission limitations in the SIP by the state, without complying with the statutory requirements for a SIP revision, would itself be contrary to fundamental procedural and substantive requirements of the CAA.

For this reason, the EPA has long discouraged the creation of new SIP provisions containing an impermissible director's discretion feature and has also taken actions to remove existing SIP provisions that it had previously approved in error.³⁰⁰ In recent years, the EPA has also recommended that if an air agency elects to have SIP provisions that contain a director's discretion feature, then to be consistent with CAA

²⁹⁹ *See, e.g.,* EPA's implementing regulations at 40 CFR 51.104(d) ("In order for a variance to be considered for approval as a revision to the [SIP], the State must submit it in accordance with the requirements of this section") and 51.105 ("Revisions of a plan, or any portion thereof, will not be considered part of an applicable plan until such revisions have been approved by the Administrator in accordance with this part.").

³⁰⁰ *See, e.g., "Approval and Disapproval and Promulgation of Air Quality Implementation Plans; Colorado; Revisions to Regulation 1,"* 76 FR 4540 (January 26, 2011) (partial disapproval of SIP submission based on inclusion of impermissible director's discretion provisions); "Correction of Implementation Plans; American Samoa, Arizona, California, Hawaii, and Nevada State Implementation Plans; Notice of proposed rulemaking," 61 FR 38664 (July 25, 1996) (proposed SIP correction to remove, pursuant to CAA section 110(k)(6), several variance provisions from American Samoa, Arizona, California, Hawaii, and Nevada SIPs), finalized at 62 FR 34641 (June 27, 1997); "Approval and Promulgation of Implementation Plans; Corrections to the Arizona and Nevada State Implementation Plans; Direct final rule," 74 FR 57051 (November 3, 2009) (rulemaking to remove, pursuant to CAA section 110(k)(6), variance provisions from Arizona and Nevada SIPs).

requirements the provisions must be structured so that any resulting variances or other deviations from the emission limitation or other SIP requirements have no federal law validity, unless and until the EPA specifically approves that exercise of the director's discretion as a SIP revision. Barring such a later ratification by the EPA through a SIP revision, the exercise of director's discretion is only valid for state (or tribal) law purposes and would have no bearing in the event of an action to enforce the provision of the SIP as it was originally approved by the EPA.

The EPA's evaluation of the specific SIP provisions of this type identified in the Petition indicates that none of them provides sufficient process or sufficient bounds on the exercise of director's discretion to be permissible. Most on their face would allow potentially limitless exemptions from SIP requirements with potentially dramatic adverse impacts inconsistent with the objectives of the CAA. More importantly, however, each of the identified SIP provisions goes far beyond the limits of what might theoretically be a permissible director's discretion provision, by authorizing state personnel to create case-by-case exemptions from the applicable emission limitations or other requirements of the SIP for excess emissions during SSM events. Given that the EPA interprets the CAA not to allow exemptions from SIP emission limitations for excess emissions during SSM events in the first instance, it follows that providing such exemptions through the *ad hoc* mechanism of a director's discretion provision is also not permissible and compounds the problem.

As with automatic exemptions for excess emissions during SSM events, a provision that allows discretionary exemptions would not meet the statutory requirements of CAA sections 110(a)(2)(A) and 110(a)(2)(C) that require SIPs to contain "emission limitations" to meet CAA requirements. Pursuant to CAA section 302(k), those emission limitations must be "continuous." Discretionary exemptions from otherwise applicable emission limitations render those limits less than continuous, as is required by CAA sections 110(a)(2)(A) and 110(a)(2)(C), and thereby inconsistent with a fundamental requirement of the CAA and thus substantially inadequate as contemplated in section CAA 110(k)(5). Such exemptions undermine the objectives of the CAA such as protection of the NAAQS and PSD increments, and they fail to meet other fundamental requirements of the CAA.

In addition, discretionary exemptions undermine effective enforcement of the SIP by the EPA or through a citizen suit, because often there may have been little or no public process concerning the exercise of director's discretion to grant the exemptions, or easily accessible documentation of those exemptions, and thus even ascertaining the possible existence of such *ad hoc* exemptions will further burden parties who seek to evaluate whether a given source is in compliance or to pursue enforcement if it appears that the source is not. Where there is little or no public process concerning such *ad hoc* exemptions, or there is inadequate access to relevant documentation of those exemptions, enforcement by the EPA or through a citizen suit may be severely compromised. As explained in the 1999 SSM Guidance, the EPA does not interpret the CAA to allow SIP provisions that would allow the exercise of director's discretion concerning violations to bar enforcement by the EPA or through a citizen suit. The exercise of director's discretion to exempt conduct that would otherwise constitute a violation of the SIP would interfere with effective enforcement of the SIP. Such provisions are inconsistent with and undermine the enforcement structure of the CAA provided in CAA sections 113 and 304, which provide independent authority to the EPA and citizens to enforce SIP provisions, including emission limitations. Thus, SIP provisions that allow discretionary exemptions from applicable SIP emission limitations through the exercise of director's discretion are substantially inadequate to comply with CAA requirements as contemplated in CAA section 110(k)(5).

4. Substantial Inadequacy of Improper Enforcement Discretion Provisions

The EPA believes that SIP provisions that pertain to enforcement discretion but could be construed to bar enforcement by the EPA or through a citizen suit if the air agency declines to enforce are substantially inadequate to meet CAA requirements. A typical SIP provision that includes an impermissible enforcement discretion provision specifies certain parameters for when air agency personnel should pursue enforcement action, but is worded in such a way that the air director's decision defines what constitutes a "violation" of the emission limitation for purposes of the SIP, *i.e.*, by defining what constitutes a violation, the air agency's own enforcement

discretion decisions are imposed on the EPA or citizens.³⁰¹

The EPA's longstanding view is that SIP provisions cannot enable an air agency's decision concerning whether or not to pursue enforcement to bar the ability of the EPA or the public to enforce applicable requirements.³⁰² Such enforcement discretion provisions in a SIP would be inconsistent with the enforcement structure provided in the CAA. Specifically, the statute provides explicit independent enforcement authority to the EPA under CAA section 113 and to citizens under CAA section 304. Thus, the CAA contemplates that the EPA and citizens have authority to pursue enforcement for a violation even if the air agency elects not to do so. The EPA and citizens, and any court in which they seek to pursue an enforcement claim for violation of SIP requirements, must retain the authority to evaluate independently whether a source's violation of an emission limitation warrants enforcement action. Potential for enforcement by the EPA or through a citizen suit provides an important safeguard in the event that the air agency lacks resources or ability to enforce violations and provides additional deterrence. Accordingly, a SIP provision that operates at the air agency's election to eliminate the authority of the EPA or the public to pursue enforcement actions would undermine the enforcement structure of the CAA and would thus be substantially inadequate to meet fundamental requirements in CAA sections 113 and 304.

5. Substantial Inadequacy of Affirmative Defense Provisions

The EPA believes that SIP provisions that provide an affirmative defense for excess emissions during SSM events are substantially inadequate to meet CAA requirements. A typical SIP provision that includes an impermissible affirmative defense operates to limit or eliminate the jurisdiction of federal courts to assess liability or to impose remedies in an enforcement proceeding for exceedances of SIP emission limitations. Some affirmative defense provisions apply broadly, whereas others are components of specific

³⁰¹ See, e.g., "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 75 FR 70888 at 70892 (November 19, 2010). The SIP provision at issue provided that information concerning a malfunction "shall be used by the executive secretary in determining whether a violation has occurred and/or the need of further enforcement action." This SIP language appeared to give the state official exclusive authority to determine whether excess emissions constitute a violation.

³⁰² See 1999 SSM Guidance at 3.

emission limitations. Some provisions use the explicit term "affirmative defense," whereas others are structured as such provisions but do not use this specific terminology. All of these provisions, however, share the same legal deficiency in that they purport to alter the statutory jurisdiction of federal courts under section 113 and section 304 to determine liability and to impose remedies for violations of CAA requirements, including SIP emission limitations. Accordingly, an affirmative defense provision that operates to limit or to eliminate the jurisdiction of the federal courts would undermine the enforcement structure of the CAA and would thus be substantially inadequate to meet fundamental requirements in CAA sections 113 and 304. By undermining enforcement, such provisions also are inconsistent with fundamental CAA requirements such as attainment and maintenance of the NAAQS, protection of PSD increments and improvement of visibility.

B. SIP Call Process Under Section 110(k)(5)

Section 110(k)(5) of the CAA provides the EPA with authority to determine whether a SIP is substantially inadequate to attain or maintain the NAAQS or otherwise comply with any requirement of the CAA. Where the EPA makes such a determination, the EPA then has a duty to issue a SIP call.

In addition to providing general authority for a SIP call, CAA section 110(k)(5) sets forth the process and timing for such an action. First, the statute requires the EPA to notify the state of the final finding of substantial inadequacy. The EPA typically provides notice to states by a letter from the Assistant Administrator for the Office of Air and Radiation to the appropriate state officials in addition to publication of the final action in the **Federal Register**.

Second, the statute requires the EPA to establish "reasonable deadlines (not to exceed 18 months after the date of such notice)" for states to submit corrective SIP submissions to eliminate the inadequacy in response to the SIP call. The EPA proposes and takes comment on the schedule for the submission of corrective SIP revisions in order to ascertain the appropriate timeframe, depending on the nature of the SIP inadequacy.

Third, the statute requires that any finding of substantial inadequacy and notice to the state be made public. By undertaking a notice-and-comment rulemaking, the EPA assures that the air agencies, affected sources and members of the public all are adequately

informed and afforded the opportunity to participate in the process. Through the February 2013 proposal, the SNPR and this final notice, the EPA is providing a full evaluation of the issues raised by the Petition and has used this process as a means of giving clear and up-to-date guidance concerning SIP provisions relevant to the treatment of excess emissions during SSM events that is consistent with CAA requirements.

If the state fails to submit the corrective SIP revision by the deadline established in this final notice, CAA section 110(c) authorizes the EPA to “find[] that [the] State has failed to make a required submission.”³⁰³ Once the EPA makes such a finding of failure to submit, CAA section 110(c)(1) requires the EPA to “promulgate a Federal implementation plan at any time within 2 years after the [finding] . . . unless the State corrects the deficiency, and [the EPA] approves the plan or plan revision, before [the EPA] promulgates such [FIP].” Thus, if the EPA finds that the air agency failed to submit a complete SIP revision that responds to this SIP call, or if the EPA disapproves such SIP revision, then the EPA will have an obligation under CAA section 110(c)(1) to promulgate a FIP no later than 2 years from the date of the finding or the disapproval, if the deficiency has not been corrected before that time.³⁰⁴

The finding of failure to submit a revision in response to a SIP call or the EPA’s disapproval of that corrective SIP revision can also trigger sanctions under CAA section 179. If a state fails to submit a complete SIP revision that responds to a SIP call, CAA section 179(a) provides for the EPA to issue a finding of state failure. Such a finding starts mandatory 18-month and 24-month sanctions clocks. The two sanctions that apply under CAA section 179(b) are the 2-to-1 emission offset requirement for all new and modified major sources subject to the nonattainment NSR program and restrictions on highway funding. However, section 179 leaves it to the EPA to decide the order in which these sanctions apply. The EPA issued an order of sanctions rule in 1994 but did not specify the order of sanctions where a state fails to submit or submits a deficient SIP revision in response to a SIP call.³⁰⁵ In the February 2013

proposal, as the EPA has done in other SIP calls, the EPA proposed that the 2-to-1 emission offset requirement will apply for all new sources subject to the nonattainment NSR program beginning 18 months following such finding or disapproval unless the state corrects the deficiency before that date. The EPA proposed that the highway funding restrictions sanction will also apply beginning 24 months following such finding or disapproval unless the state corrects the deficiency before that date. Finally, the EPA proposed that the provisions in 40 CFR 52.31 regarding staying the sanctions clock and deferring the imposition of sanctions would also apply. In this action, the EPA is finalizing the order of sanctions as proposed in the February 2013 proposal and finalizing its decision concerning the application of 40 CFR 52.31.

Mandatory sanctions under CAA section 179 generally apply only in nonattainment areas. By its definition, the emission offset sanction applies only in areas required to have a part D NSR program, *i.e.*, areas designated nonattainment. Section 179(b)(1) expressly limits the highway funding restriction to nonattainment areas. Additionally, the EPA interprets the section 179 sanctions to apply only in the area or areas of the state that are subject to or required to have in place the deficient SIP and for the pollutant or pollutants that the specific SIP element addresses. For example, if the deficient provision applies statewide and applies for all NAAQS pollutants, then the mandatory sanctions would apply in all areas designated nonattainment for any NAAQS within the state. In this case, the EPA will evaluate the geographic scope of potential sanctions at the time it makes a determination that the air agency has failed to make a complete SIP submission in response to this SIP call, or at the time it disapproves such a SIP submission. The appropriate geographic scope for sanctions may vary depending upon the SIP provisions at issue.

C. SIP Call Timing Under Section 110(k)(5)

When the EPA finalizes a finding of substantial inadequacy and a SIP call for any state, CAA section 110(k)(5) requires the EPA to establish a SIP submission deadline by which the state must make a SIP submission to rectify the identified deficiency. Pursuant to CAA section 110(k)(5), the EPA has authority to set a SIP submission

deadline that is up to 18 months from the date of the final finding of inadequacy.

The EPA proposed to establish a date 18 months from the date of promulgation of the final finding for the state to respond to the SIP call. After further evaluation of this issue and consideration of comments on the proposed SIP call, the EPA has decided to finalize the proposed schedule. Thus, the SIP submission deadline for each of the states subject to this SIP call will be November 22, 2016. Thereafter, the EPA will review the adequacy of that new SIP submission in accordance with the CAA requirements of sections 110(a), 110(k), 110(l) and 193, including the EPA’s interpretation of the CAA reflected in the SSM Policy as clarified and updated through this rulemaking.

The EPA is providing the maximum time permissible under the CAA for a state to respond to a SIP call. The EPA believes that it is appropriate to provide states with the full 18 months authorized under CAA section 110(k)(5) in order to allow states sufficient time to make SIP revisions following their own SIP development process. During this time, the EPA recognizes, an affected state will need to revise its state regulations, provide for public input, process the SIP revision through the state’s own procedures and submit the SIP revision to the EPA. Such a schedule will allow for the necessary SIP development process to correct the deficiencies, yet still achieve the necessary SIP improvements as expeditiously as practicable. There may be exceptions, particularly in states that have adopted especially time-consuming procedures for adoption and submission of SIP revisions. The EPA acknowledges that the longstanding existence of many of the provisions at issue, such as automatic exemptions for SSM events, may have resulted in undue reliance on them as a compliance mechanism by some sources. As a result, development of appropriate SIP revisions may entail reexamination of the applicable emission limitations themselves, and this process may require the maximum time allowed by the CAA. For example, if circumstances do not allow the state to develop alternative emission limitations within that time, the state may find it necessary to remove the automatic exemptions in an initial responsive SIP revision and establish alternative emission limitations in a later SIP revision. Nevertheless, the EPA encourages the affected states to make the necessary revisions in as timely a fashion as possible and encourages the states to work with the respective EPA Regional

³⁰³ CAA section 110(c)(1)(A).

³⁰⁴ The 2-year deadline does not necessarily apply to FIPs following disapproval of a tribal implementation plan.

³⁰⁵ See “Selection of Sequence of Mandatory Sanctions for Findings Made Pursuant to Section

179 of the Clean Air Act.” 59 FR 39832 (August 4, 1994), codified at 40 CFR 52.31.

Office as they develop the SIP revisions. The EPA intends to review and act upon the SIP submissions as promptly as resources will allow, in order to correct these deficiencies in as timely a manner as possible. Recent experience with several states that elected to correct the deficiencies identified in the February 2013 proposal in advance of this final action suggests that these SIP revisions can be addressed efficiently through cooperation between the air agencies and the EPA.

The EPA notes that the SIP call for affected states finalized in this action is narrow and applies only to the specific SIP provisions determined to be inconsistent with the requirements of the CAA. To the extent that a state is concerned that elimination of a particular aspect of an existing emission limitation, such as an impermissible exemption, will render that emission limitation more stringent than the state originally intended and more stringent than needed to meet the CAA requirements it was intended to address, the EPA anticipates that the state will revise the emission limitation accordingly, but without the impermissible exemption or other feature that necessitated the SIP call. With adequate justification, this SIP revision might, *e.g.*, replace a numerical emission limitation with an alternative control method (design, equipment, work practice or operational standard) as a component of the emission limitation applicable during startup and/or shutdown periods.

The EPA emphasizes that its authority under CAA section 110(k)(5) does not extend to requiring a state to adopt a particular control measure in its SIP revision in response to the SIP call. Under principles of cooperative federalism, the CAA vests air agencies with substantial discretion in how to develop SIP provisions, so long as the provisions meet the legal requirements and objectives of the CAA.³⁰⁶ Thus, the inclusion of a SIP call to a state in this action should not be misconstrued as a directive to the state to adopt a particular control measure. The EPA is merely requiring that affected states make SIP revisions to remove or revise existing SIP provisions that fail to comply with fundamental requirements of the CAA. The states retain discretion to remove or revise those provisions as they determine best, so long as they bring their SIPs into compliance with

the requirements of the CAA.³⁰⁷ Through this rulemaking action, the EPA is reiterating, clarifying and updating its interpretations of the CAA with respect to SIP provisions that apply to emissions from sources during SSM events in order to provide states with comprehensive guidance concerning such provisions.

Finally, the EPA notes that under section 553 of the Administrative Procedure Act, 5 U.S.C. 553(d), an agency rule should not be “effective” less than 30 days after its publication, unless certain exceptions apply including an exception for “good cause.” In this action, the EPA is simultaneously taking final action on the Petition, issuing its revised SSM Policy guidance to states for SIP provisions applicable to emissions during SSM events and issuing a SIP call to 36 states for specific existing SIP provisions that it has determined to be substantially inadequate to meet CAA requirements. Section 110(k)(5) provides that the EPA must notify states affected by a SIP call and must establish a deadline for SIP submissions by affected states in response to a SIP call not to exceed 18 months after the date of such notification. The EPA is notifying affected states of this final SIP call action on May 22, 2015. Thus, regardless of the effective date of this action, the deadline for submission of SIP revisions to address the specific SIP provisions that the EPA has identified as substantially inadequate will be November 22, 2016. In addition, the EPA concludes that there is good cause for this final action to be effective on May 22, 2015, the day upon which the EPA provided notice to the states, because any delayed effective date would be unnecessary given that CAA section 110(k)(5) explicitly provides that the deadline for submission of the required SIP revisions runs from the date of notification to the affected states, not from some other date, and shall not exceed 18 months.

D. Response to Comments Concerning SIP Call Authority, Process and Timing

The EPA received a wide range of comments on the February 2013 proposal and the SNPR questioning the scope of the Agency’s authority to issue this SIP call action under section

110(k)(5), the process followed by EPA for this SIP call action, or the timing that the EPA provided for response to this SIP call action. Although there were numerous comments on these general topics, the majority of the comments raised the same questions and made similar arguments (*e.g.*, that the EPA has an obligation under section 110(k)(5) to “prove” not only that an exemption for SSM events in a SIP emission limitation is contrary to the explicit legal requirements of the CAA but also that this illegal exemption “caused” a specific violation of the NAAQS at a particular monitor on a particular day). For clarity and ease of discussion, the EPA is responding to these overarching comments, grouped by topic, in this section of this document.

1. Comments that section 110(k)(5) requires the EPA to “prove causation” to have authority to issue a SIP call.

Comment: Numerous state and industry commenters argued that the EPA has no authority to issue a SIP call with respect to a given SIP provision unless and until the Agency first proves definitively that the provision has caused a specific harm, such as a specific violation of the NAAQS in a specific area. These commenters generally focused upon the “attainment and maintenance” clause of section 110(k)(5) and did not address the “comply with any requirement of” the CAA clause.

For example, many industry commenters opposed the EPA’s interpretation of section 110(k)(5) on the grounds that the Agency had failed to provide a specific technical analysis “proving” how the SIP provisions failed to provide for attainment or maintenance of the NAAQS. For areas attaining the NAAQS, commenters asserted that there should be a presumption that existing SIP provisions are adequate if they have resulted in attainment of the NAAQS. For areas violating the NAAQS, commenters claimed that the EPA is required to conduct a technical analysis to determine if there is a “nexus between the provisions that are the subject of its SSM SIP Call Proposal and the specific pollutants for which attainment has not been achieved.” Other industry commenters argued that in order to have authority to issue a SIP call, the EPA must prove through a technical analysis that a given SIP provision “is” substantially inadequate, not that it “may be.” These commenters claimed that the EPA has not shown how any of the SIP provisions at issue in this action “threatens the NAAQS, fails to sufficiently mitigate interstate transport, or comply with any other

³⁰⁶ See *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997) (SIP call remanded and vacated because, *inter alia*, the EPA had issued a SIP call that required states to adopt a particular control measure for mobile sources).

³⁰⁷ Notwithstanding the latitude states have in developing SIP provisions, the EPA is required to assure that states meet the basic legal criteria for SIPs. See *Michigan v. EPA*, 213 F.3d 663, 686 (D.C. Cir. 2000) (upholding NO_x SIP call because, *inter alia*, the EPA was requiring states to meet basic legal requirement that SIPs comply with section 110(a)(2)(D), not dictating the adoption of a particular control measure).

CAA requirement.” Many industry commenters questioned whether exempt emissions during SSM events pose any attainment-related concerns, making assertions such as: “[i]nfrequent malfunction, startup and shutdown events at a limited number of stationary sources are likely to have no effect on attainment.”

Many state commenters made similar arguments, based on the specific attainment or nonattainment status of areas in their respective states. For example, one state commenter claimed that the EPA failed to make required technical findings that the specific provisions the Agency identified as legally deficient “are so substantially inadequate that the State cannot attain or maintain the NAAQS or otherwise comply with the CAA.” The commenter claimed that the EPA should have evaluated all of the state’s emission limitations, emission inventories and attainment and maintenance demonstrations for the NAAQS, rather than focusing on these individual SIP provisions. In order to demonstrate substantial inadequacy under section 110(k)(5), the state claimed, the EPA “must point to facts” that show “the State cannot attain or maintain the NAAQS or comply with the CAA” if the provisions remain in the SIP. Other states made comparable arguments with respect to the SIP provisions at issue in their SIPs and claimed that the EPA is required to establish how the provisions caused or contributed to a specific violation of a NAAQS in those states.

By contrast, many environmental group commenters and individual commenters took the opposite position concerning what is necessary to support a finding of substantial inadequacy under section 110(k)(5). These commenters argued that the EPA may issue a SIP call not only where it determines that a SIP is substantially inadequate to attain or maintain a NAAQS with a technical analysis but also where the Agency determines that the SIP is substantially inadequate “to comply with any requirement of the Act.” The commenters noted that the EPA identified specific statutory provisions of the CAA with which the SIP provisions at issue in this action do not comply. For example, these commenters agreed with the EPA’s view that SIP provisions with automatic or discretionary exemptions for emissions during SSM events do not meet the fundamental requirements that SIP emission limitations must apply to limit emissions from sources on a continuous basis, in accordance with sections 110(a)(2)(A), 110(a)(2)(C) and 302(k). In addition to arguing that failure to meet

legal requirements of the CAA is a sufficient basis for a SIP call, some commenters provided additional support to illustrate how SIP provisions with deficiencies such as automatic or discretionary exemptions for emissions during SSM events result in large amounts of excess emissions that would otherwise be violations of the applicable emission limitations.

Response: The EPA disagrees with the argument that it has no authority to issue a SIP call under section 110(k)(5) unless the Agency provides a factual or technical analysis to demonstrate that the SIP provision at issue caused a specific environmental harm or undermined a specific enforcement case. As explained in the February 2013 proposal, in the SNPR and in this final action, the EPA interprets its authority under section 110(k)(5) to authorize a SIP call for not only provisions that are substantially inadequate for purposes of attainment or maintenance of the NAAQS but also those provisions that are substantially inadequate for purposes of “any requirement” of the CAA.³⁰⁸ To be clear, the EPA can also issue a SIP call whenever it determines that a SIP as a whole, or a specific SIP provision, is deficient because the SIP did not prevent specific violations of a NAAQS, at a specific monitor, on a specific date. However, that is not the extent of the EPA’s authority under section 110(k)(5).

On its face, section 110(k)(5) does not impose any explicit requirements with respect to what specific form of factual or analytical basis is necessary for issuance of a SIP call. Because the statute does not prescribe the basis on which the EPA is to make a finding of substantial inadequacy, the Agency interprets section 110(k)(5) to provide discretion concerning what is necessary to support such a finding. The Agency believes that the nature of the factual or analytical basis necessary to make a finding is dependent upon the specific nature of the substantial inadequacy in a given SIP provision.

For example, when the EPA issued the NO_x SIP Call to multiple states because their SIPs failed to address interstate transport adequately in accordance with section 110(a)(2)(D)(i)(I), the Agency did base that SIP call on a detailed factual analysis including ambient air impacts.³⁰⁹ In that situation, the specific

requirement of the CAA at issue was the statutory obligation of each state to have a SIP that contains adequate provisions to prohibit emissions from sources “in amounts” that “contribute significantly to nonattainment in, or interfere with maintenance by, any other State” with respect to the NAAQS. Because of the phrase “in amounts,” the EPA considered it appropriate to evaluate whether each state’s SIP was substantially inadequate to comply with section 110(a)(2)(D)(i)(I) through a detailed analysis of the emissions from the state and their impacts on other states. Moreover, given the use of ambiguous terms in section 110(a)(2)(D)(i)(I) such as “contribute significantly,” the EPA concluded that it was appropriate to conduct a detailed analysis to quantify the amount of emissions that each of the affected states needed to eliminate in order to comply with section 110(a)(2)(D)(i)(I) for the specific NAAQS in question. However, the EPA’s decision to determine these facts and to conduct these analyses as a basis for that particular SIP call action was due to the nature of the SIP deficiency at issue and the wording of section 110(a)(2)(D)(i)(I). The EPA has similarly issued other SIP calls for which the Agency determined that a specific factual or technical analysis was appropriate to support the finding of substantial inadequacy.³¹⁰

Not all situations, however, require the same type of detailed factual analysis to support the finding of substantial inadequacy. For example, when the EPA issued the PSD GHG SIP call to 13 states for failure to have a PSD permitting program that properly addresses GHG emissions, the Agency did not need to base that SIP call action on a detailed factual analysis of ambient air impacts.³¹¹ In that situation, the statutory requirement of the CAA in question was the obligation of each state SIP under section 110(a)(2)(C) to

Reducing Regional Transport of Ozone,” 63 FR 57356 (October 27, 1998).

³¹⁰ See, e.g., “Finding of Substantial Inadequacy of Implementation Plan; Call for Iowa State Implementation Plan Revision,” 76 FR 41424 (July 14, 2011) (SIP call to Iowa due to PM_{2.5} NAAQS violations in Muscatine area); “Approval and Promulgation of State Implementation Plans; Call for Sulfur Dioxide SIP Revisions for Billings/Laurel, MT [Montana],” 58 FR 41430 (August 4, 1993) (SIP call to Montana due to modeled violations of the SO₂ NAAQS).

³¹¹ See “Action to Ensure Authority to Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions; Finding of Substantial Inadequacy and SIP Call,” 75 FR 77698 (December 13, 2010). The EPA notes that a number of petitioners challenged this SIP call on various grounds, but the court ultimately determined that they did not have standing. *Texas v. EPA*, 726 F.3d 180 (D.C. Cir. 2013).

³⁰⁸ See February 2013 proposal, 78 FR 12459 at 12483–89 (February 22, 2013); SNPR, 79 FR 55919 at 55935.

³⁰⁹ See “Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of

include a PSD permitting program that addresses all federally regulated air pollutants, including GHGs. In that action, the EPA made a finding that the SIPs of 13 states were substantially inadequate to “comply with any requirement” of the CAA because the PSD permitting programs in their EPA-approved SIPs did not apply to GHG emissions from new and modified sources. Accordingly, the EPA issued a SIP call to the 13 states because their SIPs failed to comply with specific legal requirements of the CAA. This failure to meet an explicit CAA legal requirement to address GHG emissions in permits for sources as required by statute did not require the EPA to provide a technical analysis of the specific environmental impacts that this substantial inadequacy would cause. For this type of SIP deficiency, it was sufficient for the EPA to make a factual finding that the affected states had SIPs that failed to meet this fundamental legal requirement.³¹² The EPA has issued other SIP calls for which the Agency made a finding that a state’s failure to meet specific legal requirement of the CAA for SIPs was a substantial inadequacy without the need to provide a technical air quality analysis relating to NAAQS violations.³¹³

The EPA believes that the most relevant precedent for what is necessary to support a finding of substantial inadequacy in this action is the SIP call that the Agency previously issued to the state of Utah for deficient SIP provisions related to the treatment of excess emissions during SSM events.³¹⁴ In that SIP call action, the EPA made a finding that two specific provisions in the state’s SIP were substantially inadequate because they were inconsistent with legal requirements of the CAA. For one of the provisions that included an exemption for emissions during “upsets” (i.e., malfunctions), the EPA explained:

Contrary to CAA section 302(k)’s definition of emission limitation, the exemption [in the provision] renders emission limitations in

the Utah SIP less than continuous and, contrary to the requirements of CAA sections 110(a)(2)(A) and (C), undermines the ability to ensure compliance with SIP emissions limitations relied on to achieve the NAAQS and other relevant CAA requirements at all times. Therefore, the [provision] renders the Utah SIP substantially inadequate to attain or maintain the NAAQS or to comply with other CAA requirements such as CAA sections 110(a)(2)(A) and (C) and 302(k), CAA provisions related to prevention of significant deterioration (PSD) and nonattainment NSR permits (sections 165 and 173), and provisions related to protection of visibility (section 169A).³¹⁵

For a second provision, the EPA made a finding of substantial inadequacy because the provision interfered with the enforcement structure of the CAA. The EPA explained:

This provision appears to give the executive secretary exclusive authority to determine whether excess emissions constitute a violation and thus to preclude independent enforcement action by EPA and citizens when the executive secretary makes a non-violation determination. This is inconsistent with the enforcement structure under the CAA, which provides enforcement authority not only to the States, but also to EPA and citizens. . . . Because it undermines the envisioned enforcement structure, it also undermines the ability of the State to attain and maintain the NAAQS and to comply with other CAA requirements related to PSD, visibility, NSPS, and NESHAPS.³¹⁶

In the Utah SIP call rulemaking, the EPA received similar adverse comments arguing that the Agency has no authority under section 110(k)(5) to issue a SIP call without a factual analysis that proves that the deficient SIP provisions caused a specific environmental harm, such as a NAAQS violation. Commenters in that rulemaking likewise argued that the EPA was required to prove a causal connection between the excess emissions that occurred during a specific exempt malfunction and a specific violation of the NAAQS. In response to those comments, the EPA explained:

[W]e need not show a direct causal link between any specific unavoidable breakdown excess emissions and violations of the NAAQS to conclude that the SIP is substantially inadequate. It is our interpretation that the fundamental integrity of the CAA’s SIP process and structure is undermined if emission limits relied on to

meet CAA requirements can be exceeded without potential recourse by any entity granted enforcement authority by the CAA. We are not restricted to issuing SIP calls only after a violation of the NAAQS has occurred or only where a specific violation can be linked to a specific excess emissions event.³¹⁷

The EPA’s interpretation of section 110(k)(5) in the Utah action was directly challenged in *US Magnesium, LLC v. EPA*.³¹⁸ Among other claims, the petitioners argued that the EPA did not have authority for the SIP call because the Agency had not “set out facts showing that the [SIP provision] has prevented Utah from attaining or maintaining the NAAQS or otherwise complying with the CAA.” Thus, the same arguments raised by commenters in this action have previously been advanced and rejected by the EPA and the courts. The court expressly upheld the EPA’s interpretation of section 110(k)(5), concluding:

Certainly, a SIP could be deemed substantially inadequate because air-quality records showed that actions permitted under the SIP resulted in NAAQS violations, but the statute can likewise apply to a situation like this, where the EPA determines that a SIP is no longer consistent with the EPA’s understanding of the CAA. In such a case, the CAA permits the EPA to find that a SIP is substantially inadequate to comply with the CAA, which would allow the EPA to issue a SIP call under CAA section 110(k)(5).³¹⁹

Finally, the EPA disagrees with the commenters on this specific point because it is not a logical construction of section 110(k)(5). The implication of the commenters’ argument is that if a given area is in attainment, then the question of whether the SIP provisions meet applicable legal requirements is irrelevant. If a given area is not in attainment, then the implication of the commenter’s argument is that the EPA must prove that the legally deficient SIP provision factually caused the violation of the NAAQS or else the legal deficiency is irrelevant. In the latter case, the logical extension of the commenter’s argument is that no matter how deficient a SIP provision is to meet applicable legal requirements, the EPA is foreclosed from directing the state to correct that deficiency unless and until there is proof of a specific environmental harm caused, or specific enforcement case thwarted, by that deficiency. Such a reading is inconsistent with both the letter and the intent of section 110(k)(5).

2. Comments that the EPA must make specific factual findings to meet the

³¹² *Id.*, 75 FR 77698 at 77705–07.

³¹³ See, e.g., “Finding of Substantial Inadequacy of Implementation Plan; Call for California State Implementation Plan Revision,” 68 FR 37746 (June 25, 2003) (SIP call to California for failure to meet legal requirements of section 110(a)(2)(C), section 110(a)(2)(I), and section 110(a)(2)(E) because of exemptions for agricultural sources from NSR and PSD permitting requirements); “Credible Evidence Revisions,” 62 FR 8314 at 8327 (February 24, 1997) (discussing SIP calls requiring states to revise their SIPs to meet CAA requirements with respect to the use of any credible evidence in enforcement actions for SIP violations).

³¹⁴ See “Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision; Proposed rule,” 76 FR 21639 (April 18, 2011).

³¹⁵ *Id.*, 76 FR 21639 at 21641. The EPA also found the first provision substantially inadequate because it operated to create an additional exemption for emissions during malfunctions that modified the existing emission limitations in some federal NSPS and NESHAP that the state had incorporated by reference into its SIP. The EPA’s 1999 SSM Guidance had indicated that state SIP provisions could not validly alter NSPS or NESHAP.

³¹⁶ *Id.*

³¹⁷ *Id.*, 76 FR 21639 at 21643.

³¹⁸ 690 F.3d 1157 (10th Cir. 2012).

³¹⁹ *Id.* 690 F.3d at 1168.

requirements of section 110(a)(2)(H)(ii) to have authority to issue a SIP call.

Comment: A number of commenters argued that even if section 110(k)(5) does not require the EPA to provide a technical analysis to support a finding of substantial inadequacy, section 110(a)(2)(H)(ii) does impose this obligation. The commenters noted that section 110(a)(2)(H)(ii) requires states to revise their SIPs “whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate.” The commenters claimed that this statutory language imposes a requirement for the EPA to “find” the SIP inadequate and “clearly indicates that a SIP Call must be justified by factual findings supported by record evidence.”

One commenter argued that the use of the word “finds” should be read in light of the dictionary definition of “find”—“to discover by study or experiment.” The commenter noted that courts commonly hold that agencies must draw a link between the facts and a challenged agency decision. To support this basic principle of administrative law, the commenter cited a litany of cases including: *Motor Vehicle Mfrs Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983); *Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1034 (D.C. Cir. 2001); *Tex. Tin Corp. v. EPA*, 992 F.2d 353, 356 (D.C. Cir. 1993); *Nat’l Gypsum v. EPA*, 968 F.2d 40, 43–44 (D.C. Cir. 1992); *Michigan v. EPA*, 213 F.3d 663, 681 (D.C. Cir. 2000). Thus, the commenter suggested that the statutory language of section 110(a)(2)(H)(ii) requires a specific factual or technical demonstration concerning the ambient air impacts of an inadequate SIP provision, even if the language of section 110(k)(5) does not.

Another commenter argued that the phrase “on the basis of information available to the Administrator” in section 110(a)(2)(H)(ii) means that the EPA must not only consider the specific terms of the SIP provisions relative to the legal requirements of the statute but must also consider other information that is “available,” including how the provisions have been affecting air quality or enforcement since approval. In support of this proposition, the commenter cited 1970 legislative history for section 110(a)(2)(H):

Whenever the Secretary or his representative finds from new information developed after the plan is approved that the plan is not or will not be adequate to achieve promulgated ambient air quality standards he must notify the appropriate States and give

them an opportunity to respond to the new information.³²⁰

Thus, the commenter concluded that the EPA must not only find that the SIP is facially inconsistent with the legal requirements of the CAA but also find it “substantially inadequate” to achieve the goals of the requirements as a factual matter before issuing a SIP call. The implication of the commenter’s argument is that section 110(a)(2)(H)(ii) imposes additional limitations upon the EPA’s authority to issue a SIP call.

Response: The EPA disagrees that it has not made the findings necessary to support the present SIP call action. The thrust of the commenters’ argument is that the facts that the EPA “finds” or the “information” upon which the EPA bases such a finding can *only* be technical or scientific facts proving that a given SIP provision resulted in emissions that caused a specific violation of the NAAQS. As with section 110(k)(5), however, nothing in section 110(a)(2)(H)(ii) compels such a narrow reading. The plain language of section 110(a)(2)(H)(ii) does not support the commenters’ arguments. To the extent that section 110(a)(2)(H)(ii) is ambiguous, however, the EPA does not interpret it to require the types of technical findings claimed by the commenters in the case of SIP provisions that do not meet legal requirements of the CAA. To the contrary, the EPA interprets the statutory language to leave to the Agency’s discretion what facts or information are necessary to find that a given SIP provision is substantially inadequate. In short, the EPA’s “finding” may be a finding that a SIP provision does not meet applicable legal requirements without definitive proof that this legal deficiency caused a specific outcome, such as a specific impact on the NAAQS or a specific enforcement action.

First, section 110(a)(2)(H)(ii) does not on its face directly address the scope of the EPA’s authority, unlike section 110(k)(5). Section 110(a)(2)(H)(ii) appears in section 110(a)(2), which contains a listing of specific structural or program requirements that each state’s SIP must include. In the case of section 110(a)(2)(H)(ii), the CAA requires each state to have provisions in its SIP that “provide for revision of such plan” in the event that the EPA issues a SIP call. Given that section 110(k)(5) is the provision that directly addresses the EPA’s authority to issue a SIP call, section 110(a)(2)(H)(ii) should not be interpreted in a way that contradicts or curtails the broad authority provided in

section 110(k)(5). The EPA does not interpret section 110(k)(5) to require proof that a given SIP provision caused a specific environmental harm or undermined a specific enforcement action in order to find the provision substantially inadequate. If the provision fails to meet fundamental legal requirements of the CAA for SIP provisions, that alone is sufficient.

Second, even if read in isolation, section 110(a)(2)(H)(ii) does not specify what type of finding the EPA is required to make or specify the way in which the Agency should make such a finding. The EPA agrees that this section of the CAA describes findings that the EPA makes “on the basis of information available to the Administrator that the plan is substantially inadequate to attain” the NAAQS. This section does not, however, expressly state that the “information” in question must be a particular form of information, nor does it expressly require any specified form of technical analysis such as modeling that demonstrates that a particular SIP deficiency caused a violation of the NAAQS. Because the term “information” is not limited in this way, the EPA interprets it to mean whatever form of information is relevant to the finding in question. For certain types of deficiencies, the EPA may determine that such a technical analysis is appropriate, but that does not mean that it is required as a basis for all findings of substantial inadequacy.³²¹

Third, section 110(a)(2)(H)(ii), like section 110(k)(5), is not limited to findings related exclusively to attainment of the NAAQS. Section 110(a)(2)(H)(ii) also expressly refers to findings by the EPA that a SIP is substantially inadequate “to otherwise comply with any additional requirements established under” the CAA. The EPA interprets this explicit reference to “any additional requirements” to include any legal requirements applicable to SIP provisions, such as the requirement that emission limitations must apply continuously. The commenters misconstrue section 110(a)(2)(H)(ii) to

³²¹ See, e.g., “Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone; Final rule,” 63 FR 57355 (October 27, 1998) (EPA found that the SIPs of multiple states did not adequately control emissions that resulted in significant contribution to nonattainment in other states); “Action To Ensure Authority To Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call; Final rule,” 75 FR 77697 (December 13, 2010) (EPA found that the SIPs of multiple states did not meet the legal requirements for PSD permitting for GHG emissions).

³²⁰ See S. Rep. No. 91–1196 at 55–56 (1970).

refer exclusively to provisions that are literally found to cause a specific violation of the NAAQS. The EPA acknowledges that the legislative history quoted by the commenters discusses findings related to a failure of a SIP to attain the NAAQS, but the passage quoted does not explain the meaning of “new information” any more specifically than the statute, nor does the passage explain why the actual statutory text of section 110(a)(2)(H)(ii) now refers to findings related to failures to meet “any additional requirements” of the CAA.³²² Moreover, the commenters did not address the changes to the CAA in 1977 that added to the statutory language to refer to other requirements, nor did they address the changes to the CAA in 1990 that added section 110(k)(5), which refers to all other requirements of the CAA. The EPA believes that the more recent changes to the statute in fact support its view that section 110(a)(2)(H)(ii) entails compliance with the legal requirements of the CAA, not the narrow reading advocated by the commenters.

Fourth, the EPA disagrees with the commenters’ arguments that it did not make factual “findings” to support this SIP call. To the contrary, the EPA has made numerous factual determinations with regard to the specific SIP provisions at issue. For example, for those SIP provisions that include automatic exemptions for emissions during SSM events, the EPA has found that the provisions are inconsistent with the definition of “emission limitation” in section 302(k) and that SIP provisions that allow sources to exceed otherwise applicable emission limitations during SSM events may interfere with attainment and maintenance of the NAAQS. The EPA has also made the factual determination that other SIP provisions that authorize director’s discretion exemptions during SSM events are inconsistent with the statutory provisions applicable to the approval and revision of SIP provisions. The EPA has found that overbroad enforcement discretion provisions are inconsistent with the enforcement structure of the CAA in that they could be interpreted to allow the state to make the final decision whether such emissions are violations, thus impeding the ability of the EPA and citizens to enforce the emission limitations of the

SIP. Similarly, the EPA has found, consistent with the court’s decision in *NRDC v. EPA*, that affirmative defenses in SIP provisions are inconsistent with CAA requirements because they operate to alter or eliminate the jurisdiction of the courts to determine liability and impose penalties. In short, the EPA has made the factual findings that specific provisions are substantially inadequate to meet requirements of the CAA, as contemplated in both section 110(a)(2)(H)(ii) and section 110(k)(5).

Finally, the EPA notes that the cases cited by the commenters to support their contentions concerning the factual basis for agency decisions are not relevant to the specific question at hand. The correct question is whether section 110(a)(2)(H)(ii) requires the type of factual or technical analysis that they claim. None of the cases they cited address this specific issue. By contrast, the decision of the Tenth Circuit in *US Magnesium, LLC v. EPA* is much more relevant. In that decision, the court concluded that the EPA’s authority under section 110(k)(5) is not restricted to situations where a deficient SIP provision caused a specific violation of the NAAQS and the exercise of that authority does not require specific factual findings that the provision caused such impacts.³²³

3. Comments that the EPA lacks authority to issue a SIP call because it is interpreting the term “substantial inadequacy” incorrectly.

Comment: Some commenters claimed that although the term “substantially inadequate” is not defined in the statute, the EPA made no effort to interpret the term. Citing *Qwest Corp. v. FCC*, 258 F.3d 1191, 1201–02 (10th Cir. 2001), the commenters argued that the EPA is not entitled to any deference to its interpretation of the term “substantial inadequacy.”

Other commenters acknowledged that the EPA took the position that the term “substantially inadequate” is not defined in the CAA and that the Agency can establish an interpretation of that provision under *Chevron* step 2. However, these commenters disagreed that the EPA’s interpretation of the term in the February 2013 proposal was reasonable. In particular, the commenters disagreed with the EPA’s view that once a SIP provision is found to be “facially inconsistent” with a specific legal requirement of the CAA, nothing more is required to find the provision “substantially inadequate” to “comply with” that requirement. Commenters claimed that the EPA’s interpretation conflicts with the statute

because it ignores the statutory requirement that a SIP call be based on inadequacies that are “substantial” and that the interpretation does not meet the “high bar” Congress established before states could be required to undertake the difficult task of revising a SIP.

State commenters claimed that the requirement that the EPA must determine that the SIP is “substantially” inadequate establishes a heavy burden for the EPA. The commenters relied on a dictionary definition of “substantially” as meaning “considerable in importance, value, degree, amount, or extent.” The commenters argued that when modifying the word “inadequate,” the use of the modifier “substantially” in section 110(k)(5) enhances the degree of proof required. Thus, the commenters argued that the EPA cannot just assume that the provisions may prevent attainment of the NAAQS.

Other industry commenters disagreed that the term “substantially inadequate” is ambiguous but claimed that even if it were, the EPA’s own interpretation is vague and ambiguous. The commenters asserted that the EPA’s statement that it must evaluate the adequacy of specific SIP provision “in light of the specific purposes for which the SIP provision at issue is required” and with respect to whether the provision meets “fundamental legal requirements applicable to such a provision” is not a reasonable interpretation of the statutory language. Furthermore, the commenters argued, the EPA’s interpretation of section 110(k)(5) to authorize a SIP call in the absence of any causal evidence that the SIP provision at issue causes a particular environmental impact reads out of the statute “the explicit requirement that a SIP call related to NAAQS be made only where the state plan is substantially inadequate to attain or maintain the relevant standard.”

Response: The EPA disagrees with commenters who claimed that the Agency did not explain its interpretation of section 110(k)(5) in general, or the term “substantially inadequate” in particular, in the February 2013 proposal. To the contrary, the EPA provided an explanation of why it considers section 110(k)(5) to be ambiguous and provided a detailed explanation of how the Agency is interpreting and applying that statutory language to the specific SIP provisions at issue in this action.³²⁴ Moreover, the EPA explained why it believes that the four major types of

³²² The EPA notes that the significance of this 1970 legislative history was raised in *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1166 (10th Cir. 2012). That court found the legislative history “inapposite” simply because it did not pertain to section 110(k)(5) which Congress added to the CAA in 1990. This legislative history passage is of limited significance in this action as well.

³²³ *Id.*, 690 F.3d 1157, 1166.

³²⁴ See February 2013 proposal, 78 FR 12459 at 12483–88.

provisions at issue are inconsistent with applicable legal requirements of the CAA and thus substantially inadequate. In the SNPR, the EPA reiterated its interpretation of section 110(k)(5) with respect to affirmative defense provisions in SIPs but updated that interpretation in response to the logic of the more recent court decision in *NRDC v. EPA*. Thus, the commenters' reliance on the *Qwest* decision is not appropriate, because the EPA did explain its interpretation of the statute and it is not one that is contrary to the statute. A more appropriate precedent is the decision in *US Magnesium, LLC v. EPA*, in which the same court upheld the EPA's interpretation of its authority under section 110(k)(5). In short, the EPA believes that section 110(k)(5) provides the EPA with discretion to determine what constitutes a substantial inadequacy and to determine the appropriate basis for such a finding in light of the relevant CAA requirements at issue. Thus, the commenters are in error that the EPA did not articulate its interpretation of section 110(k)(5).

The EPA also disagrees with those commenters who argued that the Agency has ignored or misinterpreted the term "substantial" in this action. As many commenters acknowledged, this term is not defined in the statute. Their reliance on a dictionary definition, however, is based on the incorrect premise that a failure to comply with the legal requirements of the CAA for SIP provisions is not "considerable in importance, value, degree, amount, or extent."

First, the commenters' argument ignores the full statutory language of section 110(k)(5) in which the EPA is authorized to issue a SIP call whenever it determines that a given SIP provision is inadequate, not only because of impacts on attainment of the NAAQS but also upon a failure to meet "any other requirement" of the CAA. As explained in the February 2013 proposal and in the SNPR, the EPA interprets its authority under section 110(k)(5) to encompass any type of deficiency, including failure to meet specific legal requirements of the CAA for SIP provisions. Failure to comply with these legal requirements can have the effect of interfering with attainment and maintenance of the NAAQS (e.g., by allowing unlimited emissions from sources during SSM events), but the failure to comply with the legal requirements is in and of itself a basis for a SIP call.

Second, the commenters' argument implies that failure of a SIP provision to meet a legal requirement of the CAA is not a "substantial" inadequacy. The

EPA strongly disagrees with the view that complying with applicable legal requirements is not an important consideration in general, and not important with respect to the specific legal defects at issue here. For example, the EPA considers a SIP provision that does not apply continuously because it contains SSM exemptions to be substantially inadequate because it fails to meet legal requirements of sections 110(a)(2)(A), 110(a)(2)(C) and 302(k). In particular, failure to meet the legal requirements for an emission limitation as contemplated in section 302(k) is a "substantial" inadequacy. The EPA is not alone in this view; the D.C. Circuit in the *Sierra Club v. Johnson* case held that emission limitations must be continuous and cannot contain SSM exemptions. If inclusion of SSM exemptions in emission limitations were not a "substantial" deficiency from the court's perspective, presumably the court would have ruled differently. As another example, the EPA considers the inclusion of affirmative defenses in SIP provisions that operate to alter the jurisdiction of the courts to be a substantial inadequacy. Again, the EPA's view that SIP provisions cannot interfere with the enforcement structure of the CAA set forth in section 113 and section 304 is not unreasonable. The court's decision in *NRDC v. EPA* held that EPA regulations cannot alter or eliminate the jurisdiction of courts to determine liability and impose remedies in judicial enforcement cases and this same logic extends to the states in SIP provisions. Contrary to the arguments of the commenters, the EPA reasonably interprets the term "substantial" in section 110(k)(5) to include compliance with the legal requirements of the CAA applicable to SIP provisions.

Third, the EPA notes that its reading of section 110(k)(5) does not "read out of the statute" the statutory language that SIP provisions can be substantially inadequate "to attain or maintain the relevant NAAQS" as claimed by the commenters. The EPA agrees that SIP provisions can be found substantially inadequate for this specific reason, but it is the commenters who read words out of section 110(k)(5) by disregarding the portion of the statute that also authorizes a SIP call whenever a SIP provision does not "comply with any requirement of" the CAA. Indeed, the EPA believes that SIP provisions that fail to meet the specific legal requirements of the CAA are very likely to have these impacts as well; e.g., the unlimited emissions authorized by SSM exemptions can interfere with attainment and maintenance of the

NAAQS. The EPA believes that Congress consciously included these fundamental legal requirements in order to assure that SIP provisions will achieve the objectives of the CAA, such as attainment and maintenance of the NAAQS. For example, legislative history for section 302(k) indicates that Congress intentionally required that emission limitations apply continuously in order to assure that they would achieve these goals as well as be consistent with the enforcement structure of the CAA.³²⁵

4. Comments that the EPA lacks authority to issue a SIP call because it is required to "quantify" the magnitude of any alleged SIP deficiency in order to establish that it is substantial.

Comment: A number of commenters argued that, in addition to failing to provide a required technical analysis to support a SIP call, the EPA was also failing to quantify in advance the degree of inadequacy that is necessary for a given SIP provision to be substantially inadequate. The commenters asserted that the EPA has a burden to define in advance what amount of inadequacy is "substantial," before the Agency can require states to comply with a SIP call. Some commenters made this argument based upon their experience with prior SIP call rulemakings, such as the NO_x SIP call in which the Agency performed such an analysis. Other commenters, however, evidently based this argument upon their reading of the D.C. Circuit's decision in *EME Homer City Generation, L.P. v. EPA*.³²⁶ Some commenters also argued that "all" past EPA SIP calls have been based upon a specific technical analysis concerning the sufficiency of a SIP to provide for attainment and maintenance of a NAAQS and that this establishes that such an analysis is always required.

Response: The EPA disagrees that section 110(k)(5) requires the Agency to "quantify" the degree of inadequacy in a given SIP provision before issuing a SIP call. As explained in detail in the February 2013 proposal and this document, the EPA interprets section 110(k)(5) to authorize the Agency to determine the nature of the analysis necessary to make a finding that a SIP provision is substantially inadequate. The EPA agrees that for certain SIP call actions, such as the NO_x SIP call, the

³²⁵ See, e.g., H.R. 95-294, at 92 (1977) (referring to emission limitations as a fundamental tool for assuring attainment and maintenance of the NAAQS and stating that unless they are "complied with at all times, there can be no assurance that ambient standards will be attainment and maintained.")

³²⁶ 696 F.3d 7, 29 (D.C. Cir. 2012) *rev'd*, 134 S. Ct. 1584 (2014).

specific nature of the SIP call in question for section 110(a)(2)(D)(i) did warrant a technical evaluation of whether the emissions from sources in particular states were significantly contributing to violations of a NAAQS in other states. Thus, the EPA elected to perform a specific form of analysis to determine whether emissions from sources in certain states significantly contributed to violations of the NAAQS in other states, and if so, what degree of reductions were necessary to remedy that interstate transport.

The nature of the SIP deficiencies at issue in this action does not require that type of technical analysis and does not require a “quantification” of the extent of the deficiency. In this action, the EPA is promulgating a SIP call action that directs the affected states to revise existing SIP provisions with specific legal deficiencies that make the provisions inconsistent with fundamental legal requirements of the CAA for SIPs, *e.g.*, automatic exemptions for emissions during SSM events or affirmative defense provisions that limit or eliminate the jurisdiction of courts to determine liability and impose remedies for violations. Accordingly, the EPA has determined that it is not necessary to establish that these deficiencies literally caused a specific violation of the NAAQS on a particular day or undermined a specific enforcement case. It is sufficient that the provisions fail to meet a legal requirement of the CAA and thus are substantially inadequate as provided in section 110(k)(5).

5. Comments that the EPA’s interpretation of substantial inadequacy would override state discretion in development of SIP provisions.

Comment: Some state and industry commenters argued that the EPA’s interpretation of its authority under section 110(k)(5) is wrong because it is inconsistent with the principle of cooperative federalism. These commenters asserted that the EPA’s interpretation of the term “substantially inadequate,” as explained in the February 2013 proposal, would allow the Agency to dictate that states revise their SIPs without any consideration of whether the states’ preferred control measures affect attainment of the NAAQS, thereby expanding the EPA’s role in CAA implementation. Consequently, these commenters concluded, the EPA’s interpretation of section 110(k)(5) is neither “reasonable” nor “a permissible construction of the

statute” under the principles of *Chevron* deference.³²⁷

Response: The EPA disagrees with the commenters’ view of the cooperative-federalism relationship established in the CAA, as explained in detail in section V.D.2 of this document. Because the commenters are misconstruing the respective responsibility and authorities of the states and the EPA under cooperative federalism, the Agency does not agree that its interpretation of section 110(k)(5) is “unreasonable” for this reason under the principles of *Chevron*. As explained in detail in the February 2013 proposal, the EPA interprets its authority under section 110(k)(5) to include the ability to require states to revise their SIP provisions to correct the types of deficiencies at issue in this action.

Section 110(k)(5) explicitly authorizes the EPA to issue a SIP call for a broad range of reasons, including to address any SIP provisions that relate to attainment and maintenance of the NAAQS, to interstate transport, or to any other requirement of the CAA.³²⁸ The EPA’s authority and responsibility to review SIP submissions in the first instance is to assure that they meet all applicable procedural and substantive requirements of the CAA, in accordance with the requirements of sections 110(k)(3), 110(l) and 193. The EPA’s authority and responsibility under the CAA includes assuring that SIP provisions comply with specific statutory requirements, such as the requirement that emission limitations apply to sources continuously. The CAA imposes these statutory requirements in order to assure that the larger objectives of SIPs are achieved, such as the attainment and maintenance of the NAAQS, protection of PSD increments, improvement of visibility and providing for effective enforcement. The CAA imposes this authority and responsibility upon the EPA when it first evaluates a SIP submission for approval. Likewise, after the initial approval, section 110(k)(5) authorizes the EPA to require states to revise their SIPs whenever the Agency later determines that to be necessary to meet CAA requirements. This does not in any way allow the EPA to interfere in the

states’ selection of the control measures they elect to impose to satisfy CAA requirements relating to NAAQS attainment and maintenance, provided that those selected measures comply with all CAA requirements such as the need for continuous emissions limitations. Accordingly, the EPA believes that its interpretation of section 110(k)(5) is fully consistent with the letter and the purpose of the principles of cooperative federalism.

6. Comments that the EPA cannot issue a SIP call for an existing SIP provision unless the provision was deficient at the time the state originally developed and submitted the provision for EPA approval.

Comment: Commenters argued that the EPA is using the SIP call to require states to change SIP provisions that were acceptable at the time they were originally approved and argued that section 110(k)(5) cannot be used for that purpose. Specifically, one commenter asserted that section 110(k)(5) provides that findings of substantial inadequacy shall “subject the State to the requirements of this chapter to which the State was subject *when it developed and submitted the plan for which such finding was made.*” (Emphasis added by commenter.) The implication of the commenters’ argument is that a SIP provision only needs to meet the requirements of the CAA that were applicable at the time the state originally developed and submitted the provision for EPA approval. Because the EPA has no authority to issue a SIP call under their preferred reading of section 110(k)(5), the commenters claimed, the EPA would have to use its authority under section 110(k)(6) and would have to establish that the original approval of each of the provisions at issue in this action was in error.

Response: The EPA disagrees with this reading of section 110(k)(5). As an initial matter, the commenter takes the quoted excerpt of the statute out of context. The quoted language follows “to the extent the Administrator deems appropriate.” Thus, it is clear when the statutory provision is read in full that the EPA has discretion in specifying the requirements to which the state is subject and is not limited to specifying only those requirements that applied at the time the SIP was originally “developed and submitted.” Moreover, this cramped reading of section 110(k)(5) is not a reasonable interpretation of the statute because by this logic, the EPA could never require states to update grossly out-of-date SIP provisions so long as the provisions originally met CAA requirements. Given that the CAA creates a process by which

³²⁷ *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843–44 (1984).

³²⁸ See, *e.g.*, *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1168 (10th Cir. 2012) (citing 42 U.S.C. 7410(k)(5)) (holding that the EPA may issue a SIP call not only based on NAAQS violations, but also whenever “EPA determines that a SIP is no longer consistent with the EPA’s understanding of the CAA”); *id.* at 1170 (upholding the EPA’s authority “to call a SIP in order to clarify language in the SIP that could be read to violate the CAA,” even absent a pertinent judicial finding).

the EPA is required to establish and to update the NAAQS on a continuing basis, and states are required to update and revise their SIPs on a continuing basis, the Agency believes that Congress would not have intended that SIP provisions remain static for all time simply because they were adequate when first developed and approved. Such an interpretation would mean that subsequent legally significant events such as amendments of the CAA, court decisions interpreting the CAA and new or revised EPA regulations are not relevant to the continuing adequacy of existing SIP provisions. Similarly, such an interpretation would mean that facts arising later could never provide a basis for a SIP call, e.g., to address interstate transport that was not evident at the time of the original development and approval of the SIP provisions or that needs to be addressed further because of a revised NAAQS.

The commenters also argued that if a state's SIP provision was flawed at the time the EPA approved it, then the Agency's only alternative for addressing the deficient provision is through the error correction authority of section 110(k)(6). The EPA disagrees. The CAA provides a number of tools to address flawed SIPs and the EPA does not interpret these provisions to be mutually exclusive. While the EPA could potentially have relied on section 110(k)(6) to remove the deficient provisions at issue in this action, the Agency believes that section 110(k)(5) authority also provides a means to address flawed SIP provisions. As explained in the February 2013 proposal, the EPA specifically considered the relative merits of reliance on section 110(k)(5) and section 110(k)(6) and determined that the former was a better approach for this action.³²⁹ In the present circumstances, the EPA is not addressing a single targeted flaw, i.e., a specific SIP revision that was flawed. Moreover, the EPA is not only dealing with a multitude of states in this action, but also in many cases with numerous SIP provisions developed over the years by a specific state. The provisions at issue often are included in several different places in a complex SIP and can affect multiple emission limitations in the SIP that apply to sources for purposes of multiple NAAQS.

Comparing the SIP call and error correction approaches, the EPA concluded that the SIP call authority under section 110(k)(5) provides the better approach for this action, in that

it allows the states to evaluate the overall structure of their existing SIPs and determine how best to modify the affected SIP provisions in order to address the identified deficiencies. By contrast, use of the error correction authority under section 110(k)(6) would result in immediate disapproval and removal of existing SIP provisions from the SIP, which could cause confusion in terms of what requirements apply to sources. Moreover, the EPA's disapproval of a SIP submission through an error correction that reverses a prior SIP approval of a required SIP provision starts a "sanctions clock," and sanctions would apply if the state has not submitted a revised SIP within 18 months. Similarly, the EPA would be required to promulgate a FIP if the Agency has not approved a revised SIP submission from the state within 24 months. In comparison, the sanctions and federal plan "clocks" would not start under the SIP call approach unless and until the state fails to submit a SIP revision in response to this SIP call, or unless and until the EPA disapproves that SIP submission. As explained in the February 2013 proposal, the EPA determined that the SIP call process was a better procedure through which to address the deficient SIP provisions at issue in this action.

7. Comments that the EPA failed to consider how excess emissions resulting from SSM exemptions would affect compliance with specific NAAQS, including NAAQS with different averaging periods or different statistical forms.

Comment: In addition to general claims that the EPA failed to provide required technical analysis to support the proposed SIP call to states for automatic and discretionary SSM exemptions, commenters specifically argued that the EPA is required to establish that these exemptions have caused violations in light of the considerations such as the averaging time or statistical form of specific NAAQS. The implication of the commenters' argument is that in order to demonstrate that a given SIP provision with an SSM exemption is substantially inadequate under section 110(k)(5), the EPA has to establish definitively that the emissions during SSM events would cause a violation of a particular NAAQS. This would potentially include an evaluation of the impacts of the exempted emissions on NAAQS with different averaging periods, e.g., impacts on an annual NAAQS, a 24-hour NAAQS, or a 1-hour NAAQS, and impacts on NAAQS with different statistical forms, e.g., a NAAQS that measures attainment by an annual

arithmetical mean versus one that is measured by a 98th-percentile value. Moreover, commenters alluded to the difficulty of ascertaining definitively how emissions of specific precursor pollutants during a given exempted SSM event would affect attainment of one or more NAAQS.

To support the argument that the validity of SSM exemptions must be evaluated with respect to specific NAAQS, the commenters relied upon recent modeling guidance for the 1-hour NO₂ NAAQS in which, the commenters claimed, the EPA directed states to disregard emissions during SSM events for purposes of demonstrating compliance with that NAAQS. The commenters claimed that the cited EPA guidance supports their argument that emissions from a source during any specific SSM event are unlikely to cause a violation of the 1-hour NO₂ NAAQS. Accordingly, the commenters argued that the EPA has no authority to interpret the CAA to preclude exemptions for emissions during SSM events without first demonstrating that the exempt emissions cause NAAQS violations.

Response: As explained in the February 2013 proposal, and in response to other comments in this action, the EPA does not interpret section 110(k)(5) to require a specific technical analysis to support a SIP call related to legal deficiencies in SIP provisions. In section 110(k)(5), Congress left it to the Agency's discretion to determine what type and level of analysis is necessary to establish that a SIP provision is substantially inadequate. As explained in the February 2013 proposal, the EPA does not need to define the precise contours of its authority under section 110(k)(5) for all potential types of SIP deficiencies in this action. For purposes of this action, it is sufficient that the SIP provisions at issue are inconsistent with applicable requirements. While an ambient air quality impact analysis may be appropriate to support a SIP call with respect to certain requirements of the CAA, e.g., a SIP call for failure to have SIP provisions to prevent significant contribution to nonattainment in another state in accordance with section 110(a)(2)(D)(i)(I), the EPA does not interpret the CAA to require such an analysis in all instances. In particular, where the substantial inadequacy is related to a failure to meet a fundamental legal requirement for SIP provisions, such as the requirement in section 302(k) that emission limitations apply continuously, the EPA does not believe that such a technical analysis is required.

³²⁹ See February 2013 proposal, 78 FR 12459 at 12483, n.72.

For example, section 302(k) does not differentiate between the legal requirements applicable to SIP emission limitations for an annual NAAQS versus for a 1-hour NAAQS, nor between any NAAQS based upon the statistical form of the respective standards. In addition to being supported by the text of section 302(k), the EPA's interpretation of the requirement for sources to be subject to continuous emission limitations is also the most logical given the consequences of the commenters' theory. The commenters' argument provides additional practical reasons to support the EPA's interpretation of the CAA to preclude exemptions for emissions during SSM events from SIP emission limitations as a basic legal requirement for all emission limitations.

The EPA agrees that to ascertain the specific ambient impacts of emissions during a given SSM event can sometimes be difficult. This difficulty can be exacerbated by factors such as exemptions in SIP provisions that not only excuse compliance with emission limitations but also affect reporting or recordkeeping related to emissions during SSM events. Determining specific impacts of emissions during SSM events can be further complicated by the fact that the limited monitoring network for the NAAQS in many states may make it more difficult to establish that a given SSM event at a given source caused a specific violation of the NAAQS. Even if a NAAQS violation is monitored, it may be the result of emissions from multiple sources, including multiple sources having an SSM event simultaneously. The different averaging periods and statistical forms of the NAAQS may make it yet more difficult to determine the impacts of specific SSM events at specific sources, perhaps until years after the event occurred. By the commenters' own logic, there could be situations in which it is functionally impossible to demonstrate definitively that emissions during a given SSM event at a single source caused a specific violation of a specific NAAQS.

The commenters' argument, taken to its logical extension, could result in situations where a SIP emission limitation is only required to be continuous for purposes of one NAAQS but not for another, based on considerations such as averaging time or statistical form of the NAAQS. Such situations could include illogical outcomes such as the same emission limitation applicable to the same source simultaneously being allowed to contain exemptions for emissions during SSM events for one NAAQS but not for another. For example, purely

hypothetically under the commenters' premise, a given source could simultaneously be required to comply with a rate-based NO_x emission limitation continuously for purposes of a 1-hour NO₂ NAAQS but not be required to do so for purposes of an annual NO₂ NAAQS, or the source could be required to comply continuously with the same NO_x limitation for purposes of the 8-hour ozone NAAQS and the 24-hour PM_{2.5} NAAQS but not be required to do so for purposes of the annual PM_{2.5} NAAQS. Add to this the further complication that the source may be located in an area that is designated nonattainment for some NAAQS and attainment for other NAAQS, and thus subject to emission limitations for attainment and maintenance requirements simultaneously.

Under the commenters' premise, the same SIP emission limitation, subject to the same statutory definition in section 302(k), could validly include SSM exemptions for purposes of some NAAQS but not others. Such a system of regulation would make it unnecessarily hard for regulated entities, regulators and other parties to determine whether a source is in compliance. The EPA does not believe that this is a reasonable interpretation of the requirements of the CAA, nor of its authority under section 110(k)(5). This unnecessary confusion is easily resolved simply by interpreting the CAA to require that a source subject to a SIP emission limitation for NO_x must meet the emission limitation continuously, in accordance with the express requirement of section 302(k), thus making SSM exemptions impermissible. The EPA does not agree that the term "emission limitation" can reasonably be interpreted to allow noncontinuous emission limitations for some NAAQS and not others. The D.C. Circuit has already made clear that the term "emission limitation" means limits that apply to sources continuously, without exemptions for SSM events.

Finally, the EPA disagrees with the specific arguments raised by commenters concerning the modeling guidance for the 1-hour NO₂ NAAQS.³³⁰ As relevant here, that guidance provides recommendations about specific issues that arise in modeling that is used in the PSD program for purposes of demonstrating that proposed construction will not cause or contribute to a violation of the 1-hour

NO₂ NAAQS. Thus, as an initial matter, the EPA notes that the context of that guidance relates to determining the extent of emission reductions that a source needs to achieve in order to obtain a permit under the PSD program, which is distinct from the question of whether an emission limitation in a permit must assure continuous emission reductions.

The commenters argued that this EPA guidance "allows sources to completely exclude all emissions during startup and shutdown scenarios." This characterization is inaccurate for a number of reasons. First, the guidance in question is only intended to address certain modeling issues related to predictive modeling to demonstrate that proposed construction will not cause or contribute to violation of the 1-hour NO₂ NAAQS, for purposes of determining whether a PSD permit may be issued and whether the emission limitations in the permit will require sufficient emission reductions to avoid a violation of this standard.

Second, to the extent that the guidance indicates that air quality considerations might in certain circumstances and for certain purposes be relevant to determining what emission limitations should apply to a source, that does not mean a source may legally have an exemption from compliance with existing emissions limitations during SSM events. In the guidance cited by the commenter, the EPA did recommend that under certain circumstances, it may be appropriate to model the projected impact of the source on the NAAQS without taking into account "intermittent" emissions from sources such as emergency generators or emissions from particular kinds of "startup/shutdown" operations.³³¹ However, the EPA did not intend this to suggest that emissions from sources during SSM events may validly be treated as exempt in SIP emission limitations. Within the same guidance document, the EPA stated unequivocally that the guidance "has no effect on or relevance to existing policies and guidance regarding excess emissions that may occur during startup and shutdown." The EPA explained further that "all emissions from a new or modified source are subject to the applicable permitted emission limits and may be subject to enforcement concerning such excess emissions, regardless of whether a portion of those emissions are not included in the modeling demonstration based on the

³³⁰ See Memorandum, "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO₂ National Ambient Air Quality Standard," from T. Fox, EPA/OAQPS, to Regional Air Division Directors, March 1, 2011.

³³¹ *Id.* at 2.

guidance provided here.”³³² In other words, even if a state elects not to include intermittent emissions from some types of startup and shutdown events in certain modeling exercises, this does not mean that sources can be excused from compliance with the emission limitation during startup and shutdown, via an exemption for such emissions.

Third, the guidance does not say that all SSM emissions may be considered intermittent and excluded from the modeling demonstration. The guidance explicitly recommends that the modeling be based on “emission scenarios that can logically be assumed to be relatively continuous or which occur frequently enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations” and gives the example that it may be appropriate to include startup and shutdown emissions from a peaking unit at a power plant in the modeling demonstration because those units go through frequent startup/shutdown cycles.³³³ Thus, the guidance does not support commenters’ premise that the EPA must evaluate the air quality impacts from SSM events in SIP actions to determine that SSM exemptions in SIP provisions are substantially inadequate to meet fundamental requirements of the CAA.

8. Comments that this SIP call action is inconsistent with 1976 EPA guidance for such actions.

Comment: One commenter argued that the EPA misinterpreted the term “substantially inadequate” in the February 2013 proposal because the Agency is reading this term differently than in the past. In support of this contention, the commenter pointed to a 1976 guidance document from the EPA concerning the question of when a SIP may be substantially inadequate. The commenter argued that the EPA is wrong to interpret that term to mean anything other than a demonstrated failure to provide for factual attainment of the NAAQS. According to the commenter, the content of the 1976 guidance indicates that the EPA is obligated to conduct a specific analysis to determine the air quality impact of an alleged inadequacy in a SIP provision and to establish and document the specific air quality impacts of the inadequacy.

Response: The EPA disagrees with the commenter for multiple reasons. First, the 1976 document referred to by the commenter was the EPA’s guidance on the requirements of the CAA as it was

embodied in 1970, not as Congress substantially amended it in 1990. The 1976 guidance pertained not to the current SIP call provision at section 110(k)(5) but rather to the requirements of section 110(a)(2)(H). This is particularly significant because the 1990 CAA Amendments added section 110(k)(5) to the statute. Although section 110(a)(2)(H) remains in the statute, it is primarily a requirement applicable to state “infrastructure” SIP obligations through which states are required to have state law authority to meet the structural SIP elements required in section 110(a)(2).³³⁴ In reviewing SIPs for compliance with section 110(a)(2)(H), the EPA verifies that state SIPs include the legal authority to respond to any SIP call. By contrast, the EPA’s authority to issue a SIP call under section 110(k)(5) is worded broadly, explicitly including the authority to make a finding of substantial inadequacy not only for failure to attain or maintain the NAAQS but also for failures related to interstate transport or “otherwise to comply with any requirement of” the CAA.

Second, even setting aside that the guidance is not relevant to the EPA’s authority under section 110(k)(5), the 1976 guidance on its face did not purport to define the full contours of the term “substantially inadequate” in section 110(a)(2)(H). The 1976 guidance stated explicitly that “it is difficult to develop comprehensive guidelines for all cases” and only listed “[s]ome factors that could be considered” in evaluating whether a state’s SIP is substantially inadequate.³³⁵ While the EPA acknowledges that these factors were primarily focused upon ambient air considerations as suggested by the commenter, they were not limited to that topic. Moreover, the EPA stated that factors “other than air quality and emission data must be considered” and provided several examples, including potential amendments to the CAA under consideration at that point in time that might change state SIP obligations and thus create the need for a SIP call. More significantly, nothing in the 1976 guidance indicated that the EPA should or would ignore legal deficiencies in existing SIP provisions or that legal deficiencies are not relevant to the

question of whether a SIP would provide for attainment of the NAAQS.

Third, the EPA notes that the commenter did not advocate that the Agency follow the 1976 guidance with respect to other issues, e.g., that the EPA would initiate the obligations of states to revise their SIPs simply by making an announcement of substantial inadequacy “without proposal”; that states would be required to make the necessary SIP revision within 12 months; or that states should make those revisions by no later than July 1, 1977.

The EPA has fully articulated its interpretation of the term “substantial inadequacy” in section 110(k)(5) in the February 2013 proposal. As explained in the proposal, the EPA interprets its current authority to include the issuance of a SIP call for the types of legal deficiencies identified in this action. In order to establish that these legal deficiencies are substantial inadequacies, the EPA does not interpret section 110(k)(5) to require the Agency to document precisely how each deficiency factually undermines the objectives of the CAA, such as attainment and maintenance of the NAAQS in a particular location on a particular date. It is sufficient that these provisions are inconsistent with the legal requirements for SIP provisions set forth in the CAA that are intended to assure that SIPs in fact do achieve the intended objectives.

10. Comments that because the EPA has misinterpreted the statutory terms “emission limitation” and “continuous,” the EPA has not established a substantial inadequacy.

Comment: Many state and industry commenters disagreed with the EPA’s interpretation of the CAA to prohibit SSM exemptions in SIP provisions. These arguments took many tacks, based on the interpretation of various statutory provisions, the applicability of the court decision in *Sierra Club v. Johnson*, alleged inconsistencies related to this requirement in the EPA’s own NSPS and NESHAP regulations and a variety of other arguments. In particular, many commenters argued that the EPA was misinterpreting the statutory terms “emission limitation” and “continuous” in section 302(k) to preclude automatic or discretionary exemptions for emissions during SSM events in SIP provisions. As an extension of these arguments, commenters also argued that the EPA lacks authority under section 110(k)(5) to issue a SIP call when it has incorrectly interpreted a relevant statutory term as the basis for finding a SIP provision to be substantially inadequate.

³³⁴ See Memorandum, “Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Section 110(a)(1) and 110(a)(2),” from Stephen D. Page, Director, OAQPS, to Regional Air Directors, Regions 1–10, September 13, 2013, at page 51 (explaining that a state meets section 110(a)(2)(H) by having authority to revise its SIP in response to a SIP call).

³³⁵ *Id.* at 10–11.

³³² *Id.* at 11.

³³³ *Id.* at 9.

Response: The EPA disagrees that it lacks authority to issue this SIP call on the grounds claimed by the commenters. As explained in detail in the February 2013 proposal and in this final action, the EPA has long interpreted the CAA to preclude SSM exemptions in SIP provisions. This interpretation has been stated by the EPA since at least 1982, reiterated in subsequent SSM Policy guidance documents, applied in a number of notice and comment rulemakings and upheld by courts.

With respect to the arguments that the EPA has incorrectly interpreted the terms “emission limitation” and “continuous” in this action, the EPA has responded in detail in section VII.A.3 of this document and need not repeat those responses here. In short, the EPA is interpreting those terms consistent with the relevant statutory language and consistent with the decision of the court in *Sierra Club v. Johnson*. Because the specific SIP provisions identified in this action with automatic or discretionary exemptions for emissions during SSM events do not limit emissions from the affected sources continuously, the EPA has found these provisions substantially inadequate to meet CAA requirements in accordance with section 110(k)(5).

11. Comments that section 110(k)(5) imposes a “higher burden of proof” upon the EPA than section 110(l) and that section 110(l) requires the EPA to conduct a specific technical analysis of the impacts of a SIP revision.

Comment: Commenters argued that the EPA is misinterpreting section 110(k)(5) to authorize a SIP call using a lower “standard” than the section 110(l) “standard” that requires disapproval of a new SIP provision in the first instance. The commenters stated that section 110(k)(5) requires a determination by the EPA that a SIP provision is “substantially inadequate” to meet CAA requirements in order to authorize a SIP call, whereas section 110(l) provides that the EPA must disapprove a SIP revision provision only if it “would interfere with” CAA requirements. Thus, the commenters asserted that “the SIP call standard is higher than the SIP revision standard.” The commenters further argued that it would be “illogical and contrary to the CAA to interpret section 110 to establish a lower standard for calling a previously approved SIP and demanding revisions to it than for disapproving that SIP in the first place.” For purposes of section 110(l), the commenters claimed, the EPA “is required” to rely on specific “data and evidence” that a given SIP revision would interfere with CAA requirements and this requirement is thus imposed by

section 110(k)(5) as well. In support of this reasoning, the commenters relied on prior court decisions pertaining to the requirements of section 110(l).

Response: The EPA disagrees with the commenters’ interpretations of the relative “standards” of section 110(k)(5) and section 110(l) and with the commenters’ views on the court decisions pertaining to section 110(l). In addition, the EPA notes that the commenters did not fully address the related requirements of section 110(k)(3) concerning approval and disapproval of SIP provisions, of section 302(k) concerning requirements for emission limitations or of any other sections of the CAA that are substantively germane to specific SIP provisions and to enforcement of SIP provisions in general.³³⁶

The commenters argued that, by the “plain language” of the CAA and because of “common sense,” Congress intended the section 110(k)(5) SIP call standard to be “higher” than the section 110(l) SIP revision. The EPA disagrees that this is a question resolved by the “plain language.” To the contrary, the three most relevant statutory provisions, section 110(k)(3), section 110(l), and section 110(k)(5), are each to some degree ambiguous and are likewise ambiguous with respect to how they operate together to apply to newly submitted SIP provisions versus existing SIP provisions. Section 110(k)(3) requires the EPA to approve a newly submitted SIP provision “if it meets all of the applicable requirements of [the CAA].” Implicitly, the EPA is required to disapprove a SIP provision if it does not meet all applicable CAA requirements. Section 110(l) provides that the EPA may not approve any SIP revision that “would interfere with . . . any other applicable requirement of [the CAA].” Section 110(k)(5) provides that the EPA shall issue a SIP call “whenever” the Agency finds an existing SIP provision “substantially inadequate . . . to otherwise comply with [the CAA].” None of the core terms in each of the three provisions is

³³⁶ CAA section 110(k)(5) states that “[w]henver the [EPA] finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant [NAAQS], to mitigate adequately [] interstate pollutant transport . . . , or to otherwise comply with any requirement of [the CAA], the [EPA] shall require the State to revise the plan as necessary to correct such inadequacies.” Section 110(l) states that, in the event a state submits a SIP revision, the EPA “shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress . . . or any other applicable requirement of [the CAA].” Section 110(k)(3) states that the EPA “shall approve such submittal . . . if it meets all the requirements of [the CAA].”

defined in the CAA. Thus, whether the “would interfere with” standard of section 110(l) is *per se* a “lower” standard than the “substantially inadequate” standard of section 110(k)(5) as advocated by the commenters is not clear on the face of the statute, and thus the EPA considers these terms ambiguous.

As explained in detail in the February 2013 proposal, the EPA interprets its authority under section 110(k)(5) broadly to include authority to require a state to revise an existing SIP provision that fails to meet fundamental legal requirements of the CAA.³³⁷ The commenters raise a valid point that section 110(l) and section 110(k)(5), as well as section 110(k)(3), facially appear to impose somewhat different standards. However, the EPA does not agree that the proper comparison is necessarily between section 110(k)(5) and section 110(l) but instead would compare section 110(k)(5) and section 110(k)(3). Section 110(l) is primarily an “anti-backsliding” provision, meant to assure that if a state seeks to revise its SIP to change *existing* SIP provisions that the EPA has previously determined *did meet* CAA requirements, then there must be a showing that the revision of the existing SIP provisions (e.g., a relaxation of an emission limitation) would not interfere with attainment of the NAAQS, reasonable further progress or any other requirement of the CAA. By contrast, section 110(k)(3) is a more appropriate point of comparison because it directs the EPA to approve a SIP provision “that meets all applicable requirements” of the CAA and section 110(k)(5) authorizes the EPA to issue a SIP call for previously approved SIP provisions that it later determines do not “comply with any requirement” of the CAA.

Notwithstanding that each of these three statutory provisions applies to different stages of the SIP process, all three of them explicitly make compliance with the legal requirements of the CAA a part of the analysis. At a minimum, the EPA believes that Congress intended these three sections, working together, to ensure that SIP provisions must meet all applicable legal CAA requirements when they are initially approved and to ensure that SIP provisions continue to meet CAA requirements over time, allowing for potential amendments to the CAA, changes in interpretation of the CAA by the EPA or courts or simply changed facts. With respect to compliance with the applicable legal requirements of the

³³⁷ See February 2013 proposal, 78 FR 12459 at 12483–88.

CAA, the EPA does not interpret section 110(k)(5) as setting a *per se* “higher” standard. Under section 110(l), the EPA is likewise directed not to approve a SIP revision that is not consistent with legal requirements imposed by the CAA, including those relevant to SIP provisions such as section 302(k). Pursuant to section 110(l), the EPA would not be authorized to approve a SIP revision that contradicts requirements of the CAA; pursuant to section 110(k)(5) the EPA is authorized to direct states to correct a SIP provision that it later determines does not meet the requirements of the CAA.

The EPA also disagrees with the commenters’ characterization of the requirements of section 110(l) and their arguments based on court decisions concerning section 110(l). Commenters rely on the decision in *Ky. Res Council v. EPA* to support their argument that section 110(l) requires the EPA to disapprove a SIP revision only if it “would interfere” with a requirement of the CAA, not if it “could interfere” with such requirements.³³⁸ From this decision, the commenters argue that the EPA is required to conduct a specific technical analysis under section 110(l) to determine the specific impacts of the revision on attainment and maintenance of the NAAQS and argue that by inference this must therefore also be required by section 110(k)(5). To the extent that court decisions concerning section 110(l) are relevant, these court decisions do not support the commenters’ position.

First, the EPA notes that the commenters mischaracterize section 110(l) as requiring a particular form or method of analysis to support approval or disapproval of a SIP revision. Section 110(l) does not contain any such explicit requirement or specifications. The EPA interprets section 110(l) only to require an analysis that is appropriate for the particular SIP revision at issue, and that analysis can take different forms or different levels of complexity depending on the facts and circumstances relevant to the SIP revision. Like section 110(l), the EPA believes that section 110(k)(5) does not specify a particular form of analysis necessary to find a SIP provision substantially inadequate.

Second, the commenters mischaracterize the primary decision that they rely upon. The court in *Ky. Res Council v. EPA* expressly discussed the fact that section 110(l) does not specify precisely how any such analysis should be conducted and deferred to the EPA’s reasonable interpretation of what form

of analysis is appropriate for a given SIP revision.³³⁹ Indeed, the decision stands for the proposition that the EPA does not necessarily have to develop an attainment demonstration in order to evaluate the impacts of a SIP revision, *i.e.* “prove” whether the revision will interfere with attainment, maintenance, reasonable further progress or any other requirements of the CAA. Thus, the commenters’ argument that section 110(k)(5) has to require a specific technical analysis of impacts on attainment and maintenance because section 110(l) does so is simply in error.

Third, the section 110(l) cases cited by the commenters did not involve SIP revisions in which states sought to change existing SIP provisions so that they would fail to meet the specific CAA requirements at issue in this action. For example, none of the cases involved the EPA’s approval of a new automatic exemption for emissions during SSM events. Had the state submitted a SIP revision that failed to meet applicable requirements of the CAA for SIP provisions, such as changing existing SIP emission limitations so that they would thereafter include SSM exemptions, then the EPA would have had to disapprove them.³⁴⁰ The challenged rulemaking actions at issue in the cases relied upon by the commenters involved SIP revision changes unrelated to the specific legal requirements at issue in this action. Accordingly, the EPA’s evaluation of those SIP revisions focused upon other issues, such as whether the revision would factually result in emissions that would interfere with attainment and maintenance of the NAAQS, that were relevant to the particular provisions at issue in those cases.

12. Comments that the EPA is misinterpreting *US Magnesium* and that the decision provides no precedent for this action.

Comment: A number of industry commenters argued that the EPA’s reliance on the decision of the Tenth Circuit in *US Magnesium, LLP v. EPA* is misplaced.³⁴¹ According to the commenters, the EPA did not correctly interpret the decision and is misapplying it in acting upon the Petition. The commenters asserted that

the decision provides no precedent for this action because it was decided upon issues different from those at issue here. Commenters also argued that the court did not reach an important issue because the petitioner had failed to comment on it, *i.e.*, the argument that the EPA had not defined the term “substantially inadequate” in the rulemaking.³⁴²

Response: The EPA disagrees with the commenters on this point. The EPA of course acknowledges that the court in *US Magnesium* did not address the full range of issues related to the correct treatment of emissions during SSM events in SIP provisions that were raised in the Petition, *e.g.*, the court did not need to address the legal basis for affirmative defense provisions in SIPs because of the nature of the SIP provisions at issue in that case. However, the *US Magnesium* court evaluated many of the same key questions raised in this rulemaking and reached decisions that are very relevant to this action.

First, the *US Magnesium* court specifically upheld the EPA’s SIP call action requiring the state to remove or revise a SIP provision that included an automatic exemption for emissions from sources during “upsets,” *i.e.*, malfunctions. In doing so, the court was fully aware of the reasons why the EPA interprets the CAA to prohibit such exemptions, because they violate statutory requirements including section 302(k), section 110(a)(2)(A) and (C), and other requirements related to attainment and maintenance of the NAAQS. The court explained at length the EPA’s reasoning about why the SIP provisions were inconsistent with CAA requirements for SIP provisions.³⁴³

Second, the court specifically upheld the EPA’s SIP call action requiring the state to revise its SIP to remove or revise another SIP provision that could be interpreted to give state personnel the authority to determine unilaterally whether excess emissions from sources are a violation of the applicable emission limitation and thereby preclude any enforcement action by the EPA or citizens.

Third, the court also upheld the EPA’s authority to issue a SIP call requiring a state “to clarify language in the SIP that could be read to violate the CAA, when a court has not yet interpreted the language in that way.” Indeed, the court opined that “in light of the potential conflicts” between competing interpretations of the SIP provision,

³³⁹ See 467 F.3d at 995 (rejecting claim that section 110(l) required a modeled attainment demonstration to prove that the SIP revision would meet applicable CAA requirements).

³⁴⁰ The EPA notes that the one exception to this, of course, is the Agency’s recent approval of new SIP provisions in Texas that created an affirmative defense for malfunctions. As discussed elsewhere in this document, however, the EPA has determined that such provisions do not meet CAA requirements and is thus issuing a SIP call for those provisions.

³⁴¹ See 690 F.3d 1157 (10th Cir. 2012).

³⁴² *Id.*, 690 F.3d 1167, n.3.

³⁴³ *Id.*, 690 F.3d at 1159–63.

³³⁸ See 467 F.3d 986 (6th Cir. 2006).

“seeking revision of the SIP was prudent, not arbitrary or capricious.”³⁴⁴

Fourth, the court explicitly upheld the EPA’s reasonable interpretation of section 110(k)(5) to authorize a SIP call when a state’s SIP provision is substantially inadequate to meet applicable legal requirements, without making “specific factual findings” that the deficient provision resulted in a NAAQS violation. The EPA interpreted the CAA to allow a SIP call if the Agency “determined that aspects of the SIP undermine the fundamental integrity of the CAA’s SIP process and structure, regardless of whether or not the EPA could point to specific instances where the SIP allowed violations of the NAAQS.” The *US Magnesium* court explicitly agreed that section 110(k)(5) authorizes issuance of a SIP call “where the EPA determines that a SIP is no longer consistent with the EPA’s understanding of the CAA.”³⁴⁵

Fifth, the court rejected claims that the EPA was requiring states to comply with the SSM Policy guidance rather than the CAA requirements, and the court noted that the Agency had undertaken notice-and-comment rulemaking to evaluate whether the SIP provisions at issue were consistent with CAA requirements.³⁴⁶

Sixth, the court rejected the claim that the EPA was interpreting the requirements of the CAA incorrectly because the EPA is in the process of bringing its own NSPS and NESHAP regulations into line with CAA requirements for emission limitations, in accordance with the *Sierra Club v. Johnson* decision.³⁴⁷ The court noted that the EPA is now correcting SSM exemptions in its own regulations, and thus its prior interpretation of the CAA, rejected by the court in *Sierra Club v. Johnson*, did not make the SIP call to Utah arbitrary and capricious.³⁴⁸

On these and many other issues, the EPA believes that the court’s decision in *US Magnesium* provides an important and correct precedent for the Agency’s interpretation of the CAA in this action. The commenters’ apparent disagreement with the court does not mean that the decision is not relevant to this action. The commenters specifically argued that the *US Magnesium* court did not reach the issue of whether the EPA had “defined” the term “substantial inadequacy” in the challenged rulemaking because the petitioner had

not raised this point in comments. The EPA does not necessarily agree that “defining” the full contours of the term is a necessary step for a SIP call, but regardless of that fact the Agency did explain its interpretation of the term “substantial inadequacy” with respect to the SIP provisions at issue in the February 2013 proposal, the SNPR and this final action.

13. Comments that EPA has to evaluate a SIP “as a whole” to have the authority to issue a SIP call.

Comment: Many state and industry commenters argued that the EPA cannot evaluate individual SIP provisions in isolation and that the Agency is required to evaluate the entire SIP and any related permit requirements in order to determine if a specific SIP provision is substantially inadequate. In particular, some commenters argued that the EPA was wrong to focus upon the exemptions in SIP emission limitations for emissions during SSM events without considering whether some other requirement of the SIP or of a permit might operate to override or otherwise modify the exemptions. Many of the commenters asserted that other “general duty” clause requirements, elsewhere in other SIP provisions or in permits for individual sources, make the SSM exemptions in SIP emission limitations valid under the CAA.³⁴⁹ These other requirements were often general duty-type standards that require sources to minimize emissions, to exercise good engineering judgment or not to cause a violation of the NAAQS. The implication of the commenters’ arguments is that such general-duty requirements legitimize an SSM exemption in a SIP emission limitation—even if they are not explicitly a component of the SIP provision, if they are not incorporated by reference in the SIP provision and if they are not adequate to meet the applicable substantive requirements for that type of SIP provision.

Response: The EPA disagrees with the basic premise of the commenters that the EPA cannot issue a SIP call directing a state to correct a facially deficient SIP provision without first determining

whether an unrelated and not cross-referenced provision of the SIP or of a permit might potentially apply in such a way as to correct the deficiency. As explained in section VII.A.3 of this document, the EPA believes that all SIP provisions must meet applicable requirements of the CAA, including the requirement that they apply continuously to affected sources. In reviewing the specific SIP provisions identified in the Petition, the EPA determined that many of the provisions include explicit automatic or discretionary exemptions for emissions during SSM events, whether as a component of an emission limitation or as a provision that operates to override the otherwise applicable emission limitation. Based on the EPA’s review of these provisions, neither did they apply “continuously” as required by section 302(k) nor did they include cross-references to any other limitations that applied during such exempt periods to potentially provide continuous limitations. To the extent that the SIP of a state contained any other requirements that applied during such periods, that fact was not plain on the face of the SIP provision. If the EPA was unable to ascertain what, if anything, applied during these explicitly exempt periods, then the Agency concludes that regulated entities, members of and the public, and the courts will have the same problem. The EPA has authority under section 110(k)(5) to issue a SIP call requiring a state to clarify a SIP provision that is ambiguous or unclear such that the provision can lead to misunderstanding and thereby interfere with effective enforcement.³⁵⁰

To the extent that an affected state believes that the EPA has overlooked another valid provision of the SIP that would cure the substantial inadequacy that the Agency has identified in this action, the state may seek to correct the deficient SIP provision by properly revising it to remove the impermissible exemption or affirmative defense and replacing it with the requirements of the other SIP provision or by including a clear cross-reference that clarifies the applicability of such provision as a component of the specific emission limitation at issue. The state should make this revision in such a way that the SIP emission limitation is clear on its face as to what the affected sources are required to do during all modes of operation. The emission limitation should apply continuously, and what is required by the emission limitation under any mode of operation should be

³⁴⁹ The EPA notes that other commenters on the February 2013 proposal made similar arguments with respect to affirmative defense provisions in their SIPs, asserting that other SIP provisions or terms in permits provided additional criteria that would have made the affirmative defense provisions at issue consistent with the EPA’s interpretation of the CAA in the 1999 SSM Guidance. See, e.g., Comment from Virginia Department of Environmental Quality at 1–2, in the rulemaking docket at EPA–HQ–OAR–2012–0322–0613. Because the EPA no longer interprets the CAA to allow any affirmative defense provisions, these comments are not germane.

³⁵⁰ See *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1169 (10th Cir. 2012).

³⁴⁴ *Id.*, 690 F.3d at 1170.

³⁴⁵ *Id.*, 690 F.3d at 1168.

³⁴⁶ *Id.*, 690 F.3d at 1168.

³⁴⁷ *Id.*, 690 F.3d at 1169.

³⁴⁸ *Id.*, 690 F.3d at 1170.

readily ascertainable by the regulated entities, the regulators and the public. The EPA emphasizes, however, that each revised SIP emission limitation must meet the substantive requirements applicable to that type of provision (e.g., impose RACM/RACT-level controls on sources located in nonattainment areas) and must be legally and practically enforceable (e.g., have sufficient recordkeeping, reporting and monitoring requirements). The revised SIP emission limitation must be consistent with all applicable CAA requirements.

14. Comments that the EPA inappropriately is “using guidance” as a basis for the SIP call action.

Comment: State and industry commenters asserted that the EPA is relying on guidance as the basis for issuing this SIP call action and argued that the EPA cannot issue a SIP call based on guidance. The commenters argued that the EPA guidance provided in the SSM Policy is not binding and that states thus have the flexibility to develop SIP provisions that are not in conformance with EPA guidance. Some commenters claimed that if the EPA wishes to make the interpretations of the CAA in its SSM Policy binding upon states, then it must do so through a notice-and-comment rulemaking and must codify those requirements in binding regulations in the CFR. The commenters argued that states should not be subject to a SIP call for existing provisions in their SIPs on the basis that they do not conform to guidance in the SSM Policy. Some commenters acknowledged that the EPA is providing notice and comment on its SSM Policy through this action, but still they contended that the EPA’s interpretation of the CAA is not binding upon states unless the Agency codifies its updated SSM Policy in regulations in the CFR.

Response: The EPA disagrees with arguments that the Agency has acted inappropriately by relying on its interpretations of the CAA set forth in the SSM Policy in issuing this SIP call. As explained in the February 2013 proposal, the SSM Policy is merely guidance. It is correct that guidance documents are nonbinding. However, the guidance provides the EPA’s recommendations concerning how best to interpret the statutory requirements of the CAA that are binding. Moreover, the EPA’s interpretation of the CAA in the SSM Policy can become binding once the Agency adopts and applies that interpretation through notice-and-comment rulemaking. The EPA is issuing this SIP call action through notice-and-comment rulemaking and has specifically taken comment on its

interpretations of the CAA as they apply to the specific SIP provisions at issue in this action. Thus, the EPA is requiring the affected states to comply with the requirements of the CAA, not with the SSM Policy guidance itself.³⁵¹

The EPA also disagrees with commenters that in order to rely on its interpretation of the CAA in the SSM Policy, the EPA must first issue regulatory provisions applicable to SIP provisions. There is no such general obligation for the EPA to codify its interpretations of the CAA in regulatory text. Unless Congress has specifically directed the EPA to promulgate regulations for a particular purpose, the EPA has authority and discretion to promulgate such regulations as it deems necessary or helpful in accordance with its authority under section 301. With respect to issues concerning proper treatment of excess emissions during SSM events in SIP provisions, the EPA has historically proceeded by issuance of guidance documents. In this action, the EPA is undergoing notice-and-comment rulemaking to update and revise its guidance and to apply that guidance to specific existing SIP provisions. Thus, the EPA is not required to promulgate specific implementing regulations as a precondition to making a finding of substantial inadequacy to address existing deficient SIP provisions.

15. Comments that the EPA’s redesignation and approval of a maintenance plan for an area in a state with a SIP that has provisions at issue in the SIP call establishes that all provisions in the SIP meet CAA requirements.

Comment: Commenters argued that the “EPA’s allegations that SSM provisions could threaten the NAAQS is contradicted by” the fact that the “EPA has consistently approved redesignation requests and attainment and maintenance plans, notwithstanding SSM provisions.” According to these commenters, “[t]he fact that EPA has already approved numerous redesignation requests . . . indicates that EPA has already (and in many cases, very recently) admitted that the [State SIPs are] fully approved, sufficient to achieve the NAAQS, and fully enforceable.” The commenters argued that the appropriate time for the EPA to

have addressed any issues concerning deficient SIP provisions applicable to emissions during SSM events was “in the context of its review and approval of [maintenance] plans.” Because the EPA has been approving maintenance plans for areas in states subject to this SIP call action, the commenters believed, this “is evidence that the Agency has not viewed SSM-related emissions as a threat to attainment or maintenance of the NAAQS.” In essence, these commenters argued that the EPA’s redesignation of any area in any of the states at issue in this rulemaking indicates that the SIPs of these states fully meet all CAA requirements and that there are no deficiencies whatsoever in the SIPs of these states.

Response: The EPA disagrees with the commenters’ premise that the Agency’s approval of redesignation requests and maintenance plans for certain nonattainment areas, notwithstanding the presence of impermissible provisions related to emissions during SSM events that may have been present in the SIP for those areas, is evidence that the EPA does not view SSM-related emissions as a threat to attainment or maintenance of the NAAQS. Contrary to the theory of the commenters, the EPA’s redesignation of an area to attainment does not mean that the SIP for the state in question fully meets each and every requirement of the CAA.

The CAA sets forth the general criteria for redesignation of an area from nonattainment to attainment in section 107(d)(3)(E). These criteria include a determination by the EPA that the area has attained the relevant standard (section 107(d)(3)(E)(i)) and that the EPA has fully approved the applicable implementation plan for the area for purposes of redesignation (section 107(d)(3)(E)(ii) and (v)). The EPA must also determine that the improvement in air quality in the area is due to reductions that are permanent and enforceable (section 107(d)(3)(E)(iii)) and that the EPA has fully approved a maintenance plan for the area under section 175A (section 107(d)(3)(E)(iv)).

For purposes of redesignation, the EPA has long held that SIP requirements that are not linked with a particular nonattainment area’s designation and classification, including certain section 110 requirements, are not “applicable” for purposes of evaluating compliance with the specific redesignation criteria in CAA sections 107(d)(3)(E)(ii) and (v).³⁵² The EPA maintains this

³⁵¹ The EPA’s reliance on interpretations of the CAA in the SSM Policy through notice-and-comment rulemakings has previously been upheld by several courts. See, e.g., *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1168 (10th Cir. 2012) (upholding the EPA’s SIP call to Utah for existing SIP provisions); *Mich. Dep’t of Env’tl. Quality v. Browner*, 230 F.3d 181 (6th Cir. 2000) (upholding the EPA’s disapproval of a SIP submission).

³⁵² See, e.g., “Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; State of Arizona;

interpretation because these requirements remain applicable after an area is redesignated to attainment. For at least the past 15 years, the EPA has applied this interpretation with respect to requirements to which a state will continue to be subject after the area is redesignated.³⁵³ Courts reviewing the EPA's interpretation of the term "applicable" in section 107(d)(3) in the context of requirements applicable for redesignation have generally agreed with the Agency.³⁵⁴

The EPA therefore approves redesignation requests in many instances without passing judgment on every part of a state's existing SIP, if it finds those parts of the SIP are not "applicable" for purposes of section 107(d)(3). For example, the EPA recently approved Arizona's request to redesignate the Phoenix-Mesa 1997 8-hour ozone nonattainment area and its accompanying maintenance plan, while recognizing that Arizona's SIP may contain affirmative defense provisions that are not consistent with CAA requirements.³⁵⁵ In that case, the EPA explicitly noted that approval of the redesignation of the Phoenix-Mesa nonattainment area did not relieve Arizona or Maricopa County of its obligation to remove the affirmative defense provisions from the SIP, if the EPA was to take later action to require correction of the Arizona SIP with respect to those provisions.³⁵⁶

The EPA also disagrees with commenters to the extent they suggest that the Agency must use the redesignation process to evaluate whether any existing SIP provisions are legally deficient. The EPA has other statutory mechanisms through which to

address existing deficiencies in a state's SIP, and courts have agreed that the EPA retains the authority to issue a SIP call to a state pursuant to CAA section 110(k)(5) even after redesignation of a nonattainment area in that state.³⁵⁷ The EPA recently addressed this issue in the context of redesignating the Ohio portion of the Huntington-Ashland (OH-WV-KY) nonattainment area to attainment for the PM_{2.5} NAAQS.³⁵⁸ In response to comments challenging the proposed redesignation due to the presence of certain SSM provisions in the Ohio SIP, the EPA concluded that the provisions at issue did not provide a basis for disapproving the redesignation request.³⁵⁹ In so concluding, the EPA noted that the SSM provisions and related SIP limitations at issue in that state were already approved into the SIP and thus "permanent and enforceable" for the purposes of meeting section 107(d)(3)(E)(iii) and that the Agency has other statutory mechanisms for addressing any problems associated with the SSM provisions.³⁶⁰ The EPA emphasizes that the redesignation of areas to attainment does not relieve states of the responsibility to remove legally deficient SIP provisions either independently or pursuant to a SIP call. To the contrary, the EPA maintains that it may determine that deficient provisions such as exemptions or affirmative defense provisions applicable to SSM events are contrary to CAA requirements and take action to require correction of those provisions even after an area is redesignated to attainment for a specific NAAQS. This interpretation is consistent with prior redesignation actions.

In some cases, the EPA has stated that the presence of illegal SSM provisions does constitute grounds for denying a redesignation request. For example, the EPA issued a proposed disapproval of Utah's redesignation requests for Salt Lake County, Utah County and Ogden City PM₁₀ nonattainment areas.³⁶¹ However, the specific basis for the proposed disapproval in that action, which was one of many SIP deficiencies

identified by EPA, was the state's inclusion in the submission of new provisions not previously in the SIP that would have provided blanket exemptions from compliance with emission standards during SSM events. Those SSM exemptions were not in the previously approved SIP, and the EPA declined to approve them in connection with the redesignation request because such provisions are inconsistent with CAA requirements. In most redesignation actions, states have not sought to create new SIP provisions that are inconsistent with CAA requirements as part of their redesignation requests or maintenance plans.

Finally, the EPA disagrees with commenters that approval of a maintenance plan for any area has the result of precluding the Agency from later finding that certain SIP provisions are substantially inadequate under the CAA on the basis that those provisions may interfere with attainment or maintenance of the NAAQS or fail to meet any other legal requirement of the CAA. The approval of a state's redesignation request and maintenance plan for a particular NAAQS is not the conclusion of the state's and the EPA's responsibilities under the CAA but rather is one step in the process Congress established for identifying and addressing the nation's air quality problems on a continuing basis. The redesignation process allows states with nonattainment areas that have attained the relevant NAAQS to provide the EPA with a demonstration of the control measures that will keep the area in attainment for 10 years, with the caveat that the suite of measures may be revisited if necessary and must be revisited with a second maintenance plan for the 10 years following the initial 10-year maintenance period.

Moreover, it is clear from the structure of section 175A maintenance plans that Congress understood that the EPA's approval of a maintenance plan is not a guarantee of future attainment air quality in a nonattainment area. Rather, Congress foresaw that violations of the NAAQS could occur following a redesignation of an area to attainment and therefore required section 175A maintenance plans to include contingency measures that a state could implement quickly in response to a violation of a standard. The notion that the EPA's approval of a maintenance plan must be the last word with regard to the contents of a state's SIP simply does not comport with the framework Congress established in the CAA for redesignations. The EPA has continuing authority and responsibility to assure that a state's SIP meets CAA

Redesignation of the Phoenix-Mesa Nonattainment Area to Attainment for the 1997 8-Hour Ozone Standard; Proposed rule," 79 FR 16734 at 16739 n.22 (March 26, 2014).

³⁵³ See, e.g., 73 FR 22307 at 22312–13 (April 25, 2008) (proposed redesignation of San Joaquin Valley; the EPA concluded that section 110(a)(2)(D) transport requirements are not applicable under section 110(d)(3)(E)(v) because they "continue to apply to a state regardless of the designation of any one particular area in the state"); 62 FR 24826 at 24829–30 (May 7, 1997) (redesignation of Reading, Pennsylvania, Area; the EPA concluded that the additional controls required by section 184 were not "applicable" for purposes of section 107(d)(3)(E) because "they remain in force regardless of the area's redesignation status").

³⁵⁴ See *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004); *Wall v. EPA*, 265 F.3d 426, 438 (6th Cir. 2001). But see *Sierra Club v. EPA*, Nos. 12–3169, 12–3182, 12–3420 (6th Cir. Mar. 18, 2015), petition for reh'g en banc filed.

³⁵⁵ 79 FR 55645 (September 17, 2014).

³⁵⁶ *Id.* at 55648. The EPA notes that it has included the deficient SIP provisions that include the affirmative defenses in this action, thereby illustrating that it can take action to address a SIP deficiency separately from the redesignation action, where appropriate.

³⁵⁷ See *Southwestern Pennsylvania Growth Alliance v. EPA*, 114 F.3d 984 (6th Cir. 1998) (Redesignation of Cleveland-Akron-Lorain area determined valid even though the Agency subsequently proposed a SIP call to require Ohio and other states to revise their SIPs to mitigate ozone transport to other states).

³⁵⁸ See 77 FR 76883 (December 31, 2012).

³⁵⁹ *Id.* at 76891–92.

³⁶⁰ The EPA notes that the provisions at issue in the redesignation action are included in this SIP call, thus illustrating that the Agency can address these deficient provisions in a context other than a redesignation request.

³⁶¹ 74 FR 62717 (December 1, 2009).

requirements, even after approving a redesignation request for a particular NAAQS.

In conclusion, the EPA is not required to reevaluate the validity of all previously approved SIP provisions as part of a redesignation. The existence of provisions such as impermissible exemptions and affirmative defenses applicable during SSM events in an approved SIP does not preclude the EPA's determination that emission reductions that have provided for attainment and that will provide for maintenance of a NAAQS in a nonattainment area are "permanent and enforceable," as those terms are meant in section 107(d)(3), or that the state has met all applicable requirements under section 110 and part D relevant for the purposes of redesignation. Finally, if the EPA separately determines that the state's SIP is deficient after the redesignation of the area to attainment, the Agency can issue a SIP call requiring a corrective SIP revision. Redesignation of areas to attainment in no way relieves states of their continuing responsibilities to remove deficient SIP provisions from their SIPs in the event of a SIP call.

16. Comments that in issuing a SIP call the EPA is "dictating" to states how to regulate their sources and taking away their discretion to adopt appropriate control measures of their own choosing in developing a SIP.

Comment: Several commenters claimed that the EPA's SIP call action removes discretion that states would otherwise have under the CAA. Commenters claimed that the action has the effect of unlawfully directing states to impose a particular control measure by requiring the state to regulate all periods of operation for any source it chooses to regulate. Because the alternative emission limitations and work practice standards that the EPA asserts are necessary under the statutory definition of "emissions limitation" are not real options in some cases, the commenters claimed, the EPA's proposal is the type of mandate that the court in the *Virginia* decision found to have violated the CAA.³⁶² Other commenters also cited to the *Virginia* decision, as well as citing to the U.S. Supreme Court's decision in *Train v. NRDC*, in which the Court held that "so long as the ultimate effect of a State's choice of emissions limitations is compliance with the national standards, the State is at liberty to adopt whatever mix of emissions limitations it deems best suited to its particular situation."³⁶³

The commenters concluded that the EPA cannot prescribe the specific terms of SIP provisions applicable to SSM events absent evidence that the provisions undermine the NAAQS or are otherwise inconsistent with the Act.

Commenters claimed that states are provided substantial discretion under the Act in how to develop SIPs and that the EPA's SIP call action is inconsistent with this long-recognized discretion because it limits the states to one option: "Eliminate any consideration of unavoidable emissions during planned startups and shutdowns and adopt only an extremely limited affirmative defense for unavoidable emissions during a malfunction." The commenters claimed that other options available to states include "justifying existing provisions, adopting alternative numeric emission limitations, work practice standards, additional operational limitations, or revising existing numeric emission limitations and/or their associated averaging times to create a sufficient compliance margin for unavoidable SSM emissions."

The commenters further asserted that the EPA's February 2013 proposal contained inconsistent statements about how the Agency expects states to respond to the SIP call. For example, according to one commenter, the EPA states in one place that startup and shutdown emissions above otherwise applicable limits must be considered a violation yet elsewhere discusses the fact that states can adopt alternative emission limitations for startup and shutdown. The commenter also asserted that the EPA recommended that states could elect to adopt the an approach to emissions during startup and shutdown like that of the EPA's recent MATS rule but that the EPA then failed to explain that the MATS rule contains "exemptions" for emissions during startup and shutdown that apply so long as the source meets the general work practice standards in the rule. This commenter claimed that the EPA's own approach is inconsistent with statements in the February 2013 proposal that states should treat all startups and shutdowns as "normal operations."

Response: The EPA disagrees with the commenter's claims that the SIP call violates the structure of "cooperative federalism" that Congress enacted for the SIP program in the CAA. Under this structure, the EPA establishes NAAQS and reviews state plans to ensure that they meet the requirements of the CAA. States take primary responsibility for developing plans to attain and maintain the NAAQS, but the EPA is required to step in if states fail to adopt plans that

meet the statutory requirements. As the court in *Virginia* recognized, Congress gave states discretion in choosing the "mix of controls" necessary to attain and maintain the NAAQS. *See also Train v. NRDC*, 421 U.S. 60, 79, 95 (1975). The U.S. Supreme Court first recognized this program of cooperative federalism in *Train*, and the Court stated:

The Act gives the Agency no authority to question the wisdom of a State's choices of emissions limitations if they are part of a plan which satisfies the standards of § 110(a)(2) . . . [S]o long as the ultimate effect of a State's choice of emissions limitations is compliance with the national standards, the State is at liberty to adopt whatever mix of emissions limitations it deems best suited to its particular situation.

The issue in that case concerned whether changes to requirements that would occur before the area was required to attain the NAAQS were variances that should be addressed pursuant to the provision governing SIP revisions or were "postponements" that must be addressed under section 110(f) of the CAA of 1970, which contained prescriptive criteria. The court concluded that the EPA reasonably interpreted section 110(f) not to restrict a state's choice of the mix of control measures needed to attain the NAAQS and that revisions to SIPs that would not impact attainment of the NAAQS by the attainment date were not subject to the limits of section 110(f). While the court recognized that states had discretion in determining the appropriate emissions limitations, it also recognized that the SIP must meet the standards of section 110(a)(2). In *Virginia*, the issue was whether at the request of the Ozone Transport Commission the EPA could mandate that states adopt specific motor vehicle emission standards more stringent than those mandated by CAA sections 177 and 202 for regulating emissions from motor vehicles.

As the EPA has consistently explained in its SSM Policy, the Agency does not believe that exemptions from compliance with any applicable SIP emission limitation requirements during periods of SSM are consistent with the obligation of states in SIPs, including the requirements to demonstrate that plans will attain and maintain the NAAQS, protect PSD increments and improve visibility. If a source is free from any obligation during periods of SSM, there is nothing restraining those emissions and such emissions could cause or contribute to an exceedance or violation of the NAAQS. Moreover, neither the state nor citizens would have authority to take enforcement

³⁶² 108 F.3d at 1410.

³⁶³ 421 U.S. 60, 79 (1975).

action regarding such emissions. Also, even if historically such excess emissions have not caused or contributed to an exceedance or violation, this would not mean that they could not do so at some time in the future. Finally, given that there are many locations where air quality is not monitored such that a NAAQS exceedance or violation could be observed, the inability to demonstrate that such excess emissions have not caused or contributed to an exceedance or violation would not be proof that they have not. Thus, the EPA has long held that exemptions from emission limitations for emissions during SSM events are not consistent with CAA requirements, including the obligation to attain and maintain the NAAQS and the requirement to ensure adequate enforcement authority.

Despite claims by the commenter to the contrary, the EPA has not mandated the specific means by which states should regulate emissions from sources during startup and shutdown events. Requiring states to ensure that periods of startup and shutdown are regulated consistent with CAA requirements is not tantamount to prescribing the specific means of control that the state must adopt. By the SIP call, the EPA has simply explained the statutory boundaries to the states for SIP provisions, and the next step is for the states to revise their SIPs consistent with those boundaries. States remain free to choose the “mix of controls,” so long as the resulting SIP revisions meet CAA requirements. The EPA agrees with the commenter who notes several options available to the states in responding to the SIP call. The commenter stated that there are various options available to states, such as “adopting alternative numeric emission limitations, work practice standards, additional operational limitations, or revising existing numeric emission limitations and/or their associated averaging times to create a sufficient compliance margin for unavoidable SSM emissions.” However, the state must demonstrate how that mix of controls for all periods of operation will ensure attainment and maintenance of the NAAQS or meet other required goals of the CAA relevant to the SIP provision, such as visibility protection. For example, if a state chooses to modify averaging times in an emission limitation to account for higher emissions during startup and shutdown, the state would need to consider and demonstrate to the EPA how the variability of emissions over that averaging period might affect attainment

and maintenance of a NAAQS with a short averaging period (e.g., how a 30-day averaging period for emissions can ensure attainment of an 8-hour NAAQS). One option noted by the commenter, “justifying existing provisions,” does not seem promising, based on the evaluation that the EPA has performed as a basis for this SIP call action. If by justification, the commenter simply means that the state may seek to justify continuing to have an exemption for emissions during SSM events, the EPA has already determined that this is impermissible under CAA requirements.

The EPA regrets any confusion that may have resulted from its discussion in the preamble to the February 2013 proposal. The EPA’s statement that startup and shutdown emissions above otherwise applicable limitations must be considered a violation is simply another way of stating that states cannot exempt sources from complying with emissions standards during periods of startup and shutdown. This is not inconsistent with the EPA’s statement that states can develop alternative requirements for periods of startup and shutdown where emission limitations that apply during steady-state operations could not be feasibly met. In such a case, startup and shutdown emissions would not be exempt from compliance but rather would be subject to a different, but enforceable, standard. Then, only emissions that exceed such alternative emission limitations would constitute violations.

17. Comments that because areas are in attainment of the NAAQS, SIP provisions such as automatic exemptions for excess emissions during SSM events are rendered valid under the CAA.

Comment: Commenters argued that SSM exemptions should be permissible in SIP provisions applicable to areas designated attainment because, they asserted, there is evidence that the exemptions do not result in emissions that cause violations of the NAAQS. To support this contention, the commenters observed that a number of states with SSM exemptions in SIP provisions at issue in this SIP call are currently designated attainment in all areas for one or all NAAQS and also that some of these states had areas that previously were designated nonattainment for a NAAQS but subsequently have come into attainment. Thus, the commenters asserted, the SIP provisions that the EPA identified as deficient due to SSM exemptions must instead be consistent with CAA requirements because these states are in attainment. The commenters claimed that because these areas have shown they are able to attain

and maintain the NAAQS or to achieve emission reductions, despite SSM exemptions in their SIP provisions, the EPA’s concerns with respect to SSM exemptions are unsupported and unwarranted. Based on the premise that SSM exemptions are not inconsistent with CAA requirements applicable to areas that are attaining the NAAQS, the commenters claimed that such provisions cannot be substantially inadequate to meet CAA requirements.

Response: The EPA disagrees with the commenters’ view that, so long as the provisions apply in areas designated attainment, the CAA allows SIP provisions with exemptions for emissions during SSM events. The commenters based their argument on the incorrect premise that SIP provisions applicable to sources located in attainment areas do not also have to meet fundamental CAA requirements such as sections 110(a)(2)(A), 110(a)(2)(C) and 302(k). Evidently, the commenters were only thinking narrowly of the statutory requirements applicable to SIP provisions in SIPs for purposes of part D attainment plans, which are by design intended to address emissions from sources located in nonattainment areas and to achieve attainment of the NAAQS in such areas. The EPA does not interpret the fundamental statutory requirements applicable to SIP provisions (e.g., that they impose continuous emission limitations) to apply exclusively in nonattainment areas; these requirements are relevant to SIP provisions in general.

The statutory requirements applicable to SIPs are not limited to areas designated nonattainment. To the contrary, section 107(a) imposes the responsibility on each state to attain and maintain the NAAQS “within the entire geographic areas comprising such State.” The requirement to maintain the NAAQS in section 107(a) clearly applies to areas that are designated attainment, including those that may previously have been designated nonattainment. Similarly, section 110(a)(1) explicitly requires states to have SIPs with provisions that provide for the implementation, maintenance and enforcement of the NAAQS. By inclusion of “maintenance,” section 110(a)(1) clearly encompasses areas designated attainment as well as nonattainment. The SIPs that states develop must also meet a number of more specific requirements set forth in section 110(a)(2) and other sections of the CAA relevant to particular air quality issues (e.g., the requirements for attainment plans for the different NAAQS set out in more detail in part D). Among those basic requirements that

states must meet in SIPs are section 110(a)(2)(C), requiring a permitting program applicable to sources in areas designated attainment, and section 110(a)(2)(D)(i)(II), requiring SIP provisions to prevent interference with protection of air quality in areas designated attainment in other states. Part C, in turn, imposes additional requirements on states with respect to prevention of significant deterioration of air quality in areas designated attainment. Although the EPA agrees that the CAA distinguishes between, and imposes different requirements upon, areas designated attainment versus nonattainment, there is no indication that the statute distinguishes between the basic requirements for emission limitations in these areas, including that they be continuous.

Section 110(a)(2)(A) requires states to include “emission limitations” in their SIPs “as may be necessary or appropriate to meet applicable requirements of” the CAA. The EPA notes that the commenters have raised other arguments concerning the precise meaning of “necessary or appropriate” (see section VII.A.3 of this document), but in this context the Agency believes that because states are required to have SIPs that provide for “maintenance” of the NAAQS it is clear that the general requirements for emission limitations in SIPs are not limited to areas designated nonattainment. Section 110(a)(2)(A) contains no language distinguishing between emission limitations applicable in attainment areas and emission limitations applicable in nonattainment areas. Significantly, the definition of the term “emission limitation” in section 302(k) likewise makes no distinction between requirements applicable to sources in attainment areas versus nonattainment areas. The EPA sees no basis for interpreting the term “emission limitation” differently for attainment areas and nonattainment areas, with respect to whether such emission limitations must impose continuous controls on the affected sources. Most importantly, section 110(a)(2)(A) does explicitly require that any such emission limitations must “meet the applicable requirements” of the CAA, and the EPA interprets this to include the requirement that emission limitations apply continuously, *i.e.*, contain no exemptions for emissions during SSM events. This requirement applies equally in all areas, including attainment and nonattainment areas.

The EPA’s interpretation of the CAA in the SSM Policy has long extended to SIP provisions applicable to attainment areas as well as to nonattainment areas. Since at least 1982, the SSM Policy has

stated that SIP provisions with SSM exemptions are inconsistent with requirements of the CAA to provide both for attainment and maintenance of the NAAQS, *i.e.*, inconsistent with requirements applicable to both nonattainment and attainment areas.³⁶⁴ Since at least 1999, the EPA’s SSM Policy has clearly stated that SIP provisions with SSM exemptions are inconsistent with protection of PSD increments in attainment areas.³⁶⁵ The EPA provided its full statutory analysis with respect to SSM exemptions and CAA requirements applicable to areas designated attainment in the background memorandum accompanying the February 2013 proposal.³⁶⁶

Finally, the EPA disagrees with the commenters’ theory that, absent proof that the SIP deficiency has caused or will cause a specific violation of the NAAQS, the Agency lacks authority to issue a SIP call for SIP provisions that apply only in areas attaining the NAAQS. This argument is inconsistent with the plain language of section 110(k)(5). Section 110(k)(5) authorizes the EPA to issue a SIP call whenever the SIP is substantially inadequate to attain or maintain the NAAQS, to mitigate interstate transport or to comply with any other CAA requirement. The explicit reference to a SIP’s being inadequate to maintain the NAAQS clearly indicates that the EPA has authority to make a finding of substantial inadequacy for a SIP provision applicable to attainment areas, not only for a SIP provision applicable to nonattainment areas. In addition, section 110(k)(5) explicitly authorizes the EPA to issue a SIP call not only in instances related to a specific violation of the NAAQS but rather whenever the Agency determines that a SIP provision is inadequate to meet requirements related to attainment and maintenance of the NAAQS or any other applicable requirement of the Act, including when the provision is inadequate to meet the fundamental legal requirements applicable to SIP provisions. Were the EPA’s authority limited to issuing a SIP call only in the event an area was violating the NAAQS, section 110(k)(5) would not explicitly include requirements related to “maintenance” and would not explicitly include the statement “otherwise

comply with any requirement of [the CAA].”

18. Comments that the EPA’s initial approval of these deficient provisions, or subsequent indirect approval of them through action on other SIP submissions, establishes that these provisions meet CAA requirements.

Comment: A number of commenters argued that because the EPA initially approved the SIP provisions at issue in this rulemaking, this establishes that these provisions meet CAA requirements. Other commenters argued that subsequent actions on other SIP submissions in effect override the fact that the SIP provisions at issue are legally deficient. For example, an industry commenter asserted that there have been “dozens of instances where EPA has reviewed Alabama SIP revision submittals” and the EPA has never indicated “that it believed these rules to be inconsistent with the CAA.” Other state commenters made similar arguments suggesting that the EPA’s original approval of these provisions, and the fact that the EPA has not previously taken action to require states to revise them, indicates that they are not deficient.

Response: The EPA disagrees with these commenters. The fact that the EPA once approved a SIP provision does not mean that the SIP provision is *per se* consistent with the CAA, or consistent with the CAA notwithstanding any later legal or factual developments. This is demonstrated by the very existence of the SIP call provision in section 110(k)(5), whereby the EPA may find that an “applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant [NAAQS] . . . or to otherwise comply with any requirement of” the CAA. This SIP call authority expressly authorizes the EPA to direct a state to revise its SIP to remedy any substantial inadequacy, including failures to comply with legal requirements of the CAA. By definition, when the EPA promulgates a SIP call, this means that the Agency has previously approved the provision into the SIP, rightly or wrongly. The SIP call provision would be meaningless if a SIP provision were considered perpetually consistent with CAA requirements after it was originally approved, and merely because of that prior approval as commenters suggest. In the February 2013 proposal, the EPA acknowledged its own responsibility in approving provisions that were inconsistent with CAA requirements.

The EPA also disagrees with the argument that the Agency’s action on other intervening SIP submissions from a state over the years since the approval

³⁶⁴ See 1982 SSM Guidance, Attachment at 1.

³⁶⁵ See 1999 SSM Guidance at 2.

³⁶⁶ See Memorandum, “Statutory, Regulatory, and Policy Context for this Rulemaking,” February 4, 2013, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0029.

of the original deficient SIP provision in some way negates the original deficiency. The industry commenter pointed to “dozens of instances where EPA reviewed Alabama SIP revision submittals” as times when the EPA should have addressed any SSM-related deficient SIP provisions. However, the EPA’s approval of other SIP revisions does not necessarily entail reexamination and reapproval of every provision in the SIP. The EPA often only examines the specific provision the state seeks to revise in the SIP submission without reexamining all other provisions in the SIP. The EPA sometimes broadens its review if commenters bring other concerns to the Agency’s attention during the rulemaking process that are relevant to the SIP submission under evaluation.

19. Comments that exemptions for excess emissions during exempt SSM events would not distort emissions inventories, SIP control measure development or modeling, because the EPA’s regulations and guidance concerning “rule effectiveness” adequately account for these emissions, and therefore the proposed SIP calls are not needed or justified.

Comment: One commenter argued that provisions allowing exemptions or affirmative defenses for excess emissions during startup and shutdown are consistent with a state’s authority under CAA section 110 and that this is evidenced by the fact that the EPA has issued guidance on “rule effectiveness” that plainly takes into account a “discount” factor in a state’s demonstration of attainment when it chooses to adopt startup/shutdown provisions. This commenter cited the EPA’s definition of “rule effectiveness” at 40 CFR 51.50 and EPA guidance on demonstrating attainment of PM_{2.5} and regional haze air quality goals.³⁶⁷

Response: The EPA disagrees with the characterization in this comment of past EPA guidance and with the conclusion that the fact of the existence of EPA guidance on “rule effectiveness” would support the claim that the CAA provides authority for exemptions or affirmative defenses for excess emissions during startup and shutdown. The EPA’s definition of “rule effectiveness” at 40 CFR 51.50 does not refer to startup and

shutdown; it refers only to “downtime, upsets, decreases in control efficiencies, and other deficiencies in emission estimates,” and once defined the term “rule effectiveness” is not subsequently used within 40 CFR part 51 in any way that would indicate that it is meant to capture the effect of exemptions during startup and shutdown. The EPA guidance on demonstrating attainment of PM_{2.5} and regional haze goals cited by the commenter also does not address rule effectiveness or excess emissions during startup and shutdown. The terms “startup” and “shutdown” do not appear in the attainment demonstration guidance. The EPA did issue a different guidance document in 1992 on rule effectiveness,³⁶⁸ but that document focused only on the preparation of emissions inventories for 1990, not on demonstrating attainment of NAAQS or regional haze goals. Moreover, the 1992 guidance document addressed ways of estimating actual 1990 emissions in light of the likelihood of a degree of source noncompliance with applicable emission limitations, not on the emissions that would be permissible in light of the absence of a continuous emission limitation applicable during startup and shutdown. The terms “startup” and “shutdown” do not appear in the 1992 guidance. In 2005, the EPA replaced the 1992 guidance document on rule effectiveness as part of providing guidance for the implementation of the 1997 ozone and PM_{2.5} NAAQS.³⁶⁹ Like the 1992 guidance, the 2005 guidance associated “rule effectiveness” with the issue of noncompliance and did not provide any specific advice on quantifying emissions that could be legally emitted because of SSM exemptions in SIPs. To avoid misunderstanding, the 2005 guidance included a question and answer on startup and shutdown emissions to the effect that emissions during startup and shutdown should be included in “actual emissions.” This question and answer included the statement, “[L]ess preferably, [emissions during startup, shutdown, upsets and malfunctions] can be accounted for using the rule effectiveness adjustment procedures outlined in this guidance.” However, other than in this question and answer, the 2005 guidance does not mention emissions during startup and shutdown

events; it focuses on issues of noncompliance with applicable emission limitations. The fact that the 1992 guidance document did not intend for “rule effectiveness” to encompass SIP-exempted emissions during startup and shutdown, and that the 2005 guidance also did not, is confirmed by a statement in a more recent draft EPA guidance document:

In addition to estimating the actual emissions during startup/shutdown periods, another approach to estimate startup/shutdown emissions is to adjust control parameters via the emissions calculation parameters of rule effectiveness or primary capture efficiency. *Using these parameters for startup/shutdown adjustments is not their original purpose*, but can be a simple way to increase the emissions and still have a record of the routine versus startup/shutdown portions of the emissions. (Emphasis added.)³⁷⁰

Furthermore, as explained in the proposals for this action and in this document, the EPA believes that it is a fundamental requirement of the CAA that SIP emission limitations be continuous, which therefore precludes exemptions for excess emissions during startup and shutdown. At bottom, although it is true that these guidance documents indicated that one less preferable way to account for startup and shutdown emissions could be through the rule effectiveness analysis, this does not in any way indicate that exemptions from emissions limitations would be appropriate for such periods.

Comment: A commenter argued that the EPA has not shown any substantial inadequacy with respect to CAA requirements but that the closest the EPA comes to identifying a substantial inadequacy is in the EPA’s discussion of its concern regarding the impacts of SSM exemptions on the development of accurate emissions inventories for air quality modeling and other SIP planning. This commenter and another commenter in particular noted a passage in the February 2013 proposal that stated that emission limitations in SIPs are used to meet various requirements for attainment and maintenance of the NAAQS and that all of these uses typically assume continuous source compliance with emission limitations.³⁷¹ These commenters disagreed with the EPA’s statement that all of these uses typically assume continuous source compliance with

³⁶⁷ The commenter appears to have been meaning to cite to the draft EPA guidance document “Draft Guidance for Demonstrating Attainment of Air Quality Goals for PM_{2.5} and Regional Haze,” January 2, 2001. This draft guidance on PM_{2.5} and Regional Haze was combined with similar guidance on ozone in the final guidance document “Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze,” April 2007, EPA-454/B-07-002.

³⁶⁸ “Guidelines for Estimating and Applying Rule Effectiveness for Ozone/CO State Implementation Plan Base Year Inventories,” November 1992, EPA-452/JR-92.010.

³⁶⁹ “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” Appendix B, August 2005, EPA-454/R-05-001.

³⁷⁰ “Draft Emissions Inventory Guidance for Implementation of Ozone [and Particulate Matter]* National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” April 11, 2014, page 62.

³⁷¹ February 2013 proposal, 78 FR 12459 at 12485.

applicable emission limitations, and the commenters cited several EPA guidance documents and statements that, they believe, address SSM and ensure that states do not simply assume continuous compliance. These commenters in addition cited to footnote 4 of the EPA's 1999 SSM Guidance.³⁷² The commenters argued that as long as states are complying with the EPA's inventory and modeling rules and guidance, SSM exemptions and similar applicability provisions have no negative impact on SIP planning.

Response: The EPA acknowledges that the cited statement in the February 2013 proposal, that various types of required analysis used to develop SIPs or permits "typically assume continuous source compliance with emission limitations," was an oversimplification of a complex situation. However, the EPA disagrees with the commenters' assertion that the EPA's inventory rules and other guidance are sufficient to ensure that SSM exemptions, where they still exist in SIPs, have no negative impact on SIP planning. Also, if the EPA were to allow them, such exemptions could become more prevalent and have a larger negative effect. More importantly, regardless of how SSM exemptions may or may not negatively impact things like emissions inventories, as explained elsewhere in this document, the EPA believes that it is a fundamental requirement of the CAA that SIP emission limitations be continuous, which therefore precludes exemptions for excess emissions during SSM events.

Generally, the EPA's guidance and rules do not say that it is correct for estimates of source emissions used in SIP development to be based on an assumption of continuous compliance with the SIP emission limitations even if the SIP contains exemptions for SSM periods. Rather, the EPA has generally emphasized that SIPs and permits should be based on the best available information on actual emissions, including in most cases the effects of known or reasonably anticipatable noncompliance with emission limitations that do apply.³⁷³ Because the

EPA's longstanding SSM Policy has interpreted the Act to prohibit exemptions during SSM events, it has not been a focus of EPA guidance to explain to states how to take account of such exemptions. As the commenters have pointed out, some aspects of some EPA guidance documents have some relationship to the issue of accounting for SSM exemptions. Nevertheless, taken together, the EPA's guidance does not and cannot ensure that emission estimates used in developing SIPs and permits correctly reflect actual emissions in all cases in which SSM exemptions still exist in SIPs, particularly for sources that, unlike all or most of the sources represented by these two commenters, are not subject to continuous emissions monitoring. For a source not subject to continuous emissions monitoring, when excess emissions during SSM events are exempted by a SIP—whether automatically, on a special showing or through director's discretion—it is much more likely that those emissions would not be quantified and reported to the air agency such that they could be accounted for in SIP and permit development. For example, when the SIP includes exemptions for excess emissions during SSM events, there may be no motive for a source to perform a special stack test during a SSM period in which there is no applicable emission limitation and possibly no legal basis for an air agency to require such a stack test. It would also be unusual to find well-documented emission factors for such transient operation that could be used in place of source-specific testing.

As explained in a response provided earlier in this document, the EPA guidance documents also cited by these commenters in fact do not address how the effect of exemptions in SIPs for excess emissions during startup and shutdown can be accounted for in an attainment or maintenance demonstration. The cited 1992 "rule effectiveness" guidance in regard to issues such as noncompliance in the form of non-operation of control equipment, malfunctions, poor maintenance and deterioration of control equipment was meant to address how the issues affected emissions in 1990, not in a future year when the NAAQS must be attained. The 2005 guidance also did not provide any particular advice on how "rule effectiveness" concepts could be used to estimate emissions during exempt SSM

periods. Given that the EPA's longstanding SSM Policy has been that exemptions for excess emissions during SSM events are not permissible, the EPA had no reason to provide guidance on how attainment demonstrations should account for such exemptions.

The commenters are right to infer that the EPA does believe that where exemptions for excess emissions during anticipatable events still remain in current SIPs, attainment demonstrations ideally should account for them. Indeed, the EPA's guidance has recommended that all emissions during startup and shutdown events be included in both historical and projected emissions inventories.³⁷⁴ However, as long as exemptions for excess emissions during SSM events have the effect of making such excess emissions not be violations and thus not reportable as violations, it will be difficult for air agencies to have confidence that they have sufficient knowledge of the magnitude, location and timing of such emissions as would be needed to accurately account for those emissions in attainment demonstrations, especially for NAAQS with averaging periods of one day or less. The EPA has promulgated emissions inventory reporting rules, but these rules apply requirements to air agencies rather than to the sources that would have actual knowledge of startup and shutdown events and emissions. To make a complying inventory data submission to the EPA, an air agency does not have to obtain from sources information on the magnitude and timing of emissions during SSM events for which an exemption applies, and to the EPA's knowledge most air agencies do not obtain this information. The EPA's emissions inventory rules require the reporting of historical annual-total emissions only (and in some areas "typical" seasonal and/or daily emissions for certain pollutants), not day-to-day emissions. Actual emissions during SSM events should be included in these annual emissions. While data formats are available from the EPA to allow a state to segregate the total annual emissions during SSM events

³⁷² The EPA interprets the citation "*See supra* pp. 21–24" as being intended to refer to those pages of "Guidelines for Estimating and Applying Rule Effectiveness for Ozone/CO State Implementation Plan Base Year Inventories," November 1992, EPA–452/JR–92.010, which this commenter did not refer to by title.

³⁷³ New source permitting under the PSD program is an exception to the principle that the effects of noncompliance should be included in estimates of source emissions. The air quality impact analysis for a proposed PSD permit is based on an assumption that the source will operate without malfunctions. However, it may be necessary in this

type of analysis to consider excess emissions that are the result of poor maintenance, careless operation or other preventable conditions. *See* 40 CFR part 51, appendix W, section 8.1.2, footnote a.

³⁷⁴ For example, *see* "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," Appendix B, August 2005, EPA–454/R–05–001. A recent draft EPA guidance on the preparation of emissions inventories for attainment demonstrations recognizes that, in contrast to startup and shutdown emissions, emissions during malfunctions are not predictable and do not need to be included in projected inventories for the future year of attainment. *See* "Draft Emissions Inventory Guidance for Implementation of Ozone [and Particulate Matter]* National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," April 11, 2014, page 62.

from annual emissions during other type of operation, to segregate the emissions is not a requirement and few states do so. Moreover, the EPA's emissions inventory rules require reporting on most sources only on an "every third year" basis, which means that unless an air agency has authority to and does require more information from sources than is needed to meet the air agency's reporting obligation to the EPA, the air agency will not be in a position to know whether and how, between the triennial inventory reports, excess emissions during startup and shutdown may be changing due to variations in source operation and possibly affecting attainment or maintenance. Thus, the EPA's emissions inventory rules provide air agencies only limited leverage in terms of ability to obtain detailed information from sources regarding the extent to which actual emissions during SSM events may be unreported in emissions inventories, due to SIP exemptions. The EPA believes that when exemptions for excess emissions during SSM events are removed from SIPs, thereby making high emissions during SSM events specifically reportable deviations from emission limitations for more sources than now report them as such, it will be easier for air agencies to understand the timing and magnitude of event-related emissions that can affect attainment and maintenance. However, this belief is not the basis for this SIP call action, only an expected useful outcome of it.

Footnote 4 of the EPA's 1999 SSM Guidance suggested that "[s]tates may account for [potential worst-case emissions that could occur during startup and shutdown] by including them in their routine rule effectiveness estimates." This statement in the 1999 document's footnote may seem at odds with the statement in this response that the "rule effectiveness" concept was not meant to embrace excess emissions during startup and shutdown that were allowed because of SIP exemptions. However, the footnote is attached to text that addresses "worst-case" emissions that are higher than allowed by the applicable SIP, because that text speaks about the required demonstration to support a SIP revision containing an affirmative defense for violations of applicable SIP emission limitations. Thus, estimates of such worst-case emissions would reflect the effects of noncompliance, which is within the intended scope of the EPA's "rule effectiveness" guidance. Footnote 4 was not referring to the issue of how to

account for the effect of SSM exemptions.³⁷⁵

Comment: A number of commenters stated their understanding that the EPA has proposed SIP calls as a way of improving air agencies' implementation of EPA-specified requirements in emissions inventory or modeling, and they stated that if this is the EPA's concern then the EPA should address the issue in that context.

Response: To clarify its position, the EPA explains here that while it believes that approvable SIP revisions in response to the proposed SIP calls will have the benefit of providing information on actual emissions during SSM events that can improve emissions inventories and modeling, the availability of this additional information is not the basis for the SIP calls that are being finalized. The EPA believes that it is a fundamental requirement of the CAA that SIP emission limitations be continuous, which therefore precludes exemptions for excess emissions during startup and shutdown.

Comment: An air agency commenter stated that facilities in its state are required to submit data on all annual emissions, including emissions from startup and shutdown operation (and malfunctions), as part of its annual emissions inventory, and that it takes these emissions into consideration as part of SIP development.

Response: The EPA appreciates the efforts of this commenter to develop SIPs that account for all emissions. However, these efforts and whatever degree of success the commenter enjoys do not change the fundamental requirement of the CAA that SIP emission limitations be continuous, which therefore precludes exemptions for excess emissions during startup and shutdown.

Comment: A commenter argued that even to the extent SSM emissions present some level of uncertainty in model-based air quality projections, that uncertainty is small compared to other sources of uncertainty in modeling analyses, and so SSM emissions will not have any significant impact on attainment demonstrations or any underlying air quality modeling analysis.

Response: In support of this very general statement, the commenter provided only its own assessment of its own experience and the similar opinion of unnamed permitting agencies. In any

³⁷⁵ In light of the *NRDC v. EPA* decision, affirmative defense provisions are not allowed in SIPs any longer, so this aspect of the 1999 SSM Guidance is no longer relevant.

case, this SIP call action is not based on any EPA determination about how modeling uncertainties due to SSM exemptions in SIPs compare to other modeling uncertainties.

20. Comments that exemptions for excess emissions during SSM events are not a concern with respect to PSD and protection of PSD increments.

Comment: Commenters asserted that the EPA has not adequately explained the basis for its concerns about the impact of emissions during SSM events on PSD increments.

Response: The EPA disagrees. As explained in detail in the background memorandum included in the docket for this rulemaking,³⁷⁶ CAA section 110(a)(2)(C) requires that a state's SIP must include a PSD program to meet CAA requirements for attainment areas.³⁷⁷ In addition, section 161 explains that "[e]ach [SIP] shall contain emission limitations and such other measures as may be necessary . . . to prevent significant deterioration of air quality for such region . . . designated . . . as attainment or unclassifiable." Specifically, each SIP is required to contain measures assuring that certain pollutants do not exceed designated maximum allowable increases over baseline concentrations.³⁷⁸ These maximum allowable increases are known as PSD increments. Applicable EPA regulations require states to include in their SIPs emission limitations and such other measures as may be necessary in attainment areas to assure protection of PSD increments.³⁷⁹ Authorizing sources in attainment areas to exceed SIP emission limitations during SSM events compromises the protection of these increments.

The commenters' concerns seem to be focused on PSD permitting for individual sources rather than on emission limitations in SIPs. The commenters asserted that the EPA already adequately accounts for all emissions during SSM events when calculating the baseline and increment consumption and expressed concern about the potential for "double counting" of emissions by counting them both toward the baseline and against increment. The EPA agrees that

³⁷⁶ See Memorandum, "Statutory, Regulatory, and Policy Context for this Rulemaking," February 4, in the rulemaking docket at EPA-HQ-OAR-2012-0322-0029.

³⁷⁷ "Each implementation plan . . . shall . . . include a program to provide for . . . regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that [NAAQS] are achieved, including a permit program as required in . . . part C." CAA section 110(a)(2)(C).

³⁷⁸ CAA section 163.

³⁷⁹ See 40 CFR 51.166(c).

emissions should not be double-counted and has regulatory requirements in place to ensure that emissions are either attributed to the baseline or counted against increment but not both.³⁸⁰ Nevertheless, permitting agencies base their calculations of both the baseline and increment consumption on air quality data representing actual emissions from sources.³⁸¹ As explained more fully in the background memorandum accompanying the February 2013 proposal, the EPA is concerned that as a result of SSM exemptions in SIPs, inventories of actual emissions often do not include an accurate accounting of excess emissions that occur during SSM events. Moreover, the models used to calculate increment consumption typically assume continuous source compliance with applicable emission limitations.³⁸² Authorizing exceedances of emission limitations during SSM events would compromise the accuracy of the projections made by these models. Accurate calculations of the baseline and increment consumption rely on the correct accounting of all emissions, including those occurring during SSM events. Without accurate data, the EPA cannot be certain that state agencies are calculating baseline or increment consumption correctly or that increments in attainment areas are not being exceeded. For the foregoing reasons, the EPA is concerned that SSM exemptions in SIPs compromise the ability of the PSD program to protect air quality increments.

21. Comments that because ambient air quality has improved over the duration of the CAA through various regulatory programs such as the Acid Rain Program, this disproves that SIP provisions including exemptions for excess emissions during SSM events pose any concerns with respect to

protection of public health and the environment.

Comment: Industry commenters claimed that because ambient air quality data show that air quality has been consistently improving over a period of years, this proves that exemptions for emissions during SSM events do not impede the ability of areas to attain and maintain the NAAQS. The commenters provided a chart showing percentage reduction in emissions of the various NAAQS pollutants ranging from 52 percent reduction in NO_x between 1980 and 2010 to 83 percent reduction in direct PM₁₀ emissions for that same time period. The commenters further claimed that a significant portion of the recent emissions reductions have been achieved by electric utilities. The commenters also provided charts and graphs showing reductions in pollutants under the CAA Acid Rain Program. The commenters further claimed that the states in which they operate—Alabama, Florida, Georgia, Mississippi and North Carolina—are meeting the NAAQS, with isolated exceptions. The commenters further stated that, although the EPA recently has promulgated several new NAAQS, the attainment plans for those standards are not yet due, and thus the new standards cannot justify the SIP call. The commenters concluded by noting that the states' success in achieving the various NAAQS, even as the NAAQS have been strengthened, demonstrates that the existing SSM exemptions in SIP provisions identified by the EPA do not "place the NAAQS at risk." Regarding visibility, the commenters noted that plans to show progress in meeting the regional haze goal were due in 2013 and that evidence shows that visibility is also improving notwithstanding the existing SSM exemptions.

Response: The EPA agrees that many areas in the U.S. have made great strides in improving ambient air quality under the CAA. However, excess emissions from sources during SSM events have the potential to undermine that progress and are also inconsistent with the requirements of the CAA, as discussed elsewhere in the February 2013 proposal and in this final action. The EPA notes that the fact that an area has attained the NAAQS does not demonstrate that emissions during SSM events do not have the potential to undermine attainment or maintenance of the NAAQS, interfere with protection of PSD increments or interfere with visibility. For certain pollutants, such as lead or SO₂, a single source could have a single SSM event that could cause an exceedance of the NAAQS that would otherwise not have occurred. It is

through its SIP that a state demonstrates that it has in place an air quality management program that will attain and maintain the NAAQS on an ongoing basis, and so it is critical that the state, through its SIP provisions, can ensure that emissions during normal source operation including startup and shutdown events do not exceed levels relied on for purposes of developing attainment and maintenance plans. Similarly, SIP provisions designed to protect visibility must also meet requirements of the CAA, and exemptions for emissions during SSM events would likewise have the potential to undermine visibility objectives of the CAA. Thus, it is not appropriate to exempt emissions during these SSM events from compliance with emission limitations in SIPs. As explained in this final action, the state has flexibility in choosing how to regulate source during these periods of operation, and sources do not necessarily have to be subject to the same numerical emissions limitations or the same other control requirements during startup and shutdown that apply during other modes of operation. However, SIP emission limitations must be continuous, and thus sources must be subject to requirements that apply at all times including during startup and shutdown.

22. Comments that the EPA's position that SIP provisions such as automatic exemptions for excess emissions during SSM events hinder effective enforcement for violations is incorrect, because there have been a number of citizen suits brought under the CAA.

Comment: According to industry commenters, the EPA's argument that deficient SIP provisions concerning emissions during SSM events limit enforcement of violations of emissions limitations under sections 113 and 304 is inaccurate, because "the facts show that SSM provisions do not preclude or hinder enforcement of any CAA requirements." The commenters provided a list of "recent" enforcement actions and asserted that "[t]he sheer number of cases demonstrates that the existing regulations provide ample opportunity for enforcement." The commenters cited to litigation brought by citizen groups that the commenters asserted has resulted in settlements including "injunctive relief and supplemental environmental projects ('SEPs') worth tens of millions, if not hundreds of millions, of dollars." The commenters also cited to one example to suggest that "whereas EPA and/or States may use enforcement discretion" in certain types of cases, "citizen groups do not."

³⁸⁰ See 40 CFR 51.166 and 52.21.

³⁸¹ See CAA section 169(4) (defining baseline concentration); 40 CFR 51.166(b)(13)(i) (setting forth what is included in baseline concentration); 40 CFR 52.21(b)(13)(i) (same). The **Federal Register** document promulgating the revised PSD regulations also explained this point. In that document, the EPA explained, "[B]aseline concentrations reflect actual air quality in an area. Increment consumption or expansion is directly related to baseline concentration. Any emissions not included in the baseline are counted against the increment. The complementary relationship between the concepts supports using the same approach for calculating emissions contributions to each." 45 FR 52676, 52718 (August 7, 1980). "Actual emissions" is defined in 40 CFR 51.166(b)(21)(i) and 52.21(b)(21)(i).

³⁸² See 45 FR 52717 ("increment consumption and expansion should be based primarily on actual emissions increases and decreases, which can be presumed to be allowable emissions for sources subject to source-specific emissions limitations.").

Response: The EPA disagrees with the commenters' logic that the mere existence of enforcement actions negates the concern that deficient SIP provisions interfere with effective enforcement of SIP emission limitations. The EPA believes that deficient SIP provisions can interfere with effective enforcement by air agencies, the EPA and the public to assure that sources comply with CAA requirements, contrary to the fundamental enforcement structure provided in CAA sections 113 and 304. For example, automatic or discretionary exemption provisions for excess emissions during SSM events by definition completely eliminate the possibility of enforcement for what may otherwise be clear violations of emissions limitations during those times. Affirmative defense provisions purport to alter or eliminate the statutory jurisdiction of courts to determine liability or to impose remedies for violations. These types of provisions eliminate the opportunity to obtain injunctive relief or penalties that may be needed to ensure appropriate efforts to design, operate and maintain sources so as to prevent and to minimize excess emissions, protect the NAAQS and PSD increments and meet other CAA requirements. Similarly, the exemption of sources from liability for excess emissions during SSM events eliminates incentives to minimize emissions during those times. These exemptions thus reduce deterrence of future violations from the same sources or other sources during these periods.

In the February 2013 proposal, the EPA discussed in detail an enforcement case that illustrates and supports the Agency's position.³⁸³ In that case, citizen suit plaintiffs sought to bring an enforcement action against a source for thousands of self-reported exceedances of emission limitations in the source's operating permit. The source asserted that those exceedances were not "violations," through application of a permit provision that mirrored an underlying Georgia SIP provision. The U.S. Court of Appeals for the Eleventh Circuit (Eleventh Circuit) ultimately determined that the provision created an "affirmative defense" for SSM emissions that shielded the source from liability for numerous violations. The court noted that even if the approved provision in Georgia's SIP was inconsistent with the EPA's guidance on the proper treatment of excess emissions during SSM events, the defendant could rely on the provision because the EPA had not taken action through

rulemaking to rectify any discrepancy.³⁸⁴ In this final action on the Petition, the EPA has determined that the specific SIP provision at issue in that case is deficient for several reasons. Had that deficient SIP provision not been in the SIP at the time of the enforcement action, then the provision would not have had any effect on the outcome of the case. Instead, the courts would have evaluated the alleged violations and imposed any appropriate remedies consistent with the applicable CAA provisions, rather than in accordance with the SIP provision that imposed the state's enforcement discretion preferences on other parties contrary to their rights under the CAA.

As the outcome of this case demonstrates, the mere fact that a number of enforcement actions have been filed does not mean that the deficient SIP provisions identified by the EPA in this SIP call action do not hinder effective enforcement under sections 113 and 304. To the contrary, that case illustrates exactly how conduct that might otherwise be a clear violation of the applicable SIP emission limitations by a source was rendered immune from enforcement through the application of a provision that operated to excuse liability for violations and potentially allowed unlimited excess emissions during SSM events.

The commenters cited 15 other enforcement cases brought by government and citizen groups over a span of 17 years, but the commenters do not indicate whether any SIP provisions relevant to emissions during SSM events were involved, nor do the commenters indicate whether any provisions at issue in this SIP call action were involved in any of the enforcement cases it cited.³⁸⁵ Even if an enforcement action has been initiated, the EPA's fundamental point remains: SIP provisions that exempt what would otherwise be a violation of SIP

emissions limitations can undermine effective enforcement during times when the CAA requires continuous compliance with such emissions limitations. By interfering with enforcement, such provisions undermine the integrity of the SIP process and the rights of parties to seek enforcement for violation of SIP emission limitations.

A number of commenters on the February 2013 proposal indicated that, from their perspective, a primary benefit of automatic or discretionary exemptions in SIP provisions applicable to emissions during SSM events is to shield sources from liability. Similarly, commenters on the SNPR indicated that, from their perspective, a key benefit of affirmative defense provisions is to prevent what is in their opinion inappropriate enforcement action for violations of SIP emission limitations during SSM events. The EPA does not agree that the purpose of SIP provisions should be to preclude or impede effective enforcement of SIP emission limitations. To the contrary, the potential for enforcement for violations of CAA requirements is a key component of the enforcement structure of the CAA. To the extent that commenters are concerned about inappropriate enforcement actions for conduct that is not in violation of CAA requirements, the EPA believes that the sources already have the ability to defend against any such invalid claims in court.

23. Comments that the EPA's alleged inclusion of "exemptions" or "affirmative defenses" in enforcement consent decrees negates the Agency's interpretation of the CAA to prohibit them in SIP provisions.

Comment: One industry commenter claimed that the EPA has itself recently promulgated an exemption for emissions during SSM events. The commenter cited an April 1, 2013, settlement agreement in a CAA enforcement case against Dominion Energy as an example. According to the commenter, this settlement agreement "provides allowances for excess emissions during startup and shutdown" and "allows an EGU to operate without the ESP when it is not practicable." The commenter characterized this as the creation of an exemption from the applicable emission limitations during startup and shutdown. The commenter further alleged that the settlement agreement "provides for an affirmative defense to stipulated penalties for excess emissions occurring during start up and shutdown." The commenter intended the fact that the EPA agrees to this type

³⁸⁴ See *Sierra Club v. Georgia Power Co.*, 443 F.3d 1346 (11th Cir. 2006).

³⁸⁵ Even if these cases did all involve SIP provisions relevant to SSM events, the sampling of cases cited by the commenter still do not prove the commenter's point. The commenter indicated that 11 of the 15 cited cases resulted in settlement. The EPA presumes that neither party admitted any fault in these settlements and it remains unknown whether the court would have found the existence of a violation. In addition, because these cases were settled, it is unknown whether exemption or affirmative defense provisions would have prevented the court from finding liability for violation of a CAA emissions limitation that would otherwise have applied. In one additional case cited by the commenter, the court determined that the defendant successfully asserted an affirmative defense to alleged violations of a 6-minute 40-percent opacity limit. The outcome of this case evidently supports the EPA's concerns about the impacts of such provisions.

³⁸³ See February 2013 proposal, 78 FR 12459 at 12504-05.

of provision in an enforcement settlement agreement to establish that affirmative defense provisions must also be valid in SIP provisions so that sources can assert them in the event of any violation of SIP emission limitations.

Response: The EPA disagrees with the commenter concerning the EPA's purported creation of exemptions for SSM events in enforcement consent decrees or settlement agreements. Consent decrees or settlement agreements negotiated by the EPA to resolve enforcement actions do not raise the same concerns as automatic exemptions for excess emissions during SSM periods or any other provisions that the EPA has found substantially inadequate in this SIP call action.

The EPA has the authority to enter consent decrees and settlement agreements in its enforcement cases and uses this discretion to resolve these cases. Settlements aim to achieve the best possible result for a given case, taking into account its specific circumstances and risks, but are still compromises between the parties to the litigation.

The EPA also disagrees with comments that attempt to equate affirmative defense provisions in SIPs with affirmative defense clauses that the EPA and defendants agree to contractually in a consent decree or settlement agreement to resolve an enforcement case. Some consent decrees and settlement agreements that the EPA enters into contain provisions referred to as "affirmative defenses" that apply only with respect to whether a source must pay stipulated penalties specified in the consent decree or settlement agreement. However, the EPA does not believe these agreements are counter to CAA requirements. The provisions in these contractual agreements are distinguishable from affirmative defense provisions in SIPs for excess emissions during SSM events. Affirmative defenses to stipulated penalties apply only in the limited context of violations of the contract terms of the consent decree or settlement agreement.

Significantly, these affirmative defense provisions apply only to the stipulated penalties of the consent decree or settlement agreement and do not carry over for incorporation into the source's permit. Most importantly, these affirmative defense provisions do not affect the penalty for violations of CAA requirements in general or of SIP emission limitation violations in particular. Further, a consent decree is itself a court order, and where these provisions have been used in a consent decree they are sanctioned by the court

and cannot be seen as a compromise of the court's own jurisdiction or authority. Indeed, the specific consent decree cited by the commenter contains exactly these types of "affirmative defense" provisions that are applicable only to the stipulated penalties imposed contractually by the consent decree and that do not operate to create any other form of affirmative defense applicable more broadly.

The EPA's use of these provisions in enforcement consent decrees or settlement agreements is not inconsistent with the EPA's interpretation of the CAA to preclude such provisions in SIPs. The EPA interprets the CAA to preclude such affirmative defenses in SIP provisions because they purport to alter or eliminate the jurisdiction of courts to find liability or to impose remedies for CAA violations in the event of judicial enforcement. No such concern is presented by the types of provisions in consent decrees or settlement agreements raised by the commenters, because the terms of such agreements must be approved and sanctioned by a court.

24. Comments that the EPA should provide more than 18 months for the SIP call because state law administrative process can take longer than that.

Comment: Several state and industry commenters claimed that states will need longer than 18 months to submit SIPs in response to a SIP call. One state commenter argued generally that more time is needed for the state to "change rules and submit a proposed SIP revision" but did not provide any detail on how much more time is needed. The commenter concluded that a "total of five years" is needed for both the state to complete its actions and for facilities "to change operating procedures or add hardware." Another state commenter claimed states would need at least 3 years to submit revised plans and cited to 40 CFR 51.166(a)(6) as providing a 3-year window for submission of SIP revisions.

An industry commenter asserted that it has taken EPA numerous years to address the startup and shutdown provisions in its own MACT standards and that states will need a similar amount of time to "unspin" the SSM provisions from SIP emission limitations and replace them with new requirements. The commenter pointed to the difficulty of modifying multiple permits and source-specific or source-category specific regulations. The commenter urged the EPA to provide much more time than the 18 months allowed by statute for a SIP call through

"a transition period of a reasonable length far exceeding 48 months."

Another industry commenter stated that more time is necessary but recognized that the maximum statutory period is 18 months. The commenter supported the EPA's providing states with the full 18 months to submit SIP revisions, because that time is needed in order for the states to undertake the necessary technical analyses to support the SIP revisions and in order to allow for the state rulemaking processes.

Response: The EPA recognizes that rule development and the associated administrative processes can be complex and time-consuming for states and for the Agency. Thus, the EPA is providing the maximum period allowed under CAA section 110(k)(5)—18 months—for states to submit SIP revisions in response to the SIP call. The EPA does not have authority under the statute to provide states with a longer period of time to submit these SIP submissions. To assist states in responding to this SIP call, the EPA is providing updated and comprehensive guidance concerning CAA requirements applicable to SIP provisions with respect to emissions during SSM events. Ideally, this guidance will allow states and the EPA to address the existing deficiencies as efficiently as possible, given the statutory schedules applicable to both states and the Agency.

The commenter who cited to 40 CFR 51.166(a)(6) is incorrect that it provides authority for the EPA to grant states 3 years to correct SIPs in response to a SIP call. The regulatory provision cited by the commenter is part of the EPA's regulations for the PSD program and simply provides that if the EPA amends that section of the PSD regulations, then a state will have 3 years to make a SIP submission to revise its SIP to meet the new PSD requirements in response to such amendments. This final action does not amend the PSD regulations and 40 CFR 51.166(a)(6) is not implicated. Under CAA section 110(k)(5), the EPA is only authorized to provide a maximum period of 18 months for states to submit SIP revisions to rectify the SIP deficiencies.

25. Comments that EPA should issue an interim enforcement policy, with respect to enforcement between the time that states revise SIP requirements and source permits are revised to reflect those changes.

Comment: One commenter argued that if the EPA finalizes the proposed SIP call for provisions applicable to emissions during SSM events, it will take state regulators a significant period of time to "disaggregate" the effect of those deficient provisions on various

other SIP provisions and the requirements of source operating permits. Because these corrections to SIP provisions and permit requirements will take time to occur, the commenter asserted that “a transition period of reasonable length far exceeding 48 months will be needed to shield industry from enforcement.” The commenter thus requested that the EPA impose such a transition period. In addition, the commenter suggested that the EPA should create “an interim enforcement policy” to shield sources and allow reliance on affirmative defense provisions “even after SIPs are corrected until permits reflect those changes.” The commenter posed this request based upon concern that there will be industry confusion concerning what requirements apply to individual sources until permits are revised to reflect the correction of the deficient SIP provisions.

Response: The EPA agrees with the commenter that it will take time for states to make the necessary SIP revisions in response to this SIP call, for the EPA to evaluate and act upon those SIP submissions and subsequently for states or the Agency to revise operating permits in the ordinary course to reflect the corrected state SIPs. As explained in the February 2013 proposal, the EPA consciously elected to proceed via its SIP call authority under section 110(k)(5) and to provide the statutory maximum of 18 months for the submission of corrective SIP revisions. The EPA chose this path specifically in order to provide states with time to revise their deficient SIP provisions correctly and in the manner that they think most appropriate, consistent with CAA requirements. The EPA also explicitly acknowledged that during the pendency of the SIP revision process, and during the time that it will take for permit terms to be revised in the ordinary course, sources will remain legally authorized to emit in accordance with current permit terms.³⁸⁶

The EPA is in this final action reiterating that the issuance of the SIP call action does not automatically alter any provisions in existing operating permits. By design, sources for which emission limitations are incorporated in permits will thus have a *de facto* transition period during which they can take steps to assure that they will ultimately meet the revised SIP provisions (e.g., by changing their equipment or mode of operation to meet an appropriate emission limitation that applies during startup and shutdown

instead of relying on exemptions). Sources subject to permit requirements will thus have yet more time (beyond the 18 months allowed for the SIP revision in response to this SIP call action) over the permit review cycle to take steps to meet revised permit terms reflecting the revised SIP provisions. However, the EPA does not agree with the commenter that there is a need for a “transition period” to “shield” sources from enforcement. The EPA’s objective in this action is to eliminate impermissible SIP provisions that exempt emissions during SSM events or otherwise interfere with effective enforcement for violations that occur during such events. Further delaying the time by which sources will be expected to comply with SIP provisions that are consistent with CAA requirements is inappropriate. Moreover, the primary purpose of SIP provisions is not to shield sources from liability for violations of CAA requirements but rather to assure that sources are required to meet CAA requirements.

The EPA shares the commenter’s concern that there is the potential for confusion on the part of sources or other parties in the interim period between the correction of deficient SIP provisions and the revision of source operating permits in the ordinary course. However, the EPA presumes that most sources required to have a permit, especially a title V operating permit, are sufficiently sophisticated and aware of their legal rights and responsibilities that the possibility for confusion on the part of sources should be very limited. Likewise, by making clear in this final action that sources will continue to be authorized to operate in accordance with existing permit terms until such time as the permits are revised after the necessary SIP revision, the EPA anticipates that other parties should be on notice of this fact as well. Regardless of the potential for confusion by any party, the EPA believes that the legal principle of the “permit shield” is well known by regulated entities, regulators, courts and other interested parties. Accordingly, the EPA is not issuing any “enforcement policy” in connection with this SIP call action.

26. Comments that a SIP call directing states to eliminate exemptions for excess emissions during SSM events is a “paper exercise” or “exalts form over substance.”

Comment: A number of commenters argued that by requiring states to correct deficient SIP provisions, such as by requiring removal of exemptions for emissions during SSM events, this SIP call action will not result in any environmental benefits. For example,

state commenters claimed that they will not be able simply to revise regulations to eliminate startup and shutdown exemptions. Instead, the commenters claimed, the states will need to revise the emissions limitations completely in order to take into account the EPA’s interpretation of the CAA that such exemptions are impermissible. The commenters asserted that rewriting the state regulations will produce no reduction in emissions or improvement in air quality and will merely impose burdens upon states to change existing regulations. The implication of the commenters’ argument is that states will merely revise SIP emission limitations to allow the same amount of emissions during SSM events by some other means, rather than by establishing emission limitations that would encourage sources to be designed, operated and maintained in a fashion that would better control those emissions.

Response: The EPA does not agree with the commenters’ assertion that revisions to the affected SIP provisions in response to this SIP call action will produce no emissions reductions or improvements in air quality. The EPA recognizes that some states may elect to develop revised emission limitations that provide for alternative numerical limitations, control technologies or work practices applicable during startup and shutdown that differ from requirements applicable during other modes of source operation. Other states may elect to develop completely revised emission limitations and elevate the level of the numerical emission limitation that applies at all times to account for greater emissions during startup and shutdown. However, any such revised emission limitations must comply with applicable substantive CAA requirements relevant to the type of SIP provision at issue, e.g. be RACM and RACT for sources located in nonattainment areas, and must meet other requirements for SIP revisions such as in sections 110(k)(3), 110(l) and 193.

The EPA believes that revision of the existing deficient SIP provisions has the potential to decrease emissions significantly in comparison to existing provisions, such as those that authorize unlimited emissions during startup and shutdown. Elimination of automatic and director’s discretion exemptions for emissions during SSM events should encourage sources to reduce emissions during startup and shutdown and to take steps to avoid malfunctions. Elimination of inappropriate enforcement discretion provisions and affirmative defense provisions should

³⁸⁶ See February 2013 proposal, 78 FR 12459 at 12482.

provide increased incentive for sources to be properly designed, operated and maintained in order to reduce emissions at all times. The EPA also anticipates that revision of older SIP emission limitations in light of more recent technological advances in control technology, and in light of more recent NAAQS, has the potential to result in significant emission control and air quality improvements. In any event, by bringing these provisions into compliance with CAA requirements, the EPA believes that the resulting SIP provisions will support the fundamental integrity of the SIP process and structure, both substantively and with respect to enforceability.

27. Comments that the EPA should make its interpretation of the CAA with respect to SSM exemptions applicable only “prospectively” and not require states to correct existing deficient provisions.

Comment: Commenters argued that the EPA should not issue a SIP call to states for existing SIP provisions and should only require states to comply with its interpretations of the CAA “prospectively.” One commenter argued that the SIP provisions at issue in this SIP call action were approved by the EPA in the past and have largely been “upheld through several EPA refinements and guidance on SSM since then.” The commenter estimated that the proposed SIP call would require states to reestablish emission limits for thousands of existing sources or could require existing sources to comply with emission limitations that did not originally take into account emissions during SSM events. The commenter characterized the EPA’s action on the Petition as a change of policy with which the EPA should only require states to meet prospectively, putting states “on notice” that the EPA will evaluate future SIP submissions under a different test applicable only to new sources going forward.

Other commenters argued that the EPA cannot require states to revise their SIP provisions if this would have the effect of making existing sources have to comply with the revised SIP. According to the commenters, existing sources should be “grandfathered” and should not have to change their control strategies or modes of operation to meet the revised SIP requirements. The commenters asserted that issuance of a SIP call without grandfathering existing sources would “retroactively” require sources to comply with the new SIP provisions and “suddenly” render sources noncompliant, even though they were in compliance with the SIP when they were originally designed, financed

and built. The commenter claimed that the SIP call would “change the legal structure for commercial transactions that have already taken place.” The thrust of the commenters’ argument is that sources, once built, should never be subjected to any additional pollution control requirements once they are in existence.

Response: The EPA disagrees with the commenters’ suggestions for multiple reasons. At the outset, the EPA notes that the only significant actual “change” in the Agency’s SSM Policy in this action is the determination that affirmative defense provisions are not permissible in SIP provisions. Since the 1999 SSM Guidance, the EPA had interpreted the CAA to allow such affirmative defense provisions, so long as they were limited only to civil penalties and very narrowly drawn consistent with criteria recommended by the Agency. As fully explained in section IV of this document, however, the EPA has determined in light of the court’s decision in *NRDC v. EPA* that the CAA does not permit SIP provisions that operate to alter or eliminate the jurisdiction of the courts to determine liability and impose remedies in judicial enforcement actions.³⁸⁷ In other respects, this action primarily consists of the EPA’s taking action to assure that SIP provisions are consistent with the CAA as the Agency has interpreted it in the SSM Policy for many years.

In addition, it is not appropriate for the EPA to allow states to retain deficient SIP provisions that would continue to excuse existing sources from complying with the revised SIP provisions in perpetuity or that would only require that future sources comply with such revised SIP provisions. The commenters advocate for “grandfathering” that would authorize current sources to continue to operate under existing deficient SIP provisions (e.g., with exemptions for SSM emissions or with affirmative defense provisions) while requiring only new sources to comply with revised SIP provisions that meet CAA requirements. The EPA understands the practical reasons why the commenters make this suggestion, but such an approach would be grossly unfair both to new sources and to the communities affected by emissions from the old sources, as well as flatly inconsistent with the

requirements of the CAA for SIP provisions. Existing sources will not be required to comply with the revised SIP emission limitations until the SIPs are updated, and if they are subject to permit requirements the sources may continue to operate consistent with those permits until the operating permits are revised to reflect the revised SIP requirements, but after that time current sources will be required to comply. Thus, sources will not immediately be in noncompliance with any requirements. The EPA has authority to issue a SIP call at any time that it determines a SIP provision is substantially inadequate, even if it mistakenly thought that the SIP provision was adequate at some time in the past. Sources will be on notice of the SIP call and the state’s administrative process to respond to it long before they will be required to comply with a revised SIP provision, and those sources will have ample opportunity to participate in the rulemakings establishing new requirements at both the state and federal level.

Finally, the EPA notes, the need for states to establish new emission limitations and change permit terms for many sources should not be viewed as an unusual occurrence. The need to reexamine existing SIP provisions and permit terms applicable to sources in response to this SIP call action is comparable to the process that states would undertake to update their SIPs as necessary to meet new and evolving CAA requirements, including future revised NAAQS. For example, under section 110(a)(1) and section 110(a)(2) states are already required to reexamine and potentially to revise their SIP provisions whenever the EPA promulgates a new or revised NAAQS. States already need to reexamine emission limitations required by section 110(a)(2)(A) and other relevant sections of the CAA in their SIPs on a regular basis as the NAAQS are revised (e.g., the potential need to revisit what is RACT for a specific source category with respect to a new NAAQS), as new legal requirements are created (e.g. the potential need to address interstate transport including compliance with any applicable FIP addressing a SIP deficiency with respect to this issue), or as new emissions control technologies are developed (e.g., what is RACT for a pollutant may evolve with technological developments). Thus, as a general matter, states already engage in periodic review of their SIP provisions on a regular basis, and the potential need to update the emissions limitations applicable to sources and thereafter the

³⁸⁷ The EPA notes, however, that many of the affirmative defense type provisions at issue in this action were also not consistent with the Agency’s interpretation of the CAA in the 1999 SSM Guidance. Thus, even in the absence of the *NRDC v. EPA* decision, these provisions were not consistent with the EPA’s prior interpretation of the CAA for such provisions.

need to update the permits applicable to those sources is part of that process. This SIP call action simply directs the affected states to address specific deficiencies in their SIP provisions as part of this normal evolutionary process.

28. Comments that directing states to correct their existing SIP provisions will require many sources to change terms of their operating permits.

Comment: A number of commenters opposed the February 2013 proposal because of the administrative burden the action would impose on air agencies and sources. Commenters asserted that requiring states to remove affirmative defense provisions for startup and shutdown from SIPs and to develop alternative emission limitations for such periods of operation instead is unreasonable. Other commenters argued that requiring removal of the deficient SIP provisions would impose enormous and time-consuming burdens on permitting authorities and the regulated community associated with the development of new or revised emissions limitations for startup and shutdown, the revision of SIPs and the revision of permits to incorporate such revised emission limitations. Another commenter asserted that sources only accepted numerical limits in permits with the understanding that they also had the benefit of affirmative defenses in the event of exceedances of those numerical emission limits during periods of SSM. The commenter thus argued that sources would seek to revise the permit limits in order to account for the absence of such affirmative defenses.

Response: The EPA acknowledges the concerns raised by commenters concerning the need for air agencies to revise the deficient SIP provisions at issue in this action, as well as the need for the EPA to review the resulting SIP revisions. The EPA does not agree, however, with the commenters' argument that the need for these administrative actions is a justification for leaving the deficient provisions unaddressed.

The EPA also acknowledges that the SIP revisions initiated by this SIP call action will result in the removal of deficient provisions such as automatic and discretionary SSM exemptions, overly broad enforcement discretion provisions and affirmative defense provisions. These SIP revisions will ultimately need to be reflected in revised operating permit terms for sources. This SIP call action will not, however, have an automatic impact on any permit terms and conditions, and the resource burden to revise permits will be spread over many years. After a

state makes the necessary revisions to its SIP provisions, any needed revisions to operating permits to reflect the revised SIP provisions will occur in the ordinary course as the state issues new permits or reviews and revises existing permits. For example, in the case of title V operating permits, permits with more than 3 years remaining will be reopened to add new applicable requirements within 18 months of the promulgation of the requirements. If a permit has less than 3 years remaining, the new applicable requirement will be added at renewal.³⁸⁸

IX. What is the EPA's final action for each of the specific SIP provisions identified in the Petition or by the EPA?

A. Overview of the EPA's Evaluation of Specific SIP Provisions

In reviewing the Petitioner's concerns with respect to the specific SIP provisions identified in the Petition, the EPA notes that most of the provisions relate to a small number of common issues. Many of these provisions are as old as the original SIPs that the EPA approved in the early 1970s, when the states and the EPA had limited experience in evaluating the provisions' adequacy, enforceability and consistency with CAA requirements.

In some instances the EPA does not agree with the Petitioner's reading of the provision in question, or with the Petitioner's conclusion that the provision is inconsistent with the requirements of the CAA. However, given the common issues that arise for multiple states in the Petition as well as in the EPA's independent evaluation, there are some overarching conceptual points that merit discussion in general terms. Thus, this section IX.A of the document provides a general discussion of each of the overarching points, including a summary of what the EPA proposed to determine with respect to the relevant SIP provisions collectively. The EPA received comments on the proposed determinations from affected states, the Petitioner and other commenters. A detailed discussion of the comments received with the EPA's responses is provided in the Response to Comment document available in the docket for this rulemaking.

Sections IX.B through IX.K of this document name the specific SIP provisions identified in the Petition or by the EPA, including a summary of what the EPA proposed and followed by the EPA's stated final action with respect to each SIP provision.

³⁸⁸ See 40 CFR 70.7(f)(1)(i).

1. Automatic Exemption Provisions

A significant number of provisions identified by the Petitioner pertain to existing SIP provisions that create automatic exemptions for excess emissions during periods of SSM. Some of these provisions also pertain to exemptions for excess emissions that occur during maintenance, load change or other types of normal source operation. These provisions typically provide that a source subject to a specific SIP emission limitation is exempted from compliance during SSM, so that the excess emissions are defined as not violations. Most of these provisions are artifacts of the early phases of the SIP program, approved before state and EPA regulators recognized the implications of such exemptions. Whatever the genesis of these existing SIP provisions, however, these automatic exemptions from emission limitations are not consistent with the CAA, as the EPA has stated in its SSM Policy since at least 1982.

After evaluating the Petition, the EPA proposed to determine that a number of states have existing SIP provisions that create impermissible automatic exemptions for excess emissions during malfunctions or during startup, shutdown or other types of normal source operation. In those instances where the EPA agreed that a SIP provision identified by the Petitioner contained such an exemption contrary to the requirements of the CAA, the EPA proposed to grant the Petition and accordingly to issue a SIP call to the appropriate state.

2. Director's Discretion Exemption Provisions

Another category of problematic SIP provision identified by the Petitioner is exemptions for excess emissions that, while not automatic, are exemptions for such emissions granted at the discretion of state regulatory personnel. In some cases, the SIP provision in question may provide some minimal degree of process and some parameters for the granting of such discretionary exemptions, but the typical provision at issue allows state personnel to decide unilaterally and without meaningful limitations that what would otherwise be a violation of the applicable emission limitation is instead exempt. Because the state personnel have the authority to decide that the excess emissions at issue are not a violation of the applicable emission limitation, such a decision would transform the violation into a nonviolation, thereby barring enforcement by the EPA or others.

The EPA refers to this type of provision as a “director’s discretion” provision, and the EPA interprets the CAA generally to forbid such provisions in SIPs because they have the potential to undermine fundamental statutory objectives such as the attainment and maintenance of the NAAQS and to undermine effective enforcement of the SIP. As described in sections VII.C and VIII.A.3 of this document, unbounded director’s discretion provisions purport to allow unilateral revisions of approved SIP provisions without meeting the applicable statutory substantive and procedural requirements for SIP revisions. The specific SIP provisions at issue in the Petition are especially inappropriate because they purport to allow discretionary creation of case-by-case exemptions from the applicable emission limitations, when the CAA does not permit any such exemptions in the first instance. The practical impact of such provisions is that in effect they transform an enforcement discretion decision by the state (e.g., that the excess emission from a given SSM event should be excused for some reason) into an exemption from compliance that also prevents enforcement by the EPA or through a citizen suit. The EPA’s longstanding SSM Policy has interpreted the CAA to preclude SIP provisions in which a state’s exercise of its own enforcement discretion bars enforcement by the EPA or through a citizen suit. Where the EPA agreed that a SIP provision identified by the Petitioner contained such a discretionary exemption contrary to the requirements of the CAA, the EPA proposed to grant the Petition and to call for the state to rectify the problem.

3. State-Only Enforcement Discretion Provisions

The Petitioner identified existing SIP provisions in many states that ostensibly pertain to parameters for the exercise of enforcement discretion by state personnel for violations due to excess emissions during SSM events. The EPA’s SSM Policy has consistently encouraged states to utilize traditional enforcement discretion within appropriate bounds for such violations and, in the 1982 SSM Guidance, explicitly recommended criteria that states might consider in the event that they elected to formalize their enforcement discretion with provisions in the SIP. The intent has been that such enforcement discretion provisions in a SIP would be “state-only,” meaning that the provisions apply only to the state’s own enforcement personnel and not to the EPA or to others.

The EPA determined that a number of states have SIP provisions that, when evaluated carefully, could reasonably be construed to allow the state to make enforcement discretion decisions that would purport to foreclose enforcement by the EPA under CAA section 113 or by citizens under section 304. In those instances where the EPA agreed that a specific provision could have the effect of impeding adequate enforcement of the requirements of the SIP by parties other than the state, the EPA proposed to grant the Petition and to take action to rectify the problem. By contrast, where the EPA’s evaluation indicated that the existing provision on its face or as reasonably construed could not be read to preclude enforcement by parties other than the state, the EPA proposed to deny the Petition, and the EPA invited comment on this issue in particular to assure that the state and the EPA have a common understanding that the provision does not have any impact on potential enforcement by the EPA or through a citizen suit. This process was intended to ensure that there is no misunderstanding in the future that the correct reading of the SIP provision would not bar enforcement by the EPA or through a citizen suit when the state elected to exercise its own enforcement discretion.

In the February 2013 proposal, the EPA noted that another method by which to eliminate any potential ambiguity about the meaning of these enforcement discretion provisions would be for the state to revise its SIP to remove the provisions. Because these provisions are only applicable to the state, the EPA’s view was, and still is, that the provisions need not be included within the SIP. Thus, the EPA supports states that elect to revise their SIPs to remove these provisions to avoid any unnecessary confusion.

4. Affirmative Defense Provisions

The Petitioner asked the EPA to rescind its SSM Policy element that interpreted the CAA to allow SIPs to include affirmative defenses for violations due to excess emissions during any type of SSM events. Related to this request, the Petitioner asked the EPA to find that states with SIPs containing an affirmative defense to monetary penalties for excess emissions during SSM events are substantially inadequate because they do not comply with the CAA. If the EPA were to deny the Petitioner’s request that the EPA revise its interpretation of the CAA, the Petitioner asked that the EPA in the alternative require states with SIPs that contain such affirmative defense provisions to revise them so that they

are consistent with the EPA’s 1999 SSM Guidance for excess emissions during SSM events and to issue a SIP call to states with provisions inconsistent with the EPA’s interpretation of the CAA.

The Petitioner drew no distinction between affirmative defense provisions for malfunctions versus affirmative defense provisions for startup and shutdown or other normal modes of operation. As explained in section IV.B of the February 2013 proposal, the EPA did make such distinction in its proposed response to the Petition, at that time proposing to revise its SSM Policy to reflect an interpretation of the CAA that affirmative defense provisions applicable during startup and shutdown were not appropriate but reasoning that affirmative defense provisions remained appropriate for violations when due to malfunction events. Thus, in the February 2013 proposal, the EPA proposed to issue a SIP call to a state to rectify a problem with an affirmative defense provision only if the provision included an affirmative defense that was applicable to excess emissions during startup and shutdown or included an affirmative defense that was applicable to excess emissions during malfunctions but was inconsistent with the criteria recommended in the EPA’s SSM Policy.

Subsequent to that February 2013 proposal, a federal court ruled that the CAA precludes authority of the EPA to create affirmative defense provisions applicable to private civil suits. The *NRDC v. EPA* decision pertained to a challenge to the EPA’s NESHAP regulations issued pursuant to CAA section 112 to regulate hazardous air pollutants from sources that manufacture Portland cement.³⁸⁹ As explained in detail in section V of the SNPR, the court’s decision in *NRDC v. EPA* compelled the Agency to revise its interpretation of the CAA concerning the legal basis for affirmative defense provisions. As a result, the EPA proposed in the SNPR to further revise its SSM Policy with respect to affirmative defense provisions applicable to excess emissions during SSM events (as described in section V of the SNPR) and to apply its revised interpretation of the CAA to specific provisions in the SIPs of particular states (as described in section VII of the SNPR).

For some of the affirmative defense provisions identified by the Petitioner, the EPA in the SNPR re-proposed granting of the Petition but proposed a revised basis for its proposed findings of inadequacy and SIP calls. For other affirmative defense provisions identified

³⁸⁹ *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014).

by the Petitioner, the EPA in the SNPR reversed its prior proposed denial of the Petition, and it newly proposed findings of inadequacy and SIP calls. Further, for some affirmative defense provisions that were not explicitly identified by the Petitioner, the EPA in the SNPR proposed findings of inadequacy and SIP calls for additional affirmative defense provisions that were not explicitly identified by the Petitioner.

B. Affected States in EPA Region I

1. Maine

As described in section IX.B.1 of the February 2013 proposal, the Petitioner first objected to a specific provision in the Maine SIP that provides an exemption for certain boilers from otherwise applicable SIP visible emission limits during startup and shutdown (06–096–101 Me. Code R. § 3). Second, the Petitioner objected to a provision that empowers the state to “exempt emissions occurring during periods of unavoidable malfunction or unplanned shutdown from civil penalty under section 349, subsection 2” (06–096–101 Me. Code R. § 4).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 06–096–101 Me. Code R. § 3 and 06–096–101 Me. Code R. § 4.

Consequently, the EPA proposed to find that 06–096–101 Me. Code R. § 3 and 06–096–101 Me. Code R. § 4 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 06–096–101 Me. Code R. § 3 and 06–096–101 Me. Code R. § 4. Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call to Maine to correct its SIP with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Maine SIP that the EPA received and considered during the development of this rulemaking.

2. New Hampshire

As described in section IX.B.2 of the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the New Hampshire SIP that allow emissions in excess of otherwise applicable SIP emission limitations during “malfunction or breakdown of any component part of the

air pollution control equipment.” The Petitioner argued that the challenged provisions provide an automatic exemption for excess emissions during the first 48 hours when any component part of air pollution control equipment malfunctions (N.H. Code R. Env-A 902.03) and further provide that “[t]he director may . . . grant an extension of time or a temporary variance” for excess emissions outside of the initial 48-hour time period (N.H. Code R. Env-A 902.04). Second, the Petitioner objected to two specific provisions in the New Hampshire SIP that provide source-specific exemptions for periods of startup for “any process, manufacturing and service industry” (N.H. Code R. Env-A 1203.05) and for pre-June 1974 asphalt plants during startup, provided they are at 60-percent opacity for no more than 3 minutes (N.H. Code R. Env-A 1207.02).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to N.H. Code R. Env-A 902.03, N.H. Code R. Env-A 1203.05 and N.H. Code R. Env-A 902.04. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to N.H. Code R. Env-A 1207.02.

Consequently, the EPA proposed to find that N.H. Code R. Env-A 902.03, N.H. Code R. Env-A 1203.05 and N.H. Code R. Env-A 902.04 were substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions. Through comments submitted on the February 2013 proposal, however, the EPA has ascertained that the versions of N.H. Code R. Env-A 902.03 and N.H. Code R. Env-A 902.04 identified in the Petition and evaluated in the February 2013 proposal are no longer in the state’s SIP. In November 2012, the EPA approved a SIP revision that replaced N.H. Code R. Env-A 902.03 and N.H. Code R. Env-A 902.04 with a new version of Env-A 900 that does not contain the deficient provisions identified in the February 2013 proposal.³⁹⁰ These provisions no longer exist for purposes of state or federal law. In addition, the EPA has determined that the version of N.H. Code R. Env-A 1203.05 identified in the Petition and the February 2013 proposal is no longer in the state’s SIP as a result of another SIP revision.³⁹¹ Because

³⁹⁰ See “Approval and Promulgation of Air Quality Implementation Plans; New Hampshire; Reasonably Available Control Technology for the 1997 8-Hour Ozone Standard; Direct final rule,” 77 FR 66388 (November 5, 2012).

³⁹¹ See “Approval and Promulgation of Air Quality Implementation Plans; New Hampshire;

these three provisions are no longer components of the EPA-approved SIP for the state of New Hampshire, the Petition is moot with respect to these provisions and there is no need for a SIP call with respect to these no longer extant provisions.

In this final action, the EPA is denying the Petition with respect to N.H. Code R. Env-A 902.03, N.H. Code R. Env-A 902.04, N.H. Code R. Env-A 1203.05 and N.H. Code R. Env-A 1207.02. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the New Hampshire SIP that the EPA received and considered during the development of this rulemaking.

3. Rhode Island

As described in section IX.B.3 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Rhode Island SIP that allows for a case-by-case petition procedure whereby a source can obtain a variance from state personnel under R.I. Gen. Laws § 23–23–15 to continue to operate during a malfunction of its control equipment that lasts more than 24 hours, if the source demonstrates that enforcement would constitute undue hardship without a corresponding benefit (25–4–13 R.I. Code R. § 16.2).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 25–4–13 R.I. Code R. § 16.2.

Consequently, the EPA proposed to find that 25–4–13 R.I. Code R. § 16.2 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to 25–4–13 R.I. Code R. § 16.2. Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Rhode Island SIP that the EPA received and considered during the development of this rulemaking.

Reasonably Available Control Technology Update To Address Control Techniques Guidelines Issued in 2006, 2007, and 2008; Direct final rule,” 77 FR 66921 (November 8, 2012).

C. Affected State in EPA Region II

New Jersey

As described in section IX.C.1 of the February 2013 proposal, the Petitioner objected to two specific provisions in the New Jersey SIP that allow for automatic exemptions for excess emissions during emergency situations. The Petitioner objected to the first provision because it provides industrial process units that have the potential to emit sulfur compounds an exemption from the otherwise applicable sulfur emission limitations where “[t]he discharge from any stack or chimney [has] the sole function of relieving pressure of gas, vapor or liquid under abnormal emergency conditions” (N.J. Admin. Code 7:27–7.2(k)(2)). The Petitioner objected to the second provision because it provides electric generating units (EGUs) an exemption from the otherwise applicable NO_x emission limitations when the unit is operating at “emergency capacity,” also known as a “MEG alert,” which is statutorily defined as a period in which one or more EGUs is operating at emergency capacity at the direction of the load dispatcher in order to prevent or mitigate voltage reductions or interruptions in electric service, or both (N.J. Admin. Code 7:27–19.1).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to N.J. Admin. Code 7:27–7.2(k)(2). Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to N.J. Admin. Code 7:27–19.1.

Consequently, the EPA proposed to find that N.J. Admin. Code 7:27–7.2(k)(2) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to N.J. Admin. Code 7:27–7.2(k)(2) and denying the Petition with respect to N.J. Admin. Code 7:27–19.1. Accordingly, the EPA is finding that the provision in N.J. Admin. Code 7:27–7.2(k)(2) is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the New Jersey SIP that the EPA received and considered during the development of this rulemaking.

D. Affected States in EPA Region III

1. Delaware

As described in section IX.D.1 of the February 2013 proposal, the Petitioner objected to seven provisions in the Delaware SIP that provide exemptions during startup and shutdown from the otherwise applicable SIP emission limitations. The seven source-specific and pollutant-specific provisions that provide exemptions during periods of startup and shutdown are: 7–1100–1104 Del. Code Regs § 1.5 (Particulate Emissions from Fuel Burning Equipment); 7–1100–1105 Del. Code Regs § 1.7 (Particulate Emissions from Industrial Process Operations); 7–1100–1108 Del. Code Regs § 1.2 (Sulfur Dioxide Emissions from Fuel Burning Equipment); 7–1100–1109 Del. Code Regs § 1.4 (Emissions of Sulfur Compounds From Industrial Operations); 7–1100–1114 Del. Code Regs § 1.3 (Visible Emissions); 7–1100–1124 Del. Code Regs § 1.4 (Control of Volatile Organic Compound Emissions); and 7–1100–1142 Del. Code Regs § 2.3.5 (Specific Emission Control Requirements).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 7–1100–1104 Del. Code Regs § 1.5, 7–1100–1105 Del. Code Regs § 1.7, 7–1100–1108 Del. Code Regs § 1.2, 7–1100–1109 Del. Code Regs § 1.4, 7–1100–1114 Del. Code Regs § 1.3, 7–1100–1124 Del. Code Regs § 1.4 and 7–1100–1142 Del. Code Regs § 2.3.5.

Consequently, the EPA proposed to find that 7–1100–1104 Del. Code Regs § 1.5, 7–1100–1105 Del. Code Regs § 1.7, 7–1100–1108 Del. Code Regs § 1.2, 7–1100–1109 Del. Code Regs § 1.4, 7–1100–1114 Del. Code Regs § 1.3, 7–1100–1124 Del. Code Regs § 1.4 and 7–1100–1142 Del. Code Regs § 2.3.5 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 7–1100–1104 Del. Code Regs § 1.5, 7–1100–1105 Del. Code Regs § 1.7, 7–1100–1108 Del. Code Regs § 1.2, 7–1100–1109 Del. Code Regs § 1.4, 7–1100–1114 Del. Code Regs § 1.3, 7–1100–1124 Del. Code Regs § 1.4 and 7–1100–1142 Del. Code Regs § 2.3.1.6 (updated to § 2.3.1.6 from earlier identification as § 2.3.5). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions.

2. District of Columbia

As described in section IX.D.2 of the February 2013 proposal, the Petitioner objected to five provisions in the District of Columbia (DC) SIP as being inconsistent with the CAA and the EPA’s SSM Policy. The Petitioner first objected to a generally applicable provision in the DC SIP that allows for discretionary exemptions during periods of maintenance or malfunction (D.C. Mun. Regs. tit. 20 § 107.3). Secondly, the Petitioner objected to the alternative limitations on stationary sources for visible emissions during periods of “start-up, cleaning, soot blowing, adjustment of combustion controls, or malfunction,” (D.C. Mun. Regs. tit. 20 § 606.1) and, for fuel-burning equipment placed in initial operation before January 1977, alternative limits for visible emissions during startup and shutdown (D.C. Mun. Regs. tit. 20 § 606.2). The Petitioner also objected to the exemption from emission limitations for emergency standby engines (D.C. Mun. Regs. tit. 20 § 805.1(c)(2)). Finally, the Petitioner objected to the provision in the DC SIP that provides an affirmative defense for violations of visible emission limitations during “unavoidable malfunction” (D.C. Mun. Regs. tit. 20 § 606.4).

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to D.C. Mun. Regs. tit. 20 § 107.3 and D.C. Mun. Regs. tit. 20 §§ 606.1 and 606.2. Also for reasons explained in the February 2013 proposal, the EPA proposed to deny the Petition with respect to D.C. Mun. Regs. tit. 20 § 805.1(c)(2). Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the petition with respect to D.C. Mun. Regs. tit. 20 § 606.4 on the basis that it was not a permissible affirmative defense provision consistent with the requirements of the CAA as interpreted in the EPA’s SSM Policy at the time.

Subsequently, for reasons explained in the SNPR, the EPA repropose granting of the Petition with respect to the affirmative defense provision in D.C. Mun. Regs. tit. 20 § 606.4, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that D.C. Mun. Regs. tit. 20 § 107.3, D.C. Mun. Regs. tit. 20 §§ 606.1 and 606.2 and D.C. Mun. Regs. tit. 20 § 606.4 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to D.C. Mun. Regs. tit. 20 § 107.3, D.C. Mun. Regs. tit. 20 §§ 606.1 and 606.2 and D.C. Mun. Regs. tit. 20 § 606.4 and is denying the Petition with respect to D.C. Mun. Regs. tit. 20 § 805.1(c)(2). Accordingly, the EPA is finding that the provisions in D.C. Mun. Regs. tit. 20 § 107.3, D.C. Mun. Regs. tit. 20 §§ 606.1 and 606.2 and D.C. Mun. Regs. tit. 20 § 606.4 are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call to the District of Columbia to correct its SIP with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the DC SIP that the EPA received and considered during the development of this rulemaking.

3. Virginia

As described in section IX.D.3 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Virginia SIP that allows for discretionary exemptions during periods of malfunction (9 Va. Admin. Code § 5-20-180(G)). First, the Petitioner objected because this provision provides an exemption from the otherwise applicable SIP emission limitations. Second, the Petitioner objected to the discretionary exemption for excess emissions during malfunction because the provision gives the state the authority to determine whether a violation “shall be judged to have taken place.” Third, the Petitioner argued that while the regulation provides criteria, akin to an affirmative defense, by which the state must make such a judgment that the event is not a violation, the criteria “fall far short of EPA policy at the time” and the provision “fails to establish any procedure through which the criteria are to be evaluated.”

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 9 Va. Admin. Code § 5-20-180(G). Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to this provision on the basis that it was not a permissible affirmative defense provision consistent with the requirements of the CAA as interpreted in the EPA’s SSM Policy.

Subsequently, for reasons explained in the SNPR, the EPA reproposed granting of the Petition with respect to 9 Va. Admin. Code § 5-20-180(G), but it proposed to revise the basis for the

finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that 9 Va. Admin. Code § 5-20-180(G) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to 9 Va. Admin. Code § 5-20-180(G) and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Virginia SIP that the EPA received and considered during the development of this rulemaking.

4. West Virginia

As described in section IX.D.4 of the February 2013 proposal, the Petitioner made four types of objections identifying inadequacies regarding SSM provisions in West Virginia’s SIP. First, the Petitioner objected to three specific provisions in the West Virginia SIP that allow for automatic exemptions from emission limitations, standards, and monitoring and recordkeeping requirements for excess emission during startup, shutdown, or malfunction (W. Va. Code R. § 45-2-9.1, W. Va. Code R. § 45-7-10.3 and W. Va. Code R. § 45-40-100.8). Second, the Petitioner objected to seven discretionary exemption provisions because these provisions provide exemptions from the otherwise applicable SIP emission limitations. The Petitioner noted that the provisions allow a state official to “grant an exception to the otherwise applicable visible emissions standards” due to “unavoidable shortage of fuel” or “any emergency situation or condition creating a threat to public safety or welfare” (W. Va. Code R. § 45-2-10.1), to permit excess emissions “due to unavoidable malfunctions of equipment” (W. Va. Code R. § 45-3-7.1, W. Va. Code R. § 45-5-13.1, W. Va. Code R. § 45-6-8.2, W. Va. Code R. § 45-7-9.1 and W. Va. Code R. § 45-10-9.1) and to permit exceedances where the limit cannot be “satisfied” because of “routine maintenance” or “unavoidable malfunction” (W. Va. Code R. § 45-21-9.3). Third, the Petitioner objected to the alternative limit imposed on hot mix asphalt plants during periods of startup and shutdown in W. Va. Code R. § 45-3-3.2 because it was “not sufficiently justified” under the EPA’s SSM Policy regarding source category-specific rules. Fourth, the

Petitioner objected to a discretionary provision allowing the state to approve an alternative visible emission standard during startups and shutdowns for manufacturing processes and associated operations (W. Va. Code R. § 45-7-10.4). The Petitioner argued that such a provision “allows a decision of the state to preclude enforcement by EPA and citizens.”

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to W. Va. Code R. § 45-2-9.1, W. Va. Code R. § 45-7-10.3 and W. Va. Code R. § 45-40-100.8 on the basis that each of these provisions allows for automatic exemptions. Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to W. Va. Code R. § 45-2-10.1, W. Va. Code R. § 45-3-7.1, W. Va. Code R. § 45-5-13.1, W. Va. Code R. § 45-6-8.2, W. Va. Code R. § 45-7-9.1, W. Va. Code R. § 45-10-9.1 and W. Va. Code R. § 45-21-9.3 on the basis that these provisions allow for discretionary exemptions from otherwise applicable SIP emission limitations. Further, for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to W. Va. Code R. § 45-3-3.2, W. Va. Code R. § 45-2-10.2 and W. Va. Code R. § 45-7-10.4. The W. Va. Code R. § 45-3-3.2 applies to a broad category of sources and is not narrowly limited to a source category that uses a specific control strategy, as required by the EPA’s SSM Policy interpreting the CAA. Similarly, W. Va. Code R. § 45-2-10.2 is inconsistent with the EPA’s SSM Policy interpreting the CAA because it is an alternative limit that allows for discretionary exemptions from otherwise applicable SIP emission limitations.³⁹² The W. Va. Code R. § 45-

³⁹² As explained in the February 2013 proposal, the Petitioner specifically focused on concern with W. Va. Code R. § 45-2-10.1, but the same issue affects W. Va. Code R. § 45-2-10.2, and so the EPA similarly proposed to issue a SIP call with respect to the latter provision. See 78 FR 12459 at 12500, n.111. W. Va. Code R. § 45-2-10.2 is an alternative limit that applies during periods of maintenance. In the February 2013 proposal, the EPA noted that this provision was inconsistent with the EPA’s SSM Policy interpreting the CAA because it was an alternative limit that specifically applied during periods of maintenance. Although the EPA originally contemplated that an alternative emission limitation could appropriately apply only during startup or shutdown, the EPA recognizes in section VII.B of this document that it may be appropriate for an air agency to establish alternative emission limitations that apply during modes of source operation other than during startup and shutdown, but any such alternative emission limitations should be developed using the same criteria that the EPA recommends for those applicable during startup and shutdown. The alternative emission limitation applicable during maintenance does not appear to have been developed using the

Continued

7–10.4 allows state officials the discretion to establish alternative visible emissions standards during startup and shutdown upon application.

Subsequently, for reasons explained fully in the SNPR, the EPA identified one affirmative defense provision in the West Virginia SIP in W. Va. Code R. § 45–2–9.4 that was not identified by the Petitioner, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for this provision.

Consequently, the EPA proposed to find that W. Va. Code R. § 45–2–9.1, W. Va. Code R. § 45–7–10.3, W. Va. Code R. § 45–40–100.8, W. Va. Code R. § 45–2–10.1, W. Va. Code R. § 45–3–7.1, W. Va. Code R. § 45–5–13.1, W. Va. Code R. § 45–6–8.2, W. Va. Code R. § 45–7–9.1, W. Va. Code R. § 45–10–9.1, W. Va. Code R. § 45–21–9.3, W. Va. Code R. § 45–3–3.2 and W. Va. Code R. § 45–7–10.4, which are provisions identified by the Petitioner, and W. Va. Code R. § 45–2–10.2 and W. Va. Code R. § 45–2–9.4, which are provisions identified by the EPA, are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to the West Virginia SIP provisions identified by the Petitioner. Accordingly, the EPA is finding that the provisions in W. Va. Code R. § 45–2–9.1, W. Va. Code R. § 45–7–10.3, W. Va. Code R. § 45–40–100.8, W. Va. Code R. § 45–2–10.1, W. Va. Code R. § 45–3–7.1, W. Va. Code R. § 45–5–13.1, W. Va. Code R. § 45–6–8.2, W. Va. Code R. § 45–7–9.1, W. Va. Code R. § 45–10–9.1, W. Va. Code R. § 45–21–9.3, W. Va. Code R. § 45–3–3.2 and W. Va. Code R. § 45–7–10.4, which are provisions identified by the Petitioner, and W. Va. Code R. § 45–2–10.2 and W. Va. Code R. § 45–2–9.4, which are provisions identified by the EPA, are substantially inadequate to meet CAA requirements. The EPA is thus issuing a SIP call to West Virginia to correct its SIP with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the West Virginia SIP that the

recommended criteria for such alternative emission limitations. In addition, the EPA finds that this provision, like W. Va. Code R. § 45–2–10.1, is also deficient because it allows for discretionary exemptions from otherwise applicable SIP emission limitations. As noted in the proposal, such provisions that authorize director's discretion exemptions are impermissible in SIPs.

EPA received and considered during the development of this rulemaking.

E. Affected States and Local Jurisdictions in EPA Region IV

1. Alabama

As described in section IX.E.1 of the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the Alabama SIP that allow for discretionary exemptions during startup, shutdown or load change (Ala Admin Code Rule 335–3–14–.03(1)(h)(1)), and during emergencies (Ala Admin Code Rule 335–3–14–.03(1)(h)(2)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Ala Admin Code Rule 335–3–14–.03(1)(h)(1) and Ala Admin Code Rule 335–3–14–.03(1)(h)(2).

Consequently, the EPA proposed to find that Ala Admin Code Rule 335–3–14–.03(1)(h)(1) and Ala Admin Code Rule 335–3–14–.03(1)(h)(2) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Ala Admin Code Rule 335–3–14–.03(1)(h)(1) and Ala Admin Code Rule 335–3–14–.03(1)(h)(2). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Alabama SIP that the EPA received and considered during the development of this rulemaking.

2. Florida

As described in section IX.E.2 of the February 2013 proposal, the Petitioner objected to three specific provisions in the Florida SIP that allow for generally applicable automatic exemptions for excess emissions during SSM (Fla. Admin. Code Ann Rule 62–210.700(1)), for fossil fuel steam generators during startup and shutdown (Fla. Admin. Code Ann Rule 62–210.700(2)), and for such sources during boiler cleaning and load change (Fla. Admin. Code Ann Rule 62–210.700(3)).³⁹³ After objecting

to the three provisions that create the exemptions, the Petitioner noted that the related provision in Fla. Admin. Code Ann Rule 62–210.700(4) reduces the potential scope of the exemptions in the other three provisions if the excess emissions at issue are caused entirely or in part by things such as poor maintenance but that it does not eliminate the impermissible exemptions.

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Fla. Admin. Code Ann Rule 62–210.700(1), Fla. Admin. Code Ann Rule 62–210.700(2), Fla. Admin. Code Ann Rule 62–210.700(3) and Fla. Admin. Code Ann Rule 62–210.700(4).

Consequently, the EPA proposed to find that Fla. Admin. Code Ann Rule 62–210.700(1), Fla. Admin. Code Ann Rule 62–210.700(2), Fla. Admin. Code Ann Rule 62–210.700(3) and Fla. Admin. Code Ann Rule 62–210.700(4) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Fla. Admin. Code Ann Rule 62–210.700(1), Fla. Admin. Code Ann Rule 62–210.700(2), Fla. Admin. Code Ann Rule 62–210.700(3) and Fla. Admin. Code Ann Rule 62–210.700(4). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Florida SIP that the EPA received and considered during the development of this rulemaking.

3. Georgia

As described in section IX.E.3 of the February 2013 proposal, the Petitioner objected to a provision in the Georgia SIP that provides for exemptions for excess emissions during SSM under certain circumstances (Ga. Comp. R. & Regs. 391–3–1–.02(2)(a)(7)). The Petitioner acknowledged that this provision of the Georgia SIP includes some conditions for when sources may be entitled to seek the exemption under state law, such as when the source has

correctly recognized that the EPA intended to instead refer to Fla. Admin. Code Ann Rule 52.210.700. See, e.g., comment letter received from the Florida Department of Environmental Protection, May 13, 2013, in the rulemaking docket at EPA–HQ–OAR–2012–0322–0878.

³⁹³ The EPA notes that in the February 2013 proposal, it incorrectly cited Fla. Admin. Code Ann Rule 52.201.700 when it intended to cite Rule 52.210.700. The transposition of numbers was a typographical error. Commenters on the proposal

used “best operational practices” to minimize emissions during the SSM event.

First, the Petitioner objected because the provision creates an exemption from the applicable emission limitations by providing that the excess emissions “shall be allowed” subject to certain conditions. Second, the Petitioner argued that although the provision provides some “substantive criteria,” the provision does not meet the criteria the EPA recommended at the time for an affirmative defense provision consistent with the requirements of the CAA in the EPA’s SSM Policy. Third, the Petitioner asserted that the provision is not a permissible “enforcement discretion” provision applicable only to state personnel, because it “is susceptible to interpretation as an enforcement exemption, precluding EPA and citizen enforcement as well as state enforcement.”

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Ga. Comp. R. & Regs. 391–3–1–.02(2)(a)(7). Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to this provision on the basis that it was not a permissible affirmative defense provision consistent with the requirements of the CAA and the EPA’s recommendations in the EPA’s SSM Policy at the time.

Subsequently, for reasons explained in the SNPR, the EPA repropose granting of the Petition with respect to Ga. Comp. R. & Regs. 391–3–1–.02(2)(a)(7), but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that Ga. Comp. R. & Regs. 391–3–1–.02(2)(a)(7) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Ga. Comp. R. & Regs. 391–3–1–.02(2)(a)(7). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Georgia SIP that the EPA received and considered during the development of this rulemaking.

4. Kentucky

As described in section IX.E.4 of the February 2013 proposal, the Petitioner objected to a generally applicable provision that allows discretionary exemptions from otherwise applicable SIP emission limitations in Kentucky’s SIP (401 KAR 50:055 § 1(1)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 401 KAR 50:055 § 1(1).

Consequently, the EPA proposed to find that 401 KAR 50:055 § 1(1) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to 401 KAR 50:055 § 1(1). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Kentucky SIP that the EPA received and considered during the development of this rulemaking.

5. Kentucky: Jefferson County

As described in section IX.E.5 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Jefferson County Air Regulations 1.07 because it provided for discretionary exemptions from compliance with emission limitations during SSM. The provision required different demonstrations for exemptions for excess emissions during startup and shutdown (Regulation 1.07 § 3), malfunction (Regulation 1.07 § 4 and § 7) and emergency (Regulation 1.07 § 5 and § 7). Second, the Petitioner objected to the affirmative defense for emergencies in Jefferson County Air Regulations 1.07.

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to provisions in the Jefferson County Air Regulations 1.07.

Subsequently, for reasons explained fully in the SNPR, the EPA reversed its prior proposed granting of the Petition with respect to Jefferson County Air Regulations 1.07. For Jefferson County, Kentucky, the provisions for which the EPA proposed in February 2013 to grant the Petition were subsequently removed from the SIP. Thus, in the SNPR, the EPA proposed instead to deny the

Petition.³⁹⁴ As explained in the SNPR, the state of Kentucky has revised the SIP provisions applicable to Jefferson County and eliminated the SIP inadequacies identified in the February 2013 proposal document. The EPA has already approved the necessary SIP revisions.³⁹⁵ Accordingly, the EPA’s final action on the Petition does not include a finding of substantial inadequacy and SIP call for Jefferson County, Kentucky.

In this final action, the EPA is denying the Petition with respect to Jefferson County Air Regulations 1.07. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Kentucky SIP that the EPA received and considered during the development of this rulemaking.

6. Mississippi

As described in section IX.E.6 of the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the Mississippi SIP that allow for affirmative defenses for violations of otherwise applicable SIP emission limitations during periods of upset, *i.e.*, malfunctions (11–1–2 Miss. Code R. § 10.1) and unavoidable maintenance (11–1–2 Miss. Code R. § 10.3). First, the Petitioner objected to both of these provisions based on its assertion that the CAA allows no affirmative defense provisions in SIPs. Second, the Petitioner asserted that even if affirmative defense provisions were permissible under the CAA, the affirmative defenses in these provisions “fall far short of the EPA policy at the time.” The Petitioner also objected to a generally applicable provision that provides an exemption from otherwise applicable SIP emission limitations during startup and shutdown (11–1–2 Miss. Code R. § 10.2).

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 11–1–2 Miss. Code R. § 10.1 and 11–1–2 Miss. Code R. § 10.3. Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the petition with respect to these provisions on the basis that they were not appropriate as an affirmative defense provisions because they were

³⁹⁴ See SNPR, 79 FR 55919 at 55925.

³⁹⁵ See Approval and Promulgation of Implementation Plans; Kentucky; Approval of Revisions to the Jefferson County Portion of the Kentucky SIP; Emissions During Startups, Shutdowns, and Malfunctions, 79 FR 33101 (June 10, 2014).

inconsistent with fundamental requirements of the CAA. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 11–1–2 Miss. Code R. § 10.2.

Subsequently, for reasons explained in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provisions in 11–1–2 Miss. Code R. § 10.1 and 11–1–2 Miss. Code R. § 10.3, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for these provisions.

Consequently, the EPA proposed to find that 11–1–2 Miss. Code R. § 10.1, 11–1–2 Miss. Code R. § 10.2 and 11–1–2 Miss. Code R. § 10.3 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 11–1–2 Miss. Code R. § 10.1, 11–1–2 Miss. Code R. § 10.2 and 11–1–2 Miss. Code R. § 10.3. Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Mississippi SIP that the EPA received and considered during the development of this rulemaking.

7. North Carolina

As described in section IX.E.7 of the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the North Carolina SIP that provide exemptions for emissions exceeding otherwise applicable SIP emission limitations at the discretion of the state agency during malfunctions (15A N.C. Admin. Code 2D.0535(c)) and during startup and shutdown (15A N.C. Admin. Code 2D.0535(g)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 15A N.C. Admin. Code 2D.0535(c) and 15A N.C. Admin. Code 2D.0535(g).

Consequently, the EPA proposed to find that 15A N.C. Admin. Code 2D.0535(c) and 15A N.C. Admin. Code 2D.0535(g) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 15A

N.C. Admin. Code 2D.0535(c) and 15A N.C. Admin. Code 2D.0535(g). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the North Carolina SIP that the EPA received and considered during the development of this rulemaking.

8. North Carolina: Forsyth County

As described in section IX.E.8 of the February 2013 proposal, the Petitioner objected to two generally applicable provisions in the Forsyth County Code that provide exemptions for emissions exceeding otherwise applicable SIP emission limitations at the discretion of a local official during malfunctions (Forsyth County Code, ch. 3, 3D.0535(c)) and startup and shutdown (Forsyth County Code, ch. 3, 3D.0535(g)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Forsyth County Code, ch. 3, 3D.0535(c) and Forsyth County Code, ch. 3, 3D.0535(g).

Consequently, the EPA proposed to find that Forsyth County Code, ch. 3, 3D.0535(c) and Forsyth County Code, ch. 3, 3D.0535(g) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Forsyth County Code, ch. 3, 3D.0535(c) and Forsyth County Code, ch. 3, 3D.0535(g). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the North Carolina SIP that the EPA received and considered during the development of this rulemaking.

9. South Carolina

As described in section IX.E.9 of the February 2013 proposal, the Petitioner objected to three provisions in the South Carolina SIP, arguing that they contained impermissible source category- and pollutant-specific exemptions. The Petitioner

characterized these provisions as providing exemptions from opacity limits for fuel-burning operations for excess emissions that occur during startup or shutdown (S.C. Code Ann. Regs. 61–62.5 St 1(C)), exemptions from NO_x limits for special-use burners that are operated less than 500 hours per year (S.C. Code Ann. Regs. 61–62.5 St 5.2(I)(b)(14)) and exemptions from sulfur limits for kraft pulp mills for excess emissions that occur during SSM events (S.C. Code Ann. Regs. St 4(XI)(D)(4)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to S.C. Code Ann. Regs. 61–62.5 St 1(C) and S.C. Code Ann. Regs. St 4(XI)(D)(4). Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to S.C. Code Ann. Regs. 61–62.5 St 5.2(I)(b)(14).

Subsequently, for reasons explained fully in the SNPR, the EPA identified one affirmative defense provision in the South Carolina SIP in S.C. Code Ann. Regs. 62.1, Section II(G)(6) that was not identified by the Petitioner, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for this provision.

Consequently, the EPA proposed to find that the provisions in S.C. Code Ann. Regs. 61–62.5 St 1(C), S.C. Code Ann. Regs. St 4(XI)(D)(4) and S.C. Code Ann. Regs. 62.1, Section II(G)(6) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to S.C. Code Ann. Regs. 61–62.5 St 1(C), S.C. Code Ann. Regs. St 4(XI)(D)(4) and S.C. Code Ann. Regs. 62.1, Section II(G)(6) and denying the Petition with respect to S.C. Code Ann. Regs. 61–62.5 St 5.2(I)(b)(14). Accordingly, the EPA is finding that the provisions in S.C. Code Ann. Regs. 61–62.5 St 1(C), S.C. Code Ann. Regs. St 4(XI)(D)(4) and S.C. Code Ann. Regs. 62.1, Section II(G)(6) are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the South Carolina SIP that the EPA received and considered during the development of this rulemaking.

10. Tennessee

As described in section IX.E.10 of the February 2013 proposal, the Petitioner objected to three provisions in the Tennessee SIP. First, the Petitioner objected to two provisions that authorize a state official to decide whether to “excuse or proceed upon” (Tenn. Comp. R. & Regs. 1200–3–20–.07(1)) violations of otherwise applicable SIP emission limitations that occur during “malfunctions, startups, and shutdowns” (Tenn. Comp. R. & Regs. 1200–3–20–.07(3)). Second, the Petitioner objected to a provision that excludes excess visible emissions from the requirement that the state automatically issue a notice of violation for all excess emissions (Tenn. Comp. R. & Regs. 1200–3–5–.02(1)). This provision states that “due allowance may be made for visible emissions in excess of that permitted in this chapter which are necessary or unavoidable due to routine startup and shutdown conditions.”

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Tenn. Comp. R. & Regs. 1200–3–20–.07(1), Tenn. Comp. R. & Regs. 1200–3–20–.07(3) and Tenn. Comp. R. & Regs. 1200–3–5–.02(1).

Consequently, the EPA proposed to find that Tenn. Comp. R. & Regs. 1200–3–20–.07(1), Tenn. Comp. R. & Regs. 1200–3–20–.07(3) and Tenn. Comp. R. & Regs. 1200–3–5–.02(1) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Tenn. Comp. R. & Regs. 1200–3–20–.07(1), Tenn. Comp. R. & Regs. 1200–3–20–.07(3) and Tenn. Comp. R. & Regs. 1200–3–5–.02(1). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Tennessee SIP that the EPA received and considered during the development of this rulemaking.

11. Tennessee: Knox County

As described in section IX.E.11 of the February 2013 proposal, the Petitioner objected to a provision in the Knox County portion of the Tennessee SIP that bars evidence of a violation of SIP emission limitations from being used in

a citizen enforcement action (Knox County Regulation 32.1(C)). The provision specifies that “[a] determination that there has been a violation of these regulations or orders issued pursuant thereto shall not be used in any law suit brought by any private citizen.”

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Knox County Regulation 32.1(C). For instance, the regulation was inconsistent with requirements related to credible evidence.

Consequently, the EPA proposed to find that Knox County Regulation 32.1(C) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Knox County Regulation 32.1(C). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Tennessee SIP that the EPA received and considered during the development of this rulemaking.

12. Tennessee: Shelby County

As described in section IX.E.12 of the February 2013 proposal, the Petitioner objected to a provision in the Shelby County Code (Shelby County Code § 16–87) that addresses enforcement for excess emissions that occur during “malfunctions, startups, and shutdowns” by incorporating by reference the state’s provisions in Tenn. Comp. R. & Regs. 1200–3–20. Shelby County Code § 16–87 provides that “all such additions, deletions, changes and amendments as may subsequently be made” to Tennessee’s regulations will automatically become part of the Shelby County Code.

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Shelby County Code § 16–87.

Consequently, the EPA proposed to find that Shelby County Code § 16–87 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Shelby County Code § 16–87. Accordingly, the EPA is finding that this provision is substantially inadequate to

meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Tennessee SIP that the EPA received and considered during the development of this rulemaking.

F. Affected States in EPA Region V

1. Illinois

As described in section IX.F.1 of the February 2013 proposal, the Petitioner objected to three generally applicable provisions in the Illinois SIP which together have the effect of providing discretionary exemptions from otherwise applicable SIP emission limitations. The Petitioner noted that the provisions invite sources to request, during the permitting process, advance permission to continue to operate during a malfunction or breakdown, and, similarly to request advance permission to “violate” otherwise applicable emission limitations during startup (Ill. Admin. Code tit. 35 § 201.261). The Illinois SIP provisions establish criteria that a state official must consider before granting the advance permission to violate the emission limitations (Ill. Admin. Code tit. 35 § 201.262). However, the Petitioner asserted, the provisions state that, once granted, the advance permission to violate the emission limitations “shall be a prima facie defense to an enforcement action” (Ill. Admin. Code tit. 35 § 201.265).

Further, the Petitioner objected to the use of the term “prima facie defense” in Ill. Admin. Code tit. 35 § 201.265, arguing that the term is “ambiguous in its operation.” The Petitioner argued that the provision is not clear regarding whether the defense is to be evaluated “in a judicial or administrative proceeding or whether the Agency determines its availability.” Allowing defenses to be raised in these undefined contexts, the Petitioner argued, is “inconsistent with the enforcement structure of the Clean Air Act.”

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Ill. Admin. Code tit. 35 § 201.261, Ill. Admin. Code tit. 35 § 201.262 and Ill. Admin. Code tit. 35 § 201.265.

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provisions in Ill. Admin. Code tit. 35 § 201.261, Ill. Admin. Code tit. 35 § 201.262 and Ill.

Admin. Code tit. 35 § 201.265, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for these provisions.

Consequently, the EPA proposed to find that Ill. Admin. Code tit. 35 § 201.261, Ill. Admin. Code tit. 35 § 201.262 and Ill. Admin. Code tit. 35 § 201.265 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Ill. Admin. Code tit. 35 § 201.261, Ill. Admin. Code tit. 35 § 201.262 and Ill. Admin. Code tit. 35 § 201.265. Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Illinois SIP that the EPA received and considered during the development of this rulemaking.

2. Indiana

As described in section IX.F.2 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Indiana SIP that allows for discretionary exemptions during malfunctions (326 Ind. Admin. Code 1–6–4(a)). The Petitioner noted that the provision is ambiguous because it states that excess emissions during malfunction periods “shall not be considered a violation” if the source demonstrates that a number of conditions are met (326 Ind. Admin. Code 1–6–4(a)), but the provision does not specify to whom or in what forum such demonstration must be made.

If the demonstration was required to have been made in a showing to the state, the Petitioner argued, the provision would give a state official the sole authority to determine that the excess emissions were not a violation and could thus be read to preclude enforcement by the EPA or citizens in the event that the state official elects not to treat the excess emissions as a violation. If instead, as the Petitioner noted, the demonstration was required to have been made in an enforcement context, the provision could be interpreted as providing an affirmative defense.

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 326 Ind. Admin. Code 1–6–4(a).

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to 326 Ind. Admin. Code 1–6–4(a), but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that 326 Ind. Admin. Code 1–6–4(a) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to 326 Ind. Admin. Code 1–6–4(a). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Indiana SIP that the EPA received and considered during the development of this rulemaking.

3. Michigan

As described in section IX.F.3 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in Michigan’s SIP, Mich. Admin. Code r. 336.1916, that provides for an affirmative defense to monetary penalties for violations of otherwise applicable SIP emission limitations during periods of startup and shutdown.

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Mich. Admin. Code r. 336.1916.

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provision in Mich. Admin. Code r. 336.1916, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that Mich. Admin. Code r. 336.1916 substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Mich. Admin. Code r. 336.1916. Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the

docket for this rulemaking concerning any comments specific to the Michigan SIP that the EPA received and considered during the development of this rulemaking.

4. Minnesota

As described in section IX.F.4 of the February 2013 proposal, the Petitioner objected to a provision in the Minnesota SIP that provides automatic exemptions for excess emissions resulting from flared gas at petroleum refineries when those flares are caused by SSM (Minn. R. 7011.1415).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Minn. R. 7011.1415.

Consequently, the EPA proposed to find that Minn. R. 7011.1415 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Minn. R. 7011.1415. Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Minnesota SIP that the EPA received and considered during the development of this rulemaking.

5. Ohio

As described in section IX.F.5 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Ohio SIP that allows for discretionary exemptions during periods of scheduled maintenance (Ohio Admin. Code 3745–15–06(A)(3)). The Petitioner also objected to two source category-specific and pollutant-specific provisions that provide for discretionary exemptions during malfunctions (Ohio Admin. Code 3745–17–07(A)(3)(c) and Ohio Admin. Code 3745–17–07(B)(11)(f)). The Petitioner also objected to a source category-specific provision in the Ohio SIP that allows for an automatic exemption from applicable emission limitations and requirements during periods of startup, shutdown, malfunction, or regularly scheduled maintenance activities (Ohio Admin. Code 3745–14–11(D)). Finally, the Petitioner objected to five provisions that contain exemptions for Hospital/Medical/Infectious Waste Incinerator (HMIWI) sources during startup, shutdown, and malfunction—Ohio

Admin. Code 3745-75-02(E), Ohio Admin. Code 3745-75-02(J), Ohio Admin. Code 3745-75-03(I), Ohio Admin. Code 3745-75-04(K) and Ohio Admin. Code 3745-75-04(L).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Ohio Admin. Code 3745-15-06(A)(3), Ohio Admin. Code 3745-17-07(A)(3)(c), Ohio Admin. Code 3745-17-07(B)(11)(f) and Ohio Admin. Code 3745-14-11(D). Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Ohio Admin. Code 3745-75-02(E), Ohio Admin. Code 3745-75-02(J), Ohio Admin. Code 3745-75-03(I), Ohio Admin. Code 3745-75-04(K) and Ohio Admin. Code 3745-75-04(L), on the basis that they are not part of the Ohio SIP and thus cannot represent a substantial inadequacy in the SIP. In addition, for reasons explained fully in the February 2013 proposal, the EPA proposed to find that another provision, Ohio Admin. Code 3745-15-06(C), is substantially inadequate to meet CAA requirements and proposed to issue a SIP call with respect to this provision, even though the Petitioner did not request that the EPA evaluate this provision. As explained in the February 2013 proposal, the EPA determined that Ohio Admin. Code 3745-15-06(C) was the regulatory mechanism in the SIP by which exemptions are granted in the two provisions to which the Petitioner did object.

Consequently, the EPA proposed to find that the provisions in Ohio Admin. Code 3745-15-06(A)(3), Ohio Admin. Code 3745-17-07(A)(3)(c), Ohio Admin. Code 3745-17-07(B)(11)(f), Ohio Admin. Code 3745-14-11(D) and Ohio Admin. Code 3745-15-06(C) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Ohio Admin. Code 3745-15-06(A)(3), Ohio Admin. Code 3745-17-07(A)(3)(c), Ohio Admin. Code 3745-17-07(B)(11)(f), Ohio Admin. Code 3745-14-11(D) and Ohio Admin. Code 3745-15-06(C) are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. Also in this final action, the EPA is denying the Petition with respect to Ohio Admin. Code 3745-75-02(E), Ohio Admin. Code 3745-75-02(J), Ohio Admin. Code 3745-75-03(I), Ohio Admin. Code 3745-75-04(K) and Ohio Admin. Code 3745-75-04(L). This action is fully

consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Ohio SIP that the EPA received and considered during the development of this rulemaking.

G. Affected States in EPA Region VI

1. Arkansas

As described in section IX.G.1 of the February 2013 proposal, the Petitioner objected to two provisions in the Arkansas SIP. First, the Petitioner objected to a provision that provides an automatic exemption for excess emissions of VOC for sources located in Pulaski County that occur due to malfunctions (Reg. 19.1004(H)). Second, the Petitioner objected to a separate provision that provides a "complete affirmative defense" for excess emissions that occur during emergency conditions (Reg. 19.602). The Petitioner argued that this provision, which the state may have modeled after the EPA's title V regulations, is impermissible because its application is not clearly limited to operating permits.

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Reg. 19.1004(H) and Reg. 19.602.

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provision in Reg. 19.602, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that Reg. 19.1004(H) and Reg. 19.602³⁹⁶ are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Reg. 19.1004(H) and Reg. 19.602. Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the

³⁹⁶ In a final action published March 4, 2015 (80 FR 11573), the EPA approved revisions of the Arkansas SIP pertaining to the regulation and permitting of PM_{2.5}. Among the approved revisions was a change to Reg. 19.602, to capitalize the letter "C" in that regulation's title, "Emergency Conditions"). To the extent the EPA's recent action affected Reg. 19.602, that action was only a ministerial matter and should not be construed as reapproval of the provision on its merits. That action does not affect the basis on which the EPA proposed to find Reg. 19.602 substantially inadequate in the February 2013 proposal.

EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Arkansas SIP that the EPA received and considered during the development of this rulemaking.

2. Louisiana

As described in section IX.G.2 of the February 2013 proposal, the Petitioner objected to several provisions in the Louisiana SIP that allow for automatic and discretionary exemptions from SIP emission limitations during various situations, including startup, shutdown, maintenance and malfunctions. First, the Petitioner objected to provisions that provide automatic exemptions for excess emissions of VOC from wastewater tanks (LAC 33:III.2153(B)(1)(i)) and excess emissions of NO_x from certain sources within the Baton Rouge Nonattainment Area (LAC 33:III.2201(C)(8)). The LAC 33:III.2153(B)(1)(i) provides that control devices "shall not be required" to meet emission limitations "during periods of malfunction and maintenance on the devices for periods not to exceed 336 hours per year." Similarly, LAC 33:III.2201(C)(8) provides that certain sources "are exempted" from emission limitations "during start-up and shutdown . . . or during a malfunction." Second, the Petitioner objected to provisions that provide discretionary exemptions to various emission limitations. Three of these provisions provide discretionary exemptions from otherwise applicable SO₂ and visible emission limitations in the Louisiana SIP for excess emissions that occur during certain startup and shutdown events (LAC 33:III.1107, LAC 33:III.1507(A)(1) and LAC 33:III.1507(B)(1)), while the other two provide such exemptions for excess emissions from nitric acid plants during startups and "upsets" (LAC 33:III.2307(C)(1)(a) and LAC 33:III.2307(C)(2)(a)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to LAC 33:III.2153(B)(1)(i) and LAC 33:III.2201(C)(8) on the basis that these provisions allow for automatic exemptions for excess emissions from otherwise applicable SIP emission limitations. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to LAC 33:III.1107(A), LAC 33:III.1507(A)(1), LAC 33:III.1507(B)(1), LAC 33:III.2307(C)(1)(a) and LAC 33:III.2307(C)(2)(a) on the basis that

these provisions allow impermissible discretionary exemptions.

Consequently, the EPA proposed to find that LAC 33:III.2153(B)(1)(i), LAC 33:III.2201(C)(8), LAC 33:III.1107(A), LAC 33:III.1507(A)(1), LAC 33:III.1507(B)(1), LAC 33:III.2307(C)(1)(a) and LAC 33:III.2307(C)(2)(a) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to LAC 33:III.2153(B)(1)(i), LAC 33:III.2201(C)(8), LAC 33:III.1107(A), LAC 33:III.1507(A)(1), LAC 33:III.1507(B)(1), LAC 33:III.2307(C)(1)(a) and LAC 33:III.2307(C)(2)(a). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Louisiana SIP that the EPA received and considered during the development of this rulemaking.

3. New Mexico

As described in section IX.G.3 of the February 2013 proposal, the Petitioner objected to three provisions in the New Mexico SIP that provide affirmative defenses for excess emissions that occur during malfunctions (20.2.7.111 NMAC), during startup and shutdown (20.2.7.112 NMAC) and during emergencies (20.2.7.113 NMAC).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 20.2.7.111 NMAC, 20.2.7.112 NMAC and 20.2.7.113 NMAC.

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provisions in 20.2.7.111 NMAC, 20.2.7.112 NMAC and 20.2.7.113 NMAC, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for these provisions.

Consequently, the EPA proposed to find that the provisions in 20.2.7.111 NMAC, 20.2.7.112 NMAC and 20.2.7.113 NMAC are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 20.2.7.111 NMAC, 20.2.7.112 NMAC and 20.2.7.113 NMAC. Accordingly, the

EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the New Mexico SIP that the EPA received and considered during the development of this rulemaking.

4. New Mexico: Albuquerque-Bernalillo County

The Petitioner did not identify any provisions in the SIP for the state of New Mexico that specifically apply in the Albuquerque-Bernalillo County area, which is why this area was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified three affirmative defense provisions in the SIP for the state of New Mexico that apply in the Albuquerque-Bernalillo County area, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for these provisions. These provisions provide affirmative defenses available to sources for excess emissions that occur during malfunctions (20.11.49.16.A NMAC), during startup and shutdown (20.11.49.16.B NMAC) and during emergencies (20.11.49.16.C NMAC).

In this final action, the EPA is finding that the provisions in 20.11.49.16.A NMAC, 20.11.49.16.B NMAC and 20.11.49.16.C NMAC are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. The EPA notes that removal of 20.11.49.16.A NMAC, 20.11.49.16.B NMAC and 20.11.49.16.C NMAC from the SIP will render 20.11.49.16.D NMAC, 20.11.49.16.E, 20.11.49.15.B (15) (concerning reporting by a source of intent to assert an affirmative defense for a violation), a portion of 20.11.49.6 NMAC (concerning the objective of establishing affirmative defense provisions) and 20.11.49.18 NMAC (concerning actions where a determination has been made under 20.11.49.16.E NMAC) superfluous and no longer operative, and the EPA thus recommends that these provisions be removed as well. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the New Mexico SIP that the

EPA received and considered during the development of this rulemaking.

5. Oklahoma

As described in section IX.G.4 of the February 2013 proposal, the Petitioner objected to two provisions in the Oklahoma SIP that together allow for discretionary exemptions from emission limitations during startup, shutdown, maintenance and malfunctions (OAC 252:100-9-3(a) and OAC 252:100-9-3(b)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to OAC 252:100-9-3(a) and OAC 252:100-9-3(b).

Consequently, the EPA proposed to find that OAC 252:100-9-3(a) and OAC 252:100-9-3(b) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to OAC 252:100-9-3(a) and OAC 252:100-9-3(b). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Oklahoma SIP that the EPA received and considered during the development of this rulemaking.

6. Texas

The Petitioner did not identify in the June 2011 petition any provisions in the SIP for the state of Texas, which is why this state was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified four affirmative defense provisions in the SIP for the state of Texas, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for these provisions. These provisions provide affirmative defenses available to sources for excess emissions that occur during upsets (30 TAC 101.222(b)), unplanned events (30 TAC 101.222(c)), upsets with respect to opacity limits (30 TAC 101.222(d)) and unplanned events with respect to opacity limits (30 TAC 101.222(e)).

In this final action, the EPA is finding that the provisions in 30 TAC 101.222(b), 30 TAC 101.222(c), 30 TAC 101.222(d) and 30 TAC 101.222(e) are substantially inadequate to meet CAA requirements and the EPA is thus

issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Texas SIP that the EPA received and considered during the development of this rulemaking.

H. Affected States in EPA Region VII

1. Iowa

As described in section IX.H.1 of the February 2013 proposal, the Petitioner objected to a specific provision in the Iowa SIP that allows for automatic exemptions from otherwise applicable SIP emission limitations during periods of startup, shutdown or cleaning of control equipment (Iowa Admin. Code r. 567–24.1(1)). Also, the Petitioner objected to a provision that empowers the state to exercise enforcement discretion for violations of the otherwise applicable SIP emission limitations during malfunction periods (Iowa Admin. Code r. 567–24.1(4)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Iowa Admin. Code r. 567–24.1(1) on the basis that this provision allows for exemptions from the otherwise applicable SIP emission limitations. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Iowa Admin. Code r. 567–24.1(4) on the basis that the provision is on its face clearly applicable only to Iowa state enforcement personnel and that the provision thus could not reasonably be read by a court to foreclose enforcement by the EPA or through a citizen suit where Iowa state personnel elect to exercise enforcement discretion.

Consequently, the EPA proposed to find that Iowa Admin. Code r. 567–24.1(1) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Iowa Admin. Code r. 567–24.1(1). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. Also in this final action, the EPA is denying the Petition with respect to Iowa Admin. Code r. 567–24.1(4). This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document

available in the docket for this rulemaking concerning any comments specific to the Iowa SIP that the EPA received and considered during the development of this rulemaking.

2. Kansas

As described in section IX.H.2 of the February 2013 proposal, the Petitioner objected to three provisions in the Kansas SIP that allow for exemptions for excess emissions during malfunctions and necessary repairs (K.A.R. § 28–19–11(A)), scheduled maintenance (K.A.R. § 28–19–11(B)), and certain routine modes of operation (K.A.R. § 28–19–11(C)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to K.A.R. § 28–19–11(A), K.A.R. § 28–19–11(B) and K.A.R. § 28–19–11(C).

Consequently, the EPA proposed to find that K.A.R. § 28–19–11(A), K.A.R. § 28–19–11(B) and K.A.R. § 28–19–11(C) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to K.A.R. § 28–19–11(A), K.A.R. § 28–19–11(B) and K.A.R. § 28–19–11(C). Accordingly, the EPA is finding that these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Kansas SIP that the EPA received and considered during the development of this rulemaking.

3. Missouri

As described in section IX.H.3 of the February 2013 proposal, the Petitioner objected to two provisions in the Missouri SIP that could be interpreted to provide discretionary exemptions. The first provides exemptions for visible emissions exceeding otherwise applicable SIP opacity limitations (Mo. Code Regs. Ann. tit 10, § 10–6.220(3)(C)). The second provides authorization to state personnel to decide whether excess emissions “warrant enforcement action” where a source submits information to the state showing that such emissions were “the consequence of a malfunction, start-up or shutdown.” (Mo. Code Regs. Ann. tit 10, § 10–6.050(3)(C)).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Mo. Code Regs. Ann. tit 10, § 10–6.220(3)(C) on the basis that this provision could be read to allow for exemptions from the otherwise applicable SIP emission limitations through a state official’s unilateral exercise of discretionary authority that is insufficiently bounded and includes no additional public process at the state or federal level. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Mo. Code Regs. Ann. tit 10, § 10–6.050(3)(C) on the basis that the provision is on its face clearly applicable only to Missouri state enforcement personnel and that the provision thus could not reasonably be read by a court to foreclose enforcement by the EPA or through a citizen suit where Missouri state personnel elect to exercise enforcement discretion.

Consequently, the EPA proposed to find that the provision in Mo. Code Regs. Ann. tit 10, § 10–6.220(3)(C) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Mo. Code Regs. Ann. tit 10, § 10–6.220(3)(C). Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. Also in this final action, the EPA is denying the Petition with respect to Mo. Code Regs. Ann. tit 10, § 10–6.050(3)(C). This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Missouri SIP that the EPA received and considered during the development of this rulemaking.

4. Nebraska

As described in section IX.H.4 of the February 2013 proposal, the Petitioner objected to two provisions in the Nebraska SIP. First, the Petitioner objected to a generally applicable provision that provides authorization to state personnel to decide whether excess emissions “warrant enforcement action” where a source submits information to the state showing that such emissions were “the result of a malfunction, start-up or shutdown” (Neb. Admin. Code Title 129 § 11–35.001). Second, the Petitioner objected to a specific provision in Nebraska state law that contains exemptions for excess emissions at hospital/medical/infectious

waste incinerators (HMIWI) during SSM (Neb. Admin. Code Title 129 § 18–004.02).

For reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Neb. Admin. Code Title 129 § 11–35.001. Also for reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Neb. Admin. Code Title 129 § 18–004.02 on the basis that this regulation is not part of the Nebraska SIP and thus cannot represent an inadequacy in the SIP.

In this final action, the EPA is denying the Petition with respect to Neb. Admin. Code Title 129, Chapter 35, Section 001 (correction to citation, as per comment received from Nebraska DEQ, from earlier identification as Neb. Admin. Code Title 129 § 11–35.001) and Neb. Admin. Code Title 129 § 18–004.02.

This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any other comments specific to the Nebraska SIP that the EPA received and considered during the development of this rulemaking.

5. Nebraska: Lincoln-Lancaster

As described in section IX.H.5 of the February 2013 proposal, the Petitioner objected to a generally applicable provision in the Lincoln-Lancaster County Air Pollution Control Program (Art. 2 § 35), which governs the Lincoln-Lancaster County Air Pollution Control District of Nebraska, that is parallel “in all aspects pertinent to this analysis” to Neb. Admin. Code Title 129 § 11–35.001. (Note that as per comment subsequently received from Nebraska DEQ, the correct citation is Neb. Admin. Code Title 129, Chapter 35, Section 001.)

For reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Art. 2 § 35, on the basis that this provision is on its face clearly applicable only to Lincoln-Lancaster County enforcement personnel and that the provision thus could not reasonably be read by a court to foreclose enforcement by the EPA or through a citizen suit where personnel from Lincoln-Lancaster County elect not to bring an enforcement action.

In this final action, the EPA is denying the Petition with respect to Art. 2 § 35. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document

available in the docket for this rulemaking concerning any other comments specific to the Nebraska SIP that the EPA received and considered during the development of this rulemaking.

I. Affected States in EPA Region VIII

1. Colorado

As described in section IX.I.1 of the February 2013 proposal, the Petitioner objected to two affirmative defense provisions in the Colorado SIP that provide for affirmative defenses to qualifying sources during malfunctions (5 Colo. Code Regs § 1001–2(II.E)) and during periods of startup and shutdown (5 Colo. Code Regs § 1001–2(II.J)).

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to 5 Colo. Code Regs § 1001–2(II.J). Also for reasons explained in the February 2013 proposal, the EPA proposed to deny the Petition with respect to 5 Colo. Code Regs § 1001–2(II.E) on the basis that it included an affirmative defense applicable to malfunction events that was consistent with the requirements of the CAA as interpreted by the EPA in the 1999 SSM Guidance.

Subsequently, for reasons explained fully in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provision in 5 Colo. Code Regs § 1001–2(II.J) applicable to startup and shutdown, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision. Also for reasons explained in the SNPR, the EPA reversed its prior proposed denial of the Petition with respect to the affirmative defense provision 5 Colo. Code Regs § 1001–2(II.E) applicable to malfunctions.

Consequently, the EPA proposed to find that the provisions in 5 Colo. Code Regs § 1001–2(II.J) and 5 Colo. Code Regs § 1001–2(II.E) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to 5 Colo. Code Regs § 1001–2(II.J) and 5 Colo. Code Regs § 1001–2(II.E). Accordingly, the EPA is finding that the provisions in 5 Colo. Code Regs § 1001–2(II.J) and 5 Colo. Code Regs § 1001–2(II.E) are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call to Colorado to correct its SIP with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to

Comment document available in the docket for this rulemaking concerning any comments specific to the Colorado SIP that the EPA received and considered during the development of this rulemaking.

2. Montana

As described in section IX.I.2 of the February 2013 proposal, the Petitioner objected to an exemption from otherwise applicable emission limitations for aluminum plants during startup and shutdown (Montana Admin. R 17.8.334).

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to ARM 17.8.334.

Consequently, the EPA proposed to find that ARM 17.8.334 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to ARM 17.8.334. Accordingly, the EPA is finding that ARM 17.8.334 is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Montana SIP that the EPA received and considered during the development of this rulemaking.

3. North Dakota

As described in section IX.I.3 of the February 2013 proposal, the Petitioner objected to two provisions in the North Dakota SIP that create exemptions from otherwise applicable emission limitations. The first provision creates exemptions from a number of cross-referenced opacity limits “where the limits specified in this article cannot be met because of operations and processes such as, but not limited to, oil field service and drilling operations, but only so long as it is not technically feasible to meet said specifications” (N.D. Admin. Code § 33–15–03–04(4)). The second provision creates an implicit exemption for “temporary operational breakdowns or cleaning of air pollution equipment” if the source meets certain conditions (N.D. Admin. Code § 33–15–05–01(2)(a)(1)).

For reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to N.D. Admin. Code 33–15–03–04.4 (cited in the Petition as N.D. Admin. Code § 33–15–03–04(4)) and also with respect to a

provision to which the Petitioner cited but did not explicitly object, N.D. Admin. Code 33–15–03–04.3 (cited in the Petition as N.D. Admin. Code § 33–15–03–04(3)). Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to N.D. Admin. Code 33–15–05–01.2a(1) (cited in the Petition as N.D. Admin. Code § 33–15–05–01(2)(a)(1)).

Subsequently, the state of North Dakota removed N.D. Admin. Code 33–15–03–04.4 and N.D. Admin. Code 33–15–05–01.2.a(1) and eliminated the SIP inadequacies with respect to those two of the three provisions identified in the February 2013 proposal notice. The EPA has already approved the necessary SIP revisions for those two provisions.³⁹⁷ Thus, the EPA's final action on the Petition does not need to include a finding of substantial inadequacy and SIP call for those two provisions.

In this final action, the EPA is granting the Petition with respect to N.D. Admin. Code 33–15–03–04.3 and denying the Petition with respect to N.D. Admin. Code 33–15–03–04.4 and N.D. Admin. Code 33–15–05–01.2.a(1). Accordingly, the EPA is finding that the provision in N.D. Admin. Code 33–15–03–04.3 is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call to North Dakota to correct its SIP with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 with respect to this provision. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the North Dakota SIP that the EPA received and considered during the development of this rulemaking.

4. South Dakota

As described in section IX.I.4 of the February 2013 proposal, the Petitioner objected to a provision in the South Dakota SIP that creates exemptions from otherwise applicable SIP emission limitations (S.D. Admin. R. 74:36:12:02(3)). The Petitioner asserted that the provision imposes visible emission limitations on sources but explicitly excludes emissions that occur “for brief periods during such operations as soot blowing, start-up, shut-down, and malfunctions.”

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to S.D. Admin. R. 74:36:12:02(3).

Consequently, the EPA proposed to find that S.D. Admin. R. 74:36:12:02(3) is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to S.D. Admin. R. 74:36:12:02(3). Accordingly, the EPA is finding that S.D. Admin. R. 74:36:12:02(3) is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the South Dakota SIP that the EPA received and considered during the development of this rulemaking.

5. Wyoming

As described in section IX.I.5 of the February 2013 proposal, the Petitioner objected to a specific provision in the Wyoming SIP that provides an exemption for excess PM emissions from diesel engines during startup, malfunction and maintenance (WAQSR Chapter 3, section 2(d), cited as ENV–AQ–1 Wyo. Code R. § 2(d) in the Petition). The provision exempts emission of visible air pollutants from diesel engines from applicable SIP limitations “during a reasonable period of warmup following a cold start or where undergoing repairs and adjustment following malfunction.”

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to WAQSR Chapter 3, section 2(d) (cited as ENV–AQ–1 Wyo. Code R. § 2(d) in the Petition).

Subsequently, the state of Wyoming revised WAQSR Chapter 3, section 2(d) and eliminated the SIP inadequacies identified in the February 2013 proposal document with respect to this provision. The EPA has already approved the necessary SIP revision for this provision.³⁹⁸ Thus, the EPA's final action on the Petition does not need to include a finding of substantial inadequacy and SIP call for this provision.

In this final action, the EPA is denying the Petition with respect to WAQSR Chapter 3, section 2(d). Please refer to the Response to Comment document available in the docket for this rulemaking concerning any

comments specific to the Wyoming SIP that the EPA received and considered during the development of this rulemaking.

J. Affected States and Local Jurisdictions in EPA Region IX

1. Arizona

As described in section IX.J.1 of the February 2013 proposal, the Petitioner objected to two provisions in the Arizona Department of Air Quality's (ADEQ) Rule R18–2–310, which provide affirmative defenses for excess emissions during malfunctions (AAC Section R18–2–310(B)) and for excess emissions during startup or shutdown (AAC Section R18–2–310(C)).

For reasons explained in the February 2013 proposal, the EPA proposed to deny the Petition with respect to AAC Section R18–2–310(B) on the basis that it included an affirmative defense applicable to malfunction events that was consistent with the CAA as interpreted by the EPA in the 1999 SSM Guidance.

Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to AAC Section R18–2–310(C).

Subsequently, for reasons explained fully in the SNPR, the EPA reversed its prior proposed denial of the Petition with respect to the affirmative defense provision AAC Section R18–2–310(B) applicable to malfunctions. Also for reasons explained in the SNPR, the EPA repropose granting of the Petition with respect to the affirmative defense provision in AAC Section R18–2–310(C) applicable to startup and shutdown, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that the provisions in AAC Section R18–2–310(B) and AAC Section R18–2–310(C) are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to AAC Section R18–2–310(B) and AAC Section R18–2–310(C). Accordingly, the EPA is finding that the provisions in AAC Section R18–2–310(B) and AAC Section R18–2–310(C) are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments

³⁹⁷ See “Approval and Promulgation of Implementation Plans; North Dakota; Revisions to the Air Pollution Control Rules,” 79 FR 63045 (October 22, 2014).

³⁹⁸ See “Approval and Promulgation of Implementation Plans; Wyoming; Revisions to the Air Quality Standards and Regulations,” 79 FR 62859 (October 21, 2014).

specific to the Arizona SIP that the EPA received and considered during the development of this rulemaking.

2. Arizona: Maricopa County

As described in section IX.J.2 of the February 2013 proposal, the Petitioner objected to two provisions in the Maricopa County Air Pollution Control Regulations that provide affirmative defenses for excess emissions during malfunctions (Maricopa County Air Pollution Control Regulation 3, Rule 140, § 401) and for excess emissions during startup or shutdown (Maricopa County Air Pollution Control Regulation 3, Rule 140, § 402). These provisions in Maricopa County Air Quality Department (MCAQD) Rule 140 are similar to the affirmative defense provisions in ADEQ R18–2–310.

For reasons explained in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Maricopa County Air Pollution Control Regulation 3, Rule 140, § 401 on the basis that it included an affirmative defense applicable to malfunction events that was consistent with the CAA as interpreted by the EPA in the 1999 SSM Guidance. Also for reasons explained in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Maricopa County Air Pollution Control Regulation 3, Rule 140, § 402.

Subsequently, for reasons explained fully in the SNPR, the EPA reversed its prior proposed denial of the Petition with respect to the affirmative defense provision Maricopa County Air Pollution Control Regulation 3, Rule 140, § 401 applicable to malfunctions. Also for reasons explained in the SNPR, the EPA republished granting of the Petition with respect to the affirmative defense provision in Maricopa County Air Pollution Control Regulation 3, Rule 140, § 402 applicable to startup and shutdown, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that the provisions in Maricopa County Air Pollution Control Regulation 3, Rule 140, § 401 and Maricopa County Air Pollution Control Regulation 3, Rule 140, § 402 are substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to these provisions.

In this final action, the EPA is granting the Petition with respect to Maricopa County Air Pollution Control Regulation 3, Rule 140, § 401 and Maricopa County Air Pollution Control Regulation 3, Rule 140, § 402. Accordingly, the EPA is finding that

these provisions are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Arizona SIP that the EPA received and considered during the development of this rulemaking.

3. Arizona: Pima County

As described in section IX.J.3 of the February 2013 proposal, the Petitioner objected to a provision in the Pima County Department of Environmental Quality's (PCDEQ) Rule 706 that pertains to enforcement discretion.

For reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to PCDEQ Rule 706.

In this final action, the EPA is denying the Petition with respect to PCDEQ Rule 706. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Arizona SIP that the EPA received and considered during the development of this rulemaking.

4. California: Eastern Kern Air Pollution Control District

The Petitioner did not identify any provisions in the SIP for the state of California, which is why this state was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified an affirmative defense provision in the SIP for the state of California applicable in the Eastern Kern Air Pollution Control District (APCD), and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for this provision. The affirmative defense is included in Kern County "Rule 111 Equipment Breakdown." This SIP provision provides an affirmative defense available to sources for excess emissions that occur during a breakdown condition (*i.e.*, malfunction).

In this final action, the EPA is finding that Kern County Rule 111 Equipment Breakdown in the California SIP applicable in the Eastern Kern APCD³⁹⁹

³⁹⁹ The EPA is in this final action making a finding of substantial inadequacy and issuing a SIP call for Kern County Rule 111 Equipment Breakdown in the California SIP as it applies in each the Eastern Kern APCD and the San Joaquin Valley Unified APCD.

is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the California SIP that the EPA received and considered during the development of this rulemaking.

5. California: Imperial County Air Pollution Control District

The Petitioner did not identify any provisions in the SIP for the state of California, which is why this state was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified an affirmative defense provision in the SIP for the state of California applicable in the Imperial Valley APCD, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for this provision. The affirmative defense is included in Imperial County "Rule 111 Equipment Breakdown." This SIP provision provides an affirmative defense available to sources for excess emissions that occur during a breakdown condition (*i.e.*, malfunction).

In this final action, the EPA is finding that Imperial County "Rule 111 Equipment Breakdown" in the California SIP applicable in the Imperial Valley APCD is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the California SIP that the EPA received and considered during the development of this rulemaking.

6. California: San Joaquin Valley Unified Air Pollution Control District

The Petitioner did not identify any provisions in the SIP for the state of California, which is why this state was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified affirmative defense provisions in the SIP for the state of California applicable in the San Joaquin Valley Unified APCD, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for these provisions. The affirmative defenses are included in: (i) Fresno County "Rule 110 Equipment

Breakdown”; (ii) Kern County “Rule 111 Equipment Breakdown”; (iii) Kings County “Rule 111 Equipment Breakdown”; (iv) Madera County “Rule 113 Equipment Breakdown”; (v) Stanislaus County “Rule 110 Equipment Breakdown”; and (vi) Tulare County “Rule 111 Equipment Breakdown.”

Each of these SIP provisions provides an affirmative defense available to sources for excess emissions that occur during a breakdown condition (*i.e.*, malfunction).

In this final action, the EPA is finding that the following six provisions in the California SIP applicable in the San Joaquin Valley Unified APCD are substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to these provisions: (i) Fresno County “Rule 110 Equipment Breakdown”; (ii) Kern County “Rule 111 Equipment Breakdown”; (iii) Kings County “Rule 111 Equipment Breakdown”; (iv) Madera County “Rule 113 Equipment Breakdown”; (v) Stanislaus County “Rule 110 Equipment Breakdown”; and (vi) Tulare County “Rule 111 Equipment Breakdown.”⁴⁰⁰ This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the California SIP that the EPA received and considered during the development of this rulemaking.

K. Affected States in EPA Region X

1. Alaska

As described in section IX.K.1 of the February 2013 proposal, the Petitioner objected to a provision in the Alaska SIP that provides an excuse for “unavoidable” excess emissions that occur during SSM events, including startup, shutdown, scheduled maintenance and “upsets” (Alaska Admin. Code tit. 18 § 50.240). The provision provides: “Excess emissions determined to be unavoidable under this section will be excused and are not subject to penalty. This section does not limit the department’s power to enjoin the emission or require corrective action.” The Petitioner also stated that the provision is worded as if it were an affirmative defense but it uses criteria for enforcement discretion.

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with

respect to Alaska Admin. Code tit. 18 § 50.240 on the basis that, to the extent the provision was intended to be an affirmative defense, it was not a permissible affirmative defense provision consistent with the requirements of the CAA as interpreted in the EPA’s 1999 SSM Guidance.

Subsequently, for reasons explained in the SNPR, the EPA repropoed granting of the Petition with respect to Alaska Admin. Code tit. 18 § 50.240, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that Alaska Admin. Code tit. 18 § 50.240 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

In this final action, the EPA is granting the Petition with respect to Alaska Admin. Code tit. 18 § 50.240. Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Alaska SIP that the EPA received and considered during the development of this rulemaking.

2. Idaho

As described in section IX.K.2 of the February 2013 proposal, the Petitioner objected to a provision in the Idaho SIP that appears to grant enforcement discretion to the state as to whether to impose penalties for excess emissions during certain SSM events (Idaho Admin. Code r. 58.01.01.131).

For reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Idaho Admin. Code r. 58.01.01.131.

In this final action, the EPA is denying the Petition with respect to Idaho Admin. Code r. 58.01.01.131. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Idaho SIP that the EPA received and considered during the development of this rulemaking.

3. Oregon

As described in section IX.K.3 of the February 2013 proposal, the Petitioner objected to a provision in the Oregon

SIP that grants enforcement discretion to the state to pursue violations for excess emissions during certain SSM events (Or. Admin. R. 340–028–1450).

For reasons explained fully in the February 2013 proposal, the EPA proposed to deny the Petition with respect to Or. Admin. R. 340–028–1450.

In this final action, the EPA is denying the Petition with respect to Or. Admin. R. 340–028–1450. This action is fully consistent with what the EPA proposed in February 2013. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Oregon SIP that the EPA received and considered during the development of this rulemaking.

4. Washington

As described in section IX.K.4 of the February 2013 proposal, the Petitioner objected to a provision in the Washington SIP that provides an excuse for “unavoidable” excess emissions that occur during certain SSM events, including startup, shutdown, scheduled maintenance and “upsets” (Wash. Admin. Code § 173–400–107). The provision provides that “[e]xcess emissions determined to be unavoidable under the procedures and criteria under this section shall be excused and are not subject to penalty.” The Petitioner argued that this provision excuses excess emissions in violation of the CAA and the EPA’s SSM Policy, which require all such emissions to be treated as violations of the applicable SIP emission limitations. The Petitioner also stated that the provision is worded as if it were an affirmative defense but it uses criteria for enforcement discretion.

For reasons explained fully in the February 2013 proposal, the EPA proposed to grant the Petition with respect to Wash. Admin. Code § 173–400–107 on the basis that, to the extent the provision was intended to be an affirmative defense, it was not a permissible affirmative defense provision consistent with the requirements of the CAA as interpreted in the EPA’s 1999 SSM Guidance.

Subsequently, for reasons explained in the SNPR, the EPA repropoed granting of the Petition with respect to Wash. Admin. Code § 173–400–107, but it proposed to revise the basis for the finding of substantial inadequacy and the SIP call for this provision.

Consequently, the EPA proposed to find that Wash. Admin. Code § 173–400–107 is substantially inadequate to meet CAA requirements and thus proposed to issue a SIP call with respect to this provision.

⁴⁰⁰ The EPA is in this final action making a finding of substantial inadequacy and issuing a SIP call for Kern County Rule 111 Equipment Breakdown in the California SIP as it applies in each the Eastern Kern APCD and the San Joaquin Valley Unified APCD.

In this final action, the EPA is granting the Petition with respect to Wash. Admin. Code § 173-400-107. Accordingly, the EPA is finding that this provision is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in February 2013 as revised in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Washington SIP that the EPA received and considered during the development of this rulemaking.

5. Washington: Energy Facility Site Evaluation Council

The Petitioner did not identify any provisions in the SIP for the state of Washington that specifically apply to the Energy Facility Site Evaluation Council (EFSEC) area, which is why this area was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified affirmative defense provisions in the SIP for the state of Washington that relate to the EFSEC, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for these provisions in Wash. Admin. Code § 463-39-005. In the EFSEC portion of the SIP, Wash. Admin. Code § 463-39-005 adopts by reference Wash. Admin. Code § 173-400-107, thereby incorporating the affirmative defenses applicable to startup, shutdown, scheduled maintenance and “upsets” that the EPA is also finding substantially inadequate in Wash. Admin. Code § 173-400-107 (see section IX.K.4 of this document).

In this final action, the EPA is finding that Wash. Admin. Code § 463-39-005 is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Washington SIP that the EPA received and considered during the development of this rulemaking.

6. Washington: Southwest Clean Air Agency

The Petitioner did not identify any provisions in the SIP for the state of Washington that specifically apply in the portion of the state regulated by the Southwest Clean Air Agency

(SWCAA),⁴⁰¹ which is why this area was not explicitly addressed in the February 2013 proposal.

Subsequently, for reasons explained fully in the SNPR, the EPA identified affirmative defense provisions in the SIP for the state of Washington that apply in the portion of the state regulated by SWCAA, and the EPA proposed to make a finding of substantial inadequacy and to issue a SIP call for these provisions. The affirmative defenses are included in the SIP in SWAPCA “400-107 Excess Emissions.” This SIP section provides an affirmative defense available to sources for excess emissions that occur during startup and shutdown, maintenance and “upsets” (i.e., malfunctions). It is identical to Wash. Admin. Code § 173-400-107 in all respects except that SWAPCA 400-107(3) contains a more stringent requirement for the reporting of excess emissions.

In this final action, the EPA is finding that SWAPCA “400-107 Excess Emissions” in the Washington SIP applicable in the area regulated by SWCAA is substantially inadequate to meet CAA requirements and the EPA is thus issuing a SIP call with respect to this provision. This action is fully consistent with what the EPA proposed in the SNPR. Please refer to the Response to Comment document available in the docket for this rulemaking concerning any comments specific to the Washington SIP that the EPA received and considered during the development of this rulemaking.

X. Implementation Aspects of EPA’s SSM SIP Policy

A. Recommendations Concerning Alternative Emission Limitations for Startup and Shutdown

In response to a SIP call concerning an existing automatic or discretionary exemption for excess emissions during SSM events, the EPA anticipates that a state may elect to create an alternative emission limitation that applies during startup and shutdown events (or during any other normal mode of operation during which the exemption may have applied) as a revised element or component of the existing emission limitation. The EPA emphasizes that states have discretion to revise the identified deficient provisions by any means they choose, so long as the revised provision is consistent with

CAA requirements for SIP provisions. If a state elects to create an alternative emission limitation to replace an existing exemption, there are several issues that the state should consider.

First, as explained in sections VII.B and XI of this document, the EPA has longstanding guidance that provides recommendations to states concerning the development of alternative emission limitations applicable during startup and shutdown to replace exemptions in existing SIP provisions. The EPA first provided this guidance in the 1999 SSM Guidance but has reiterated and clarified its guidance in this action. The EPA recommends that states consider the seven clarified criteria described in sections VII.B and XI of this document when developing new alternative emission limitations to replace automatic or discretionary exemptions, in order to assure that the revised provisions submitted to the EPA for approval meet basic CAA requirements for SIP emission limitations.

Second, the EPA reiterates that SIP emission limitations that are expressed as numerical limitations do not necessarily have to require the same numerical level of emissions during all modes of normal source operation. Under appropriate circumstances consistent with the criteria that the EPA recommends for alternative emission limitations, it may be appropriate to have a numerical emission limitation that has a higher numerical level applicable during specific modes of source operation, such as during startup and shutdown. For example, if a rate-based NO_x emission limitation in the SIP applies to a specific source category, then it may be appropriate for that emission limitation to have a higher numerical standard applicable during defined periods of startup or shutdown. Such an approach can be consistent with SIP requirements, so long as that higher numerical level for startup or shutdown is properly established and is legally and practically enforceable, and so long as other overarching CAA requirements are also met. However, alternative emission limitations applicable during startup and shutdown cannot be inappropriately high or an effectively unlimited or uncontrolled level of emissions, as those would constitute impermissible *de facto* exemptions for emissions during certain modes of operation.

Third, the EPA reiterates that SIP emission limitations do not necessarily have to be expressed in terms of a numerical level of emissions. There are many sources for which a numerically expressed emission limitation will be the most appropriate and will result in

⁴⁰¹ The EPA notes that the SWCAA was formerly named, and in some places in the SIP still appears, as the “Southwest Air Pollution Control Authority” or “SWAPCA.” The EPA anticipates that the name will be updated in the SIP in due course as the state revises the SIP.

the most legally and practically enforceable SIP requirements.⁴⁰² However, the EPA recognizes that for some source categories, under some circumstances, it may be appropriate for the SIP emission limitation to include a specific technological control requirement or specific work practice requirement that applies during specified modes of source operation such as startup and shutdown. For example, if the otherwise applicable numerical SO₂ emission limitation in the SIP is not achievable, and the otherwise required SO₂ control measure is not effective during startup and shutdown and/or measurement of emissions during startup and shutdown is not reasonably feasible, then it may be appropriate for that emission limitation to impose a different control measure, such as use of low sulfur coal, applicable during defined periods of startup and shutdown in lieu of a numerically expressed emission limitation. Such an approach can be consistent with SIP requirements, so long as that alternative control measure applicable during startup and shutdown is properly established and is legally and practically enforceable as a component of the emission limitation, and so long as other overarching CAA requirements are also met.

Fourth, the EPA notes that revisions to replace existing automatic or discretionary exemptions for SSM events with alternative emission limitations applicable during startup and shutdown also need to meet the applicable overarching CAA requirements with respect to the SIP emission limitation at issue. For example, if the emission limitation is in the SIP to meet the requirement that the source category be subject to RACT level controls for NO_x for purposes of the ozone NAAQS, then the state should assure that the higher numerical level or other control measure that will apply to NO_x emissions during startup and shutdown does constitute a RACT level of control for such sources for such pollutant during such modes of operation.

Finally, the EPA notes that states should not replace automatic or discretionary exemptions for excess emissions during SSM events with alternative emission limitations that are

a generic requirement such as a “general duty to minimize emissions” provision or an “exercise good engineering judgment” provision.⁴⁰³ While such provisions may serve an overarching purpose of encouraging sources to design, maintain and operate their sources correctly, such generic clauses are not a valid substitute for more specific emission limitations that apply during normal modes of operation such as startup and shutdown.

B. Recommendations for Compliance With Section 110(l) and Section 193 for SIP Revisions

In response to a SIP call for any type of deficient provision, the EPA anticipates that each state will determine the best way to revise its SIP provisions to bring them into compliance with CAA requirements. In this action the EPA is only identifying the provisions that need to be revised because they violate fundamental requirements of the CAA and providing guidance to states in the SSM Policy concerning the types of provisions that are and are not permissible with respect to the treatment of excess emissions during SSM events. The EPA recognizes that one important consideration for air agencies as they evaluate how best to revise their SIP provisions in response to this SIP call is the nature of the analysis that will be necessary for the resulting SIP revisions under section 110(l) and section 193. The EPA is therefore providing in this document general guidance on this important issue in order to assist states with SIP revisions in response to the SIP call.

Section 110(k)(3) directs the EPA to approve SIP submissions that comply with applicable CAA requirements and to disapprove those that do not. Under section 110(l), the EPA is prohibited from approving any SIP revision that would interfere with any applicable requirement concerning attainment and reasonable further progress or any other requirements of the CAA. To illustrate different ways in which section 110(l) and section 193 may apply in the evaluation of future SIP submissions in response to the SIP call, the EPA anticipates that there are several common scenarios that states may wish to consider when revising their SIPs:

Example 1: A state elects to revise an existing SIP provision by removing an existing automatic exemption provision, director’s discretion provision, enforcement discretion provision or

affirmative defense provision, without altering any other aspects of the SIP provision at issue (e.g., elects to retain the emission limitation for the source category but eliminate the exemption for emissions during SSM events). Although the EPA must review each SIP submission for compliance with section 110(l) and section 193 on the facts and circumstances of the revision, the Agency believes in general that this type of SIP revision should not entail a complicated analysis to meet these statutory requirements. Presumably, removal of the impermissible components of preexisting SIP provisions would not constitute backsliding, would in fact strengthen the SIP and would be consistent with the overarching requirement that the SIP revision be consistent with the requirements of the CAA. Accordingly, the EPA believes that this type of SIP revision should not entail a complicated analysis for purposes of section 110(l). If the SIP revision is also governed by section 193, then elimination of the deficiency will likewise presumably result in equal or greater emission reductions and thus comply with section 193 without the need for a more complicated analysis. The EPA has recently evaluated a SIP revision to remove specific SSM deficiencies in this manner.⁴⁰⁴

Example 2: A state elects to revise its SIP provision by replacing an automatic exemption for excess emissions during startup and shutdown events with an appropriate alternative emission limitation (e.g., a different numerical limitation or different other control requirement) that is explicitly applicable during startup and shutdown as a component of the revised emission limitation. Although the EPA must review each SIP revision for compliance with section 110(l) and section 193 on the facts and circumstances of the revision, the Agency believes in general that this type of SIP revision should not entail a complicated analysis to meet these statutory requirements. Presumably, the replacement of an automatic exemption applicable to startup and shutdown with an appropriate alternative emission limitation would not constitute backsliding, would strengthen the SIP and would be consistent with the overarching requirement that the SIP revision be consistent with the

⁴⁰² The EPA notes that in the CAA there is a presumption in favor of numerical emission limitations for purposes of section 112 and section 169, but section 110(a) does not include such an explicit presumption. However, there may be sources for which a numerically expressed emission limitation is the one that is most legally and practically enforceable, even during startup and shutdown, and for which a numerically expressed emission limitation is thus most appropriate.

⁴⁰³ The EPA notes that the “general duty” imposed under CAA section 112(r) is a separate standard, in addition to the otherwise applicable emission limitations and is not in lieu of those requirements.

⁴⁰⁴ See “Approval and Promulgation of Implementation Plans; Kentucky; Approval of Revisions to the Jefferson County Portion of the Kentucky SIP; Emissions During Startups, Shutdowns, and Malfunctions,” proposed at 78 FR 29683 (May 21, 2013), finalized at 79 FR 33101 (June 10, 2014).

requirements of the CAA. The state should develop that alternative emission limitation in accordance with the EPA's guidance recommendations for such provisions to assure that it would meet CAA requirements.⁴⁰⁵ In addition, that alternative emission limitation would both need to meet the overarching CAA applicable requirements that the emission limitation is designed and intended to meet (e.g., RACT-level controls for the source category in an attainment area for a NAAQS) and need to be legally and practically enforceable (e.g., have adequate recordkeeping, reporting, monitoring or other features requisite for enforcement). If a state has developed the alternative emission limitation consistent with these criteria, then the EPA anticipates that the revision of the emission limitation to replace the exemption with an alternative emission limitation applicable to startup and shutdown would not be backsliding, would be a strengthening of the SIP and would be consistent with the requirement of section 110(l) that a SIP revision be consistent with the requirements of the CAA. Similarly, if section 193 applies to the emission limitation that the state is revising, then the replacement of an exemption applicable to emissions during startup and shutdown with an appropriately developed alternative emission limitation that explicitly applies during startup and shutdown would presumably result in equal or greater emission reductions and thus should meet the requirements of section 193 without the need for a more complicated analysis.

Example 3: A state elects to revise an existing SIP provision not merely by removal of an existing automatic exemption provision, director's discretion provision, enforcement defense provision, or affirmative defense provision, but by the removal of the deficiency combined with a total revision of the emission limitation. The EPA anticipates that there may be emission limitations for which a state may elect to do such a wholesale revision of the SIP provision as part of eliminating an impermissible component of the existing provision (e.g., removal of an automatic exemption applicable to emissions during SSM events through a complete revision of the emission limitation to create a different emission limitation that applies at all times, including during SSM events). In developing a completely revised SIP provision, the

state should assure that the replacement provision meets the applicable overarching CAA requirements that the provision is designed and intended to meet, is legally and practically enforceable and is not less stringent than the prior SIP provision. The EPA believes in general that this type of SIP revision may require a more in-depth analysis to meet these statutory requirements of section 110(l) and section 193. To the extent that there is any concern that the revised SIP provision is less stringent than the provision it replaces, then there will need to be a careful evaluation as to whether the revised provision would interfere with any applicable requirement concerning attainment and reasonable further progress and with any other applicable requirement of the CAA. Presumably, however, so long as the state has properly developed the revised emission limitation to assure that it meets the overarching CAA requirements and to assure that it will not result in a less stringent emission limitation, then the complete revision of the emission limitation would not constitute backsliding, would be a strengthening of the SIP and thereby would comply with section 110(l). If the SIP revision is also governed by section 193, then there will also need to be an analysis to assure that the revision will result in equal or greater emission reductions and thus comply with section 193. To the extent that there is concern that the revision would result in a less stringent emission limitation than the preexisting emission limitation, then a more complex analysis would likely be required.

The EPA emphasizes that each SIP revision must be evaluated for compliance with section 110(l) and section 193 on the facts and circumstances of the specific revision, but these examples are intended to provide general guidance on the considerations and the nature of the analysis that may be appropriate for different types of SIP revisions. States should contact their respective EPA Regional Offices (see the **SUPPLEMENTARY INFORMATION** section of this document) for further recommendations and assistance concerning the analysis appropriate for specific SIP revisions in response to this SIP call.

XI. Statement of the EPA's SSM SIP Policy as of 2015

The EPA's longstanding interpretation of the CAA is that SIP provisions cannot include exemptions from emission limitations for emissions during SSM events. In order to be permissible in a

SIP, an emission limitation must be applicable to the source continuously, *i.e.*, cannot include periods during which emissions from the source are legally or functionally exempt from regulation. Regardless of its form, a fully approvable SIP emission limitation must also meet all substantive requirements of the CAA applicable to such a SIP provision, e.g., the statutory requirement of section 172(c)(1) for imposition of RACM and RACT on sources located in designated nonattainment areas.

This section of the document provides more specific guidance on the appropriate treatment of emissions during SSM events in SIP provisions, replacing the EPA's prior guidance issued in memoranda of 1982, 1983, 1999 and 2001. The more extended explanations and interpretations provided in other sections of this document are also applicable, should a situation arise that is not sufficiently covered by this section's more concise policy statement. This SSM Policy as of 2015 is a policy statement and thus constitutes guidance. As guidance, this SSM Policy as of 2015 does not bind states, the EPA or other parties, but it does reflect the EPA's interpretation of the statutory requirements of the CAA. The EPA's evaluation of any SIP provision, whether prospectively in the case of a new provision in a SIP submission or retrospectively in the case of a previously approved SIP submission, must be conducted through a notice-and-comment rulemaking in which the EPA will determine whether a given SIP provision is consistent with the requirements of the CAA and applicable regulations.

A. Definitions

The term *alternative emission limitation* means, in this document, an emission limitation in a SIP that applies to a source during some but not all periods of normal operation (e.g., applies only during a specifically defined mode of operation such as startup or shutdown). An alternative emission limitation is a component of a continuously applicable SIP emission limitation, and it may take the form of a control measure such as a design, equipment, work practice or operational standard (whether or not numerical). This definition of the term is independent of the statutory use of the term "alternative means of emission limitation" in sections 111(h)(3) and 112(h)(3), which pertain to the conditions under which the EPA may pursuant to sections 111 and 112 promulgate emission limitations, or components of emission limitations,

⁴⁰⁵ These recommendations are discussed in detail in section VII.B.2 of this document.

that are not necessarily in numeric format.

The term *automatic exemption* means a generally applicable provision in a SIP that would provide that if certain conditions existed during a period of excess emissions, then those exceedances would not be considered violations of the applicable emission limitations.

The term *director's discretion provision* means, in general, a regulatory provision that authorizes a state regulatory official unilaterally to grant exemptions or variances from otherwise applicable emission limitations or control measures, or to excuse noncompliance with otherwise applicable emission limitations or control measures, which would be binding on the EPA and the public.

The term *emission limitation* means, in the context of a SIP, a legally binding restriction on emissions from a source or source category, such as a numerical emission limitation, a numerical emission limitation with higher or lower levels applicable during specific modes of source operation, a specific technological control measure requirement, a work practice standard, or a combination of these things as components of a comprehensive and continuous emission limitation in a SIP provision. In this respect, the term *emission limitation* is defined as in section 302(k) of the CAA. By definition, an emission limitation can take various forms or a combination of forms, but in order to be permissible in a SIP it must be applicable to the source continuously, *i.e.*, cannot include periods during which emissions from the source are legally or functionally exempt from regulation. Regardless of its form, a fully approvable SIP emission limitation must also meet all substantive requirements of the CAA applicable to such a SIP provision, *e.g.*, the statutory requirement of section 172(c)(1) for imposition of reasonably available control measures and reasonably available control technology (RACT and RACT) on sources located in designated nonattainment areas.

The term *excess emissions* means the emissions of air pollutants from a source that exceed any applicable SIP emission limitation. In particular, this term includes those emissions above the otherwise applicable SIP emission limitation that occur during startup, shutdown, malfunction or other modes of source operation, *i.e.*, emissions that would be considered violations of the applicable emission limitation but for an impermissible automatic or discretionary exemption from such emission limitation.

The term *malfunction* means a sudden and unavoidable breakdown of process or control equipment.

The term *shutdown* means, generally, the cessation of operation of a source for any reason. In this document, the EPA uses this term in the generic sense. In individual SIP provisions it may be appropriate to include a specifically tailored definition of this term to address a particular source category for a particular purpose.

The term *SSM* refers to startup, shutdown or malfunction at a source. It does not include periods of maintenance at such a source. An SSM event is a period of startup, shutdown or malfunction during which there are exceedances of the applicable emission limitations and thus excess emissions.

The term *startup* means, generally, the setting in operation of a source for any reason. In this document, the EPA uses this term in the generic sense. In an individual SIP provision it may be appropriate to include a specifically tailored definition of this term to address a particular source category for a particular purpose.

B. Emission Limitations in SIPs Must Apply Continuously During All Modes of Operation, Without Automatic or Discretionary Exemptions or Overly Broad Enforcement Discretion Provisions That Would Bar Enforcement by the EPA or by Other Parties in Federal Court Through a Citizen Suit

In accordance with CAA section 302(k), SIPs must contain emission limitations that "limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis." All of the specific requirements of a SIP emission limitation must be discernible in the SIP, for clarity preferably within a single section or provision; must meet the applicable substantive and stringency requirements of the CAA; and must be legally and practically enforceable.

To the extent that a SIP provision allows any period of time when a source is *not* subject to any requirement that limits emissions, the requirements limiting the source's emissions by definition cannot do so "on a continuous basis." Such a source would not be subject to an "emission limitation," as required by the definition of that term under section 302(k). However, the CAA allows SIP provisions that include numerical limitations, specific technological control requirements and/or work practice requirements that limit emissions during startup and shutdown as components of a continuously applicable emission limitation, as

discussed in section XI.C of this document.

Accordingly, automatic or discretionary exemption provisions applicable during SSM events are impermissible in SIPs. This impermissibility applies even for "brief" exemptions from limits on emissions, because such exemptions nevertheless render the limitation noncontinuous. Furthermore, the fact that a SIP provision includes prerequisites to qualifying for an SSM exemption does not mean those prerequisites are themselves an "alternative emission limitation" applicable during SSM events.

Automatic exemptions. A typical SIP provision that includes an impermissible automatic exemption would provide that a source has to meet a specific emission limitation during all modes of operation except startup, shutdown and malfunction; by definition any excess emissions during such events would not be violations and thus there could be no enforcement based on those excess emissions. With respect to automatic exemptions from emission limitations in SIPs, the EPA's longstanding interpretation of the CAA is that such exemptions are impermissible because they are inconsistent with the fundamental requirements of the CAA. Automatic exemptions from otherwise applicable emission limitations render those emission limitations less than continuous as required by CAA sections 302(k), 110(a)(2)(A) and 110(a)(2)(C), thereby inconsistent with a fundamental requirement of the CAA and thus substantially inadequate as contemplated in CAA section 110(k)(5).

Discretionary exemptions. A typical SIP provision that includes an impermissible "director's discretion" component would purport to authorize air agency personnel to modify existing SIP requirements under certain conditions, *e.g.*, to grant a variance from an otherwise applicable emission limitation if the source could not meet the requirement in certain circumstances.⁴⁰⁶ Director's discretion provisions operate to allow air agency personnel to make unilateral decisions on an *ad hoc* basis, up to and including the granting of complete exemptions for

⁴⁰⁶ The EPA notes that problematic "director's discretion" provisions are not limited only to those that purport to authorize alternative emission limitations from those required in a SIP. Other problematic director's discretion provisions include those that purport to provide for discretionary changes to other substantive requirements of the SIP, such as applicability, operating requirements, recordkeeping requirements, monitoring requirements, test methods or alternative compliance methods.

emissions during SSM events, thereby negating any possibility of enforcement for what would be violations of the otherwise applicable emission limitation. With respect to such director's discretion provisions in SIPs, the EPA interprets the CAA to prohibit these if they provide unbounded discretion to allow what would amount to a case-specific revision of the SIP without meeting the statutory requirements of the CAA for SIP revisions. In particular, the EPA interprets the CAA to preclude SIP provisions that provide director's discretion authority to create discretionary exemptions for violations when the CAA would not allow such exemptions in the first instance.

If an air agency elects to have SIP provisions that contain a director's discretion feature, then to be consistent with CAA requirements the provisions must be structured so that any resulting variances or other deviations from the emission limitation or other SIP requirements have no federal law validity, unless and until the EPA specifically approves that exercise of the director's discretion as a SIP revision. Barring such a later ratification by the EPA through a SIP revision, the exercise of director's discretion is only valid for state (or tribal) law purposes and would have no bearing in the event of an action to enforce the provision of the SIP as it was originally approved by the EPA.

Adoption of the EPA's NSPS or NESHAP that have not yet been revised. The EPA has recently begun revising and will continue to revise NSPS and NESHAP as needed, to make the EPA's regulations consistent with CAA requirements by removing exemptions and affirmative defense provisions applicable to SSM events, and generally on the same legal basis as for this action. A state should not submit an NSPS or NESHAP for inclusion into its SIP as an emission limitation (whether through incorporation by reference or otherwise) unless either: (i) That NSPS or NESHAP does not include an exemption or affirmative defense for SSM events; or (ii) the state takes action as part of the SIP submission to render such exemption or affirmative defense inapplicable to the SIP emission limitation. Because SIP provisions must apply continuously, including during SSM events, the EPA can no longer approve SIP submissions that include any emission limitations with such exemptions, even if those emission limitations are NSPS or NESHAP regulations that the EPA has not yet revised to make consistent with CAA requirements. Alternatively, states may elect to adopt an existing NSPS or

NESHAP as a SIP provision, so long as the SIP provision excludes the exemption or affirmative defense applicable to SSM events.⁴⁰⁷ States may also wish to replace the SSM exemption in NSPS or NESHAP regulations with appropriately developed alternative emission limitations that apply during startup and shutdown in lieu of the SSM exemption. Otherwise, the EPA's approval of the deficient SSM exemption provisions into the SIP would contravene CAA requirements for SIP provisions and would potentially result in misinterpretation or misapplication of the standards by regulators, regulated entities, courts and members of the public. The EPA emphasizes that the inclusion of an NSPS or NESHAP as an emission limitation in a state's SIP is different and distinct from reliance on such standards indirectly, such as reliance on the NSPS or NESHAP as a source of emission reductions that may be taken into account for SIP planning purposes in emissions inventories or attainment demonstrations. For those uses, states may continue to rely on the EPA's NSPS and NESHAP regulations, even those that have not yet been revised to remove inappropriate exemptions, in accordance with the requirements applicable to those SIP planning functions.

Other modes of normal operation. SIPs also may not create automatic or discretionary exemptions from otherwise applicable emission limitations during periods such as "maintenance," "load change," "soot-blowing," "on-line operating changes" or other similar normal modes of operation. Like startup and shutdown, the EPA considers all of these to be modes of normal operation at a source, for which the source can be designed, operated and maintained in order to meet an applicable emission limitations and during which the source should be expected to control and minimize emissions. Excess emissions that occur during planned and predicted periods should be treated as violations of applicable emission limitations. Accordingly, exemptions for emissions during these periods of normal source operation are not consistent with CAA requirements.

⁴⁰⁷ Under CAA section 116, states have the explicit general authority to regulate more stringently than the EPA. Indeed, under section 116 states can regulate sources subject to EPA regulations promulgated under section 111 or section 112 so long as they do not regulate them less stringently. According, the EPA believes that states may elect to adopt EPA regulations under section 111 or section 112 as SIP provisions and expressly eliminate the exemptions for emissions during SSM events.

It may be appropriate for an air agency to establish an alternative numerical limitation or other form of control measure that applies during these modes of source operation, as for startup and shutdown events, but any such alternative emission limitation should be developed using the same criteria that the EPA recommends for alternative emission limitations applicable during startup and shutdown. Similarly, any SIP provision that includes an emission limitation for sources that includes alternative emission limitations applicable to modes of operation such as "maintenance," "load change," "soot-blowing" or "on-line operating changes" must also meet the applicable level of stringency for that type of emission limitation and be practically and legally enforceable.

C. Emission Limitations in SIPs May Contain Components Applicable to Different Modes of Operation That Take Different Forms, and Numerical Emission Limitations May Have Differing Levels and Forms for Different Modes of Operation

There are approaches other than exemptions that would be consistent with CAA requirements for SIP provisions that states can use to address excess emissions during certain events. While automatic exemptions and director's discretion exemptions from otherwise applicable emission limitations for SSM events are not consistent with the CAA, SIPs may include criteria and procedures for the use of enforcement discretion by air agency personnel, as described in section XI.E of this document. Similarly, SIPs may, rather than exempt excess emissions, include emission limitations that subject those emissions to alternative numerical limitations or other control requirements during startup and shutdown events or other normal modes of operation, so long as those components of the emission limitations meet applicable CAA requirements and are legally and practically enforceable.

The EPA does not interpret section 110(a)(2) or section 302(k) to require that an emission limitation in a SIP provision be composed of a single, uniformly applicable numerical emission limitation. The text of section 110(a)(2) and section 302(k) does not require states to impose emission limitations that include a static, inflexible standard. The critical aspect for purposes of section 302(k) is that the SIP provision impose limits on emissions on a continuous basis, regardless of whether the emission

limitation as a whole is expressed numerically or as a combination of numerical limitations, specific control technology requirements and/or work practice requirements applicable during specific modes of operation, and regardless of whether the emission limitation is static or variable. Thus, emission limitations in SIP provisions do not have to be composed solely of numerical emission limitations applicable at all times. For example, so long as the SIP provision meets other applicable requirements, it may impose different numerical limitations for startup and shutdown. Also, for example, SIPs can contain numerical emission limitations applicable only to some periods and other forms of controls applicable only to some periods, with certain periods perhaps subject to both types of limitation. Thus, SIP emission limitations: (i) Do not need to be numerical in format; (ii) do not have to apply the same limitation (*e.g.*, numerical level) at all times; and (iii) may be composed of a combination of numerical limitations, specific technological control requirements and/or work practice requirements, with each component of the emission limitation applicable during a defined mode of source operation. In practice, it may be that numerical emission limitations are the most appropriate from a regulatory perspective (*e.g.*, to be legally and practically enforceable) and thus the emission limitation would need to be established in this form to meet CAA requirements. It is important to emphasize, however, that regardless of how the state structures or expresses a SIP emission limitation—whether solely as one numerical limitation, as a combination of different numerical limitations or as a combination of numerical limitations, specific technological control requirements and/or work practice requirements that apply during certain modes of operation such as startup and shutdown—the emission limitation as a whole must be continuous, must meet applicable CAA stringency requirements and must be legally and practically enforceable.⁴⁰⁸

Startup and shutdown are part of the normal operation of a source and should be accounted for in the design and

operation of the source.⁴⁰⁹ It should be possible to determine an appropriate form and degree of emission control during startup and shutdown and to achieve that control on a regular basis. Thus, sources should be required to meet defined SIP emission limitations during startup and shutdown. However, the EPA interprets the CAA to permit SIP emission limitations that include alternative emission limitations specifically applicable during startup and shutdown. Regarding startup and shutdown periods, the EPA considers the following to be the correct approach to creating an emission limitation: (i) The emission limitation contains no exemption for emissions during SSM events; (ii) the component of any alternative emission limitation that applies during startup and shutdown is clearly stated and obviously is an emission limitation that applies to the source; (iii) the component of any alternative emission limitation that applies during startup and shutdown meets the applicable stringency level for this type of emission limitation; and (iv) the emission limitation contains requirements to make it legally and practically enforceable. Section XI.D of this document contains more specific recommendations to states for developing alternative emission limitations.

In contrast to startup and shutdown, a malfunction is unpredictable as to the timing of the start of the malfunction event, its duration and its exact nature. The effect of a malfunction on emissions is therefore unpredictable and variable, making the development of an alternative emission limitation for malfunctions problematic. There may be rare instances in which certain types of malfunctions at certain types of sources are foreseeable and foreseen and thus are an expected mode of source operation. In such circumstances, the EPA believes that sources should be expected to meet the otherwise applicable emission limitation in order to encourage sources to be properly designed, maintained and operated in order to prevent or minimize any such malfunctions. To the extent that a given type of malfunction is so foreseeable and foreseen that a state considers it a

normal mode of operation that is appropriate for a specifically designed alternative emission limitation, then such alternative should be developed in accordance with the recommended criteria for alternative emission limitations. The EPA does not believe that generic general-duty provisions, such as a general duty to minimize emissions, is sufficient as an alternative emission limitation for any type of event including malfunctions.

States developing SIP revisions to remove impermissible exemption provisions from emissions limitations may choose to consider reassessing particular emission limitations, for example to determine whether limits originally applicable only during non-SSM periods can be revised such that well-managed emissions during planned operations such as startup and shutdown would not exceed the revised emission limitation, while still protecting air quality and meeting other applicable CAA requirements. Such a revision of an emission limitation will need to be submitted as a SIP revision for EPA approval if the existing limitation to be changed is already included in the SIP or if the existing SIP relies on the particular existing emission limitation to meet a CAA requirement.

Some SIPs contain other generic regulatory requirements frequently referred to as “general duty” type requirements, such as a general duty to minimize emissions at all times, a general duty to use good engineering judgment at all times or a general duty not to cause a violation of the NAAQS at any time. To the extent that such other general-duty requirement is properly established and legally and practically enforceable, the EPA would agree that it may be an appropriate separate requirement to impose upon sources in addition to the (continuous) emission limitation. The EPA itself imposes separate general duties of this type in appropriate circumstances. The existence of these generic provisions does not, however, legitimize exemptions for emissions during SSM events in a SIP provision that imposes an emission limitation.

General-duty requirements that are not clearly part of or explicitly cross-referenced in a SIP emission limitation cannot be viewed as a component of a continuous emission limitation. Even if clearly part of or explicitly cross-referenced in the SIP emission limitation, however, a given general-duty requirement may not be consistent with the applicable stringency requirements for SIP provisions that should apply during startup and

⁴⁰⁸ The EPA notes that CAA section 123 explicitly prohibits certain intermittent or supplemental controls on sources. In a situation where an emission limitation is continuous, by virtue of the fact that it has components applicable during all modes of source operation, the EPA would not interpret the components that applied only during certain modes of operation, *e.g.*, startup and shutdown, to be prohibited intermittent or supplemental controls.

⁴⁰⁹ Every source is designed, maintained and operated with the expectation that the source will at least occasionally start up and shut down, and thus these modes of operation are “normal” in the sense that they are to be expected. The EPA uses this term in the ordinary sense of the word to distinguish between such predictable modes of source operation and genuine “malfunctions,” which are by definition supposed to be unpredictable and unforeseen events that could not have been precluded by proper source design, maintenance and operation.

shutdown. In general, the EPA believes that a legally and practically enforceable alternative emission limitation applicable during startup and shutdown should be expressed as a numerical limitation, a specific technological control requirement or a specific work practice applicable to affected sources during specifically defined periods or modes of operation. Accordingly, while states are free to include general-duty provisions in their SIPs as separate additional requirements, for example, to ensure that owners and operators act consistent with reasonable standards of care, the EPA does not recommend using these background standards to bridge unlawful interruptions in an emission limitation.⁴¹⁰

D. Recommendations for Development of Alternative Emission Limitations Applicable During Startup and Shutdown

A state can develop special, alternative emission limitations that apply during startup or shutdown if the source cannot meet the otherwise applicable emission limitation in the SIP. SIP provisions may include alternative emission limitations for startup and shutdown as part of a continuously applicable emission limitation when properly developed and otherwise consistent with CAA requirements. However, if a non-numerical requirement does not itself (or in combination with other components of the emission limitation) limit the quantity, rate or concentration of air pollutants on a continuous basis, then the non-numerical standard (or overarching requirement) does not meet the statutory definition of an emission limitation under section 302(k).

In cases in which measurement of emissions during startup and/or shutdown is not reasonably feasible, it may be appropriate for an emission limitation to include as a component a control for startup and/or shutdown periods other than a numerically expressed emission limitation.

The federal NESHAP and NSPS regulations and the technical materials in the public record for those rules may provide assistance for states as they develop and consider emission limitations and alternative emission limitations for sources in their states,

and definitions of startup and shutdown events and work practices for them found in these regulations may be appropriate for adoption by the state in certain circumstances. In particular, the NSPS regulations should provide very relevant information for sources of the same type, size and control equipment type, even if the sources were not constructed or modified within a date range that would make them subject to the NSPS. The EPA therefore encourages states to explore these approaches.

The EPA recommends that, in order to be approvable (*i.e.*, meet CAA requirements), alternative requirements applicable to the source during startup and shutdown should be narrowly tailored and take into account considerations such as the technological limitations of the specific source category and the control technology that is feasible during startup and shutdown. The EPA recommends the following seven specific criteria as appropriate considerations for developing emission limitations in SIP provisions that apply during startup and shutdown:

(1) The revision is limited to specific, narrowly defined source categories using specific control strategies (*e.g.*, cogeneration facilities burning natural gas and using selective catalytic reduction);

(2) Use of the control strategy for this source category is technically infeasible during startup or shutdown periods;

(3) The alternative emission limitation requires that the frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable;

(4) As part of its justification of the SIP revision, the state analyzes the potential worst-case emissions that could occur during startup and shutdown based on the applicable alternative emission limitation;

(5) The alternative emission limitation requires that all possible steps are taken to minimize the impact of emissions during startup and shutdown on ambient air quality;

(6) The alternative emission limitation requires that, at all times, the facility is operated in a manner consistent with good practice for minimizing emissions and the source uses best efforts regarding planning, design, and operating procedures; and

(7) The alternative emission limitation requires that the owner or operator's actions during startup and shutdown periods are documented by properly signed, contemporaneous operating logs or other relevant evidence.

If a state elects to create an emission limitation with different levels of

control applicable during specifically defined periods of startup and shutdown than during other normal modes of operation, then the resulting emission limitation must meet the substantive requirements applicable to the type of SIP provision at issue, meet the applicable level of stringency for that type of emission limitation and be legally and practically enforceable. Alternative emission limitations applicable during startup and shutdown cannot allow an inappropriately high level of emissions or an effectively unlimited or uncontrolled level of emissions, as those would constitute impermissible *de facto* exemptions for emissions during certain modes of operation.

E. Enforcement Discretion Provisions

One approach other than exemptions that would be consistent with CAA requirements for SIP provisions that states can use to address excess emissions during SSM events is to include in the SIP criteria and procedures for the use of enforcement discretion by air agency personnel. SIPs may contain such provisions concerning the exercise of discretion by the air agency's own personnel, but such provisions cannot bar enforcement by the EPA or by other parties through a citizen suit.

Pursuant to the CAA, all parties with authority to bring an enforcement action to enforce SIP provisions (*i.e.*, the state, the EPA or any parties who qualify under the citizen suit provision of section 304) have enforcement discretion that they may exercise as they deem appropriate in any given circumstances. For example, if the event that causes excess emissions is an actual malfunction that occurred despite reasonable care by the source operator to avoid malfunctions, then each of these parties may decide that no enforcement action is warranted. In the event that any party decides that an enforcement action is warranted, then it has enforcement discretion with respect to what remedies to seek from the court for the violation (*e.g.*, injunctive relief, compliance order, monetary penalties or all of the above), as well as the type of injunctive relief and/or amount of monetary penalties sought.⁴¹¹

As part of state programs governing enforcement, states can include regulatory provisions or may adopt policies setting forth criteria for how they plan to exercise their own

⁴¹⁰ For example, the EPA has concerns the some general-duty provisions, if at any point relied upon as the sole requirement purportedly limiting emissions, could undermine the ability to ensure compliance with SIP emission limitations relied on to achieve the NAAQS and other relevant CAA requirements at all times. See section 110(a)(2)(A), (C); *US Magnesium, LLC v. EPA*, 690 F.3d 1157, 1161–62 (10th Cir. 2012).

⁴¹¹ The EPA notes that only the state and the Agency have authority to seek criminal penalties for knowing and intentional violation of CAA requirements. The EPA has this explicit authority under CAA section 113(c).

enforcement authority. Under section 110(a)(2), states must have adequate authority to enforce provisions adopted into the SIP, but states can establish criteria for how they plan to exercise that authority. Such enforcement discretion provisions cannot, however, impinge upon the enforcement authority of the EPA or of others pursuant to the citizen suit provision of the CAA. Such enforcement discretion provisions in a SIP would be inconsistent with the enforcement structure provided in the CAA. Specifically, the statute provides explicit independent enforcement authority to the EPA under CAA section 113 and to citizens under CAA section 304. Thus, the CAA contemplates that the EPA and citizens have authority to pursue enforcement for a violation even if the state elects not to do so. The EPA and citizens, and any federal court in which they seek to pursue an enforcement claim for violation of SIP requirements, must retain the authority to evaluate independently whether a source's violation of an emission limitation warrants enforcement action. Potential for enforcement by the EPA or through a citizen suit provides an important safeguard in the event that the state lacks resources or ability to enforce violations and provides additional deterrence. Accordingly, a SIP provision that operates at the state's election to eliminate the authority of the EPA or the public to pursue enforcement actions in federal court would undermine the enforcement structure of the CAA and would thus be substantially inadequate to meet fundamental requirements of the CAA.

Also, states should not adopt overly broad enforcement discretion provisions for inclusion in their SIPs, even for their own personnel. Section 110(a)(2) requires states to have adequate enforcement authority, and overly broad enforcement discretion provisions would run afoul of this requirement if they have the effect of precluding adequate state authority to enforce SIP requirements. If such provisions are sufficiently specific, provide for sufficient public process and are sufficiently bounded, so that it is possible to anticipate at the time of the EPA's approval of the SIP provision how that provision will actually be applied and the potential adverse impacts thereof, then such a provision might meet basic CAA requirements. In essence, if it is possible to anticipate and evaluate in advance how the exercise of enforcement discretion could affect compliance with other CAA requirements, then it may be possible to determine in advance that the

preauthorized exercise of director's discretion will not interfere with other CAA requirements, such as providing for attainment and maintenance of the NAAQS.

When using enforcement discretion in determining whether an enforcement action is appropriate in the case of excess emissions during a malfunction, satisfaction of the following criteria should be considered:

(1) To the maximum extent practicable the air pollution control equipment, process equipment or processes were maintained and operated in a manner consistent with good practice for minimizing emissions;

(2) Repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable;

(3) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(4) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality; and

(5) The excess emissions are not part of a recurring pattern indicative of inadequate design, operation or maintenance.

F. Affirmative Defense Provisions in SIPs

The EPA believes that SIP provisions that function to alter the jurisdiction or discretion of the federal courts under CAA section 113 and section 304 to determine liability and to impose remedies are inconsistent with fundamental legal requirements of the CAA, especially with respect to the enforcement regime explicitly created by statute. Affirmative defense provisions by their nature purport to limit or eliminate the authority of federal courts to find liability or to impose remedies through factual considerations that differ from, or are contrary to, the explicit grants of authority in section 113(b) and section 113(e). These provisions are not appropriate under the CAA, no matter what type of event they apply to, what criteria they contain or what forms of remedy they purport to limit or eliminate.

Section 113(b) provides courts with explicit jurisdiction to determine liability and to impose remedies of various kinds, including injunctive relief, compliance orders and monetary

penalties, in judicial enforcement proceedings. This grant of jurisdiction comes directly from Congress, and the EPA is not authorized to alter or eliminate this jurisdiction under the CAA or any other law. With respect to monetary penalties, CAA section 113(e) explicitly includes the factors that federal courts and the EPA are required to consider in the event of judicial or administrative enforcement for violations of CAA requirements, including SIP provisions. Because Congress has already given federal courts the jurisdiction to determine what monetary penalties are appropriate in the event of judicial enforcement for a violation of a SIP provision, neither the EPA nor states can alter or eliminate that jurisdiction by superimposing restrictions on that jurisdiction and discretion granted by Congress to the courts. Accordingly, pursuant to section 110(k) and section 110(l), the EPA cannot approve any such affirmative defense provision in a SIP. If such an affirmative defense provision is included in an existing SIP, the EPA has authority under section 110(k)(5) to require a state to remove that provision.

Couching an affirmative defense provision in terms of merely defining whether the emission limitation applies and thus whether there is a "violation," as suggested by some commenters, is also problematic. If there is no "violation" when certain criteria or conditions for an "affirmative defense" are met, then there is in effect no emission limitation that applies when the criteria or conditions are met; the affirmative defense thus operates to create an exemption from the emission limitation. As explained in the February 2013 proposal, the CAA requires that emission limitations must apply continuously and cannot contain exemptions, conditional or otherwise. This interpretation is consistent with the decision in *Sierra Club v. Johnson* concerning the term "emission limitation" in section 302(k).⁴¹² Characterizing the exemptions as an "affirmative defense" runs afoul of the requirement that emission limitations must apply continuously.

The EPA wishes to be clear that the absence of affirmative defense provisions in SIPs does not alter the legal rights of sources under the CAA. In the event of an enforcement action for an exceedance of a SIP emission limitation, a source can elect to assert any common law or statutory defenses that it determines are supported, based upon the facts and circumstances surrounding the alleged violation.

⁴¹² 551 F.3d 1019 (D.C. Cir. 2008).

Under section 113(b), courts have explicit authority to impose injunctive relief, issue compliance orders, assess monetary penalties or fees and impose any other appropriate relief. Under section 113(e), federal courts are required to consider the enumerated statutory factors when assessing monetary penalties, including “such other factors as justice may require.” For example, if the exceedance of the SIP emission limitation occurs due to a malfunction, that exceedance is a violation of the applicable emission limitation but the source retains the ability to defend itself in an enforcement action and to oppose the imposition of particular remedies or to seek the reduction or elimination of monetary penalties, based on the specific facts and circumstances of the event. Thus, elimination of a SIP affirmative defense provision that purported to take away the statutory jurisdiction of the federal court to exercise its authority to impose remedies does not disarm sources in potential enforcement actions. Sources retain all of the equitable arguments they could have made under an affirmative defense provision; they must simply make such arguments to the reviewing court as envisioned by Congress in section 113(b) and section 113(e).

Once impermissible SSM exemptions are removed from the SIP, then any excess emissions during such events may be the subject of an enforcement action, in which the parties may use any appropriate evidence to prove or disprove the existence and scope of the alleged violation and the appropriate remedy for an established violation. Any alleged violation of an applicable SIP emission limitation, if not conceded by the source, must be established by the party bearing the burden of proof in a legal proceeding. The degree to which evidence of an alleged violation may derive from a specific reference method or any other credible evidence must be determined based upon the facts and circumstances of the exceedance of the emission limitation at issue.⁴¹³ Congress vested the federal courts with the authority to judge how best to weigh the evidence in an enforcement action.

⁴¹³ For example, the degree to which data from continuous opacity monitoring systems (COMS) is evidence of violations of SIP opacity or PM mass emission limitations is a factual question that must be resolved on the facts and circumstances in the context of an enforcement action. See, e.g., *Sierra Club v. Pub. Serv. Co. of Colorado, Inc.*, 894 F.Supp. 1455 (D. Colo. 1995) (allowing use of COMS data to prove opacity limit violations).

G. Anti-Backsliding Considerations

The EPA recognizes that one important consideration for air agencies as they evaluate how best to revise their SIP provisions in response to this SIP call is the nature of the analysis that will be necessary for the resulting SIP revisions under section 110(k)(3), section 110(l) and section 193. Under section 110(l), the EPA is prohibited from approving any SIP revision that would interfere with any applicable requirement concerning attainment and reasonable further progress or any other requirements of the CAA. Section 193 prohibits states from modifying regulations in place prior to November 15, 1990, unless the modification ensures equivalent or greater reductions of the pollutant. SIP revision must be evaluated for compliance with section 110(l) and section 193 on the facts and circumstances of the specific revision. Section X of this document provides three example scenarios in which a state might remove an impermissible SSM provision from its SIP, including how sections 110(l) and 193 considerations might apply. These examples are intended to provide general guidance on the considerations and the nature of the analysis that may be appropriate for different types of SIP revisions. Air agencies should contact their respective EPA Regional Offices (see the **SUPPLEMENTARY INFORMATION** section of this document) for further recommendations and assistance concerning the analysis appropriate for specific SIP revisions involving changes in SSM provisions.

XII. Environmental Justice Consideration

The final action restates the EPA’s interpretation of the statutory requirements of the CAA. Through the SIP calls issued to certain states as part of this SIP call action under CAA section 110(k)(5), the EPA is only requiring each affected state to revise its SIP to comply with existing requirements of the CAA. The EPA’s action therefore leaves to each affected state the choice as to how to revise the SIP provision in question to make it consistent with CAA requirements and to determine, among other things, which of the several lawful approaches to the treatment of excess emissions during SSM events will be applied to particular sources. The EPA has not performed an environmental justice analysis for purposes of this action, because it cannot geographically locate or quantify the resulting source-specific emission reductions. Nevertheless, the EPA believes this action will provide

environmental protection for all areas of the country.

XIII. References

The following is a list of documents that are specifically referenced in this document. Some listed documents also include a document ID number associated with the docket for this rulemaking.

1. 1982 SSM Guidance (Memorandum to Regional Administrators, Region I–X from Kathleen M. Bennett, Assistant Administrator for Air, Noise and Radiation, Subject: Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions, dated September 28, 1982), EPA–HQ–OAR–2012–0322–0005.
2. 1983 SSM Guidance (Memorandum to Regional Administrators, Region I–X from Kathleen M. Bennett, Assistant Administrator for Air, Noise and Radiation, Subject: Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions, dated February 15, 1983), EPA–HQ–OAR–2012–0322–0006.
3. 1999 SSM Guidance (Memorandum to EPA Regional Administrators, Regions I–X from Steven A. Herman and Robert Perciasepe, USEPA, Subject: State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown, dated September 20, 1999), EPA–HQ–OAR–2012–0322–0007.
4. 2001 SSM Guidance (Memorandum to EPA Regional Administrators, Regions I–X from Eric Schaeffer, Director, Office of Regulatory Enforcement, Office of Enforcement and Compliance Assurance, and John S. Seitz, Director, Office of Air Quality Planning and Standards, Office of Air and Radiation, dated December 5, 2001), EPA–HQ–OAR–2012–0322–0038.
5. “Action to Ensure Authority To Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call; Final rule,” 75 FR 77698 (December 13, 2010), EPA–HQ–OAR–2012–0322–0014.
6. *Am. Farm Bureau Fed’n v. United States EPA*, 984 F.Supp.2d 289 (M.D. Pa. 2013).
7. *Appalachian Power Co. v. EPA*, 249 F.3d 1032 (D.C. Cir. 2001).
8. *Appalachian Power Co. v. EPA*, 251 F.3d 1026 (D.C. Cir. 2001).
9. “Approval and Disapproval and Promulgation of Air Quality Implementation Plans; Colorado; Revisions to Regulation 1; Notice of proposed rulemaking,” 75 FR 42342 (July 21, 2010), EPA–HQ–OAR–2012–0322–0015, finalized as proposed at 76 FR 4540 (January 26, 2011), EPA–HQ–OAR–2012–0322–0016.
10. “Approval and Promulgation of Air Quality Implementation Plans; New Hampshire; Reasonably Available Control Technology for the 1997 8-Hour Ozone Standard; Direct final rule,” 77 FR 66388 (November 5, 2012).

11. "Approval and Promulgation of Air Quality Implementation Plans; New Hampshire; Reasonably Available Control Technology Update To Address Control Techniques Guidelines Issued in 2006, 2007, and 2008; Direct final rule," 77 FR 66921 (November 8, 2012).
12. "Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Redesignation, Maintenance Plan, and Emissions Inventories for Reading; Ozone Redesignations Policy Change; Final rule," 62 FR 24826 (May 7, 1997).
13. "Approval and Promulgation of Air Quality Implementation Plans; Utah; Redesignation Request and Maintenance Plan for Salt Lake County; Utah County; Ogden City PM₁₀ Nonattainment Area; Proposed rule," 74 FR 62717 (December 1, 2009).
14. "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; State of Arizona; Redesignation of Phoenix-Mesa Area to Attainment for the 1997 8-Hour Ozone Standard; Final rule," 79 FR 55645 (September 17, 2014).
15. "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; Ohio; Redesignation of the Ohio Portion of the Huntington-Ashland 1997 Annual Fine Particulate Matter Nonattainment Area to Attainment; Final rule," 77 FR 76883 (December 31, 2012).
16. "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; State of Arizona; Redesignation of the Phoenix-Mesa Nonattainment Area to Attainment for the 1997 8-Hour Ozone Standard; Proposed rule," 79 FR 16734 (March 26, 2014).
17. "Approval and Promulgation of Implementation Plans; Arkansas; Revisions for the Regulation and Permitting of Fine Particulate Matter; Final rule," 80 FR 11573 (March 4, 2015).
18. "Approval and Promulgation of Implementation Plans; Corrections to the Arizona and Nevada State Implementation Plans; Direct final rule," 74 FR 57051 (November 3, 2009), EPA-HQ-OAR-2012-0322-0018.
19. "Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; State of California; PM-10; Revision of Designation; Redesignation of the San Joaquin Valley Air Basin PM-10 Nonattainment Area to Attainment; Approval of PM-10 Maintenance Plan for the San Joaquin Valley Air Basin; Approval of Commitments for the East Kern PM-10 Nonattainment Area; Proposed rule," 73 FR 22307 (April 25, 2008).
20. "Approval and Promulgation of Implementation Plans; Kentucky; Approval of Revisions to the Jefferson County Portion of the Kentucky SIP; Emissions During Startups, Shutdowns, and Malfunctions," proposed at 78 FR 29683 (May 21, 2013) and finalized at 79 FR 33101 (June 10, 2014), EPA-HQ-OAR-2012-0322-0890.
21. "Approval and Promulgation of Implementation Plans; North Dakota; Revisions to the Air Pollution Control Rules; Final rule," 79 FR 63045 (October 22, 2014).
22. "Approval and Promulgation of Implementation Plans; Texas; Excess Emissions During Startup, Shutdown, Maintenance, and Malfunction Activities," 75 FR 68989 (November 10, 2010), EPA-HQ-OAR-2012-0322-0892.
23. "Approval and Promulgation of Implementation Plans; Texas; Revisions to the New Source Review (NSR) State Implementation Plan (SIP); Prevention of Significant Deterioration (PSD), Nonattainment NSR (NNSR) for the 1997 8-Hour Ozone Standard, NSR Reform, and a Standard Permit; Proposed rule," 74 FR 48467 (September 23, 2009).
24. "Approval and Promulgation of Implementation Plans; Wyoming; Revisions to the Air Quality Standards and Regulations," 79 FR 62859 (October 21, 2014).
25. "Approval and Promulgation of State Implementation Plans; Call for Sulfur Dioxide SIP Revisions for Billings/Laurel, MT [Montana]," 58 FR 41430 (August 4, 1993).
26. "Approval and Promulgation of State Implementation Plans; Michigan," 63 FR 8573 (February 20, 1998), EPA-HQ-OAR-2012-0322-0023.
27. *Arizona Public Service Co. v. EPA*, 562 F.3d 1116 (10th Cir. 2009).
28. *ATK Launch Systems, Inc. v. EPA*, 651 F.3d 1194 (10th Cir. 2011).
29. *Auer v. Robbins*, 519 U.S. 452 (1997).
30. CAA of 1970, Pub. L. 91-604, section 4(a), 84 Stat. 1676 (December 31, 1970).
31. *Catawba County, North Carolina v. EPA*, 571 F.3d 20 (D.C. Cir. 2009).
32. *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984).
33. "Clean Air Act Full Approval of Partial Operating Permit Program; Allegheny County; Pennsylvania; Direct final rule," 66 FR 55112 (November 1, 2001), EPA-HQ-OAR-2012-0322-0020.
34. *Conn. Light & Power Co. v. NRC*, 673 F.2d 525 (D.C. Cir. 1982).
35. "Correction of Implementation Plans; American Samoa, Arizona, California, Hawaii, and Nevada State Implementation Plans; Notice of proposed rulemaking," 61 FR 38664 (July 25, 1996), EPA-HQ-OAR-2012-0322-0034, finalized at 62 FR 34641 (June 27, 1997), EPA-HQ-OAR-2012-0322-0035.
36. "Corrections to the California State Implementation Plan," 69 FR 67062 (November 16, 2004), EPA-HQ-OAR-2012-0322-0017.
37. "Credible Evidence Revisions; Final rule," 62 FR 8314 (February 24, 1997).
38. "Draft Emissions Inventory Guidance for Implementation of Ozone [and Particulate Matter]* National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," April 11, 2014.
39. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012) *rev'd*, 134 S. Ct. 1584 (2014).
40. "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," Appendix B, August 2005, EPA-454/R-05-001.
41. "Federal Implementation Plan for the Billings/Laurel, MT [Montana], Sulfur Dioxide Area," 73 FR 21418 (April 21, 2008), EPA-HQ-OAR-2012-0322-0009.
42. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009).
43. February 2013 proposal ("State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction; Proposed rule," 78 FR 12459, February 22, 2013), EPA-HQ-OAR-2012-0322-0055.
44. "Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone," 63 FR 57356 (October 27, 1998), EPA-HQ-OAR-2012-0322-0037.
45. "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 76 FR 21639 (April 18, 2011), EPA-HQ-OAR-2012-0322-0010.
46. "Finding of Substantial Inadequacy of Implementation Plan; Call for Utah State Implementation Plan Revision," 75 FR 70888 (November 19, 2010), EPA-HQ-OAR-2012-0322-0012.
47. "Finding of Substantial Inadequacy of Implementation Plan; Call for Iowa State Implementation Plan Revision," 76 FR 41424 (July 14, 2011).
48. "Finding of Substantial Inadequacy of Implementation Plan; Call for California State Implementation Plan Revision," 68 FR 37746 (June 25, 2003).
49. *Florida Power & Light Co. v. Costle*, 650 F.2d 579 (5th Cir. 1981).
50. *Florida Power & Light Co. v. United States*, 846 F.2d 765 (D.C. Cir. 1988).
51. "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze," April 2007, EPA-454/B-07-002.
52. "Guidelines for Estimating and Applying Rule Effectiveness for Ozone/CO State Implementation Plan Base Year Inventories," November 1992, EPA-4S2JR-92.010.
53. H. Rept. 101-490.
54. H.R. 95-294 (1977).
55. *Howmet Corp. v. EPA*, 614 F.3d 544 (D.C. Cir. 2010).
56. *Industrial Environmental Association v. Browner*, No. 97-71117 (9th Cir. May 26, 2000).
57. *Ky. Res Council v. EPA*, 467 F.3d 986 (6th Cir. 2006).
58. *Luminant Generation v. EPA*, 714 F.3d 841 (5th Cir. 2013) [EPA-HQ-OAR-2012-0322-0881], *cert. denied*, 134 S. Ct. 387 (2013).

59. Memorandum, "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO₂ National Ambient Air Quality Standard," from T. Fox, EPA/OAQPS, to Regional Air Division Directors, March 1, 2011.
60. Memorandum, "Estimate of Potential Direct Costs of SSM SIP Calls to Air Agencies," April 28, 2015.
61. Memorandum, "Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Section 110(a)(1) and 110(a)(2)," from Stephen D. Page, Director, OAQPS, to Regional Air Directors, Regions 1–10, September 13, 2013.
62. Memorandum, "Statutory, Regulatory, and Policy Context for this Rulemaking," February 4, 2013, EPA–HQ–OAR–2012–0322–0029 (Background Memorandum).
63. *Mich. Dep't of Env'tl. Quality v. Browner*, 230 F.3d 181 (6th Cir. 2000).
64. *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000).
65. *Mid-Tex Elec. Co-op, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985).
66. *Montana Sulphur & Chemical Co. v. EPA*, 666 F.3d 1174 (9th Cir. 2012) [EPA–HQ–OAR–2012–0322–0032], *cert. denied*, 133 S. Ct. 409 (2012).
67. *Motor Vehicle Mfrs Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29 (1983).
68. "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed rule," 80 FR 3089 (January 21, 2015).
69. "National Emission Standards for Hazardous Air Pollutants Residual Risk and Technology Review for Flexible Polyurethane Foam Production; Final rule," 79 FR 48073 (August 15, 2014).
70. "National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards; and Manufacture of Amino/Phenolic Resins; Final rule," 79 FR 60897 (October 8, 2014).
71. *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).
72. *Nat'l Gypsum v. EPA*, 968 F.2d 40 (D.C. Cir. 1992).
73. *New Hampshire v. Maine*, 532 U.S. 742 (2011).
74. *North Dakota v. EPA*, 730 F.3d 750 (8th Cir. 2013), *cert. denied*, 134 S. Ct. 2662 (2014).
75. *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014), EPA–HQ–OAR–2012–0322–0885.
76. *Oklahoma v. EPA*, 723 F.3d 1201 (10th Cir. 2013), *cert. denied*, 134 S. Ct. 2662 (2014).
77. "Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards; Final rule," 79 FR 79017 (December 31, 2014).
78. "Oil and Natural Gas Sector: Reconsideration of Additional Provisions of New Source Performance Standards; Proposed rule," 79 FR 41752 (July 17, 2014).
79. *Omnipoint Corp. v. Fed. Commc'ns Comm'n*, 78 F.3d 620 (D.C. Cir. 1996).
80. Petition ("Petition to Find Inadequate and Correct Several State Implementation Plans under Section 110 of the Clean Air Act Due to Startup, Shutdown, Malfunction, and/or Maintenance Provisions," on behalf of Sierra Club, dated June 30, 2011), EPA–HQ–OAR–2012–0322–0003.
81. "Proposed Settlement Agreement, Clean Air Act Citizen Suit," 76 FR 54465 (September 1, 2011).
82. "Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans; Final rules," 45 FR 52676 (August 7, 1980).
83. "Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971; Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978; Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units; and Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units; Final rule," 74 FR 5072 (January 28, 2009).
84. S. Rep. No. 91–1196 (1970).
85. "Selection of Sequence of Mandatory Sanctions for Findings Made Pursuant to Section 179 of the Clean Air Act," 59 FR 39832 (August 4, 1994), EPA–HQ–OAR–2012–0322–0033, codified at 40 CFR 52.31.
86. Settlement Agreement executed November 30, 2011, to address a lawsuit filed by Sierra Club and WildEarth Guardians in the United States District Court for the Northern District of California, in *Sierra Club et al. v. Jackson*, No. 3:10–cv–04060–CRB (N.D. Cal.), EPA–HQ–OAR–2012–0322–0039.
87. *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004).
88. *Sierra Club v. Georgia Power Co.*, 443 F.3d 1346 (11th Cir. 2006).
89. *Sierra Club v. Johnson*, 551 F.3d 1019 (D.C. Cir. 2008), EPA–HQ–OAR–2012–0322–0048.
90. *Sierra Club v. Pub. Serv. Co. of Colorado, Inc.*, 894 F.Supp. 1455 (D. Colo. 1995).
91. SNPR ("State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction; Supplemental Proposal To Address Affirmative Defense Provisions in States Included in the Petition for Rulemaking and in Additional States; Supplemental notice of proposed rulemaking," 79 FR 55919, September 17, 2014), EPA–HQ–OAR–2012–0322–0909.
92. *Southwestern Pennsylvania Growth Alliance v. EPA*, 114 F.3d 984 (6th Cir. 1998).
93. *State Farm Mut. Auto Ins. Co. v. Campbell*, 538 U.S. 408 (2003).
94. "State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown, and Malfunction; Notice of extension of public comment period," 78 FR 20855 (April 8, 2013), EPA–HQ–OAR–2012–0322–0126.
95. "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992).
96. *Tex. Tin Corp. v. EPA*, 992 F.2d 353 (D.C. Cir. 1993).
97. *Texas v. EPA*, No. 10–60961, 2011 WL 710498 (5th Cir. Feb. 24, 2011).
98. *Train v. NRDC*, 421 U.S. 60 (1975).
99. *U.S. v. Ford Motor Co.*, 736 F.Supp. 1539 (W.D. Mo. 1990).
100. *U.S. v. General Motors Corp.*, 702 F.Supp. 133 (N.D. Texas 1988).
101. *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976).
102. *US Magnesium, LLC v. EPA*, 690 F.3d 1157 (10th Cir. 2012), EPA–HQ–OAR–2012–0322–0031.
103. *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997).
104. *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001).
105. *Wyo. Outdoor Council v. U.S. Forest Serv.*, 165 F.3d 43 (D.C. Cir. 1999).

XIV. Statutory and Executive Order Reviews

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

This action is a "significant regulatory action" that was submitted to the Office of Management and Budget (OMB) for review because it raises novel legal or policy issues. Any changes made in response to OMB recommendations have been documented in the docket.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. This action merely reiterates the EPA's interpretation of the statutory requirements of the CAA and does not require states to collect any additional information. Through the SIP calls issued to certain states as part of this action under CAA section 110(k)(5), the EPA is only requiring each affected state to revise its SIP to comply with existing requirements of the CAA.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. Any 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 this rule. This action

will not impose any requirements on small entities. Instead, the action merely reiterates the EPA's interpretation of the statutory requirements of the CAA. Through the SIP calls issued to certain states as part of this SIP call action under CAA section 110(k)(5), the EPA is only requiring each affected state to revise its SIP to comply with existing requirements of the CAA. The EPA's action therefore leaves to each affected state the choice as to how to revise the SIP provision in question to make it consistent with CAA requirements and to determine, among other things, which of the several lawful approaches to the treatment of excess emissions during SSM events will be applied to particular sources.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any federal mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no new enforceable duty on any state, local or tribal governments or the private sector. The regulatory requirements of this action apply to certain states for which the EPA is issuing a SIP call. To the extent that such affected states allow local air districts or planning organizations to implement portions of the state's obligation under the CAA, the regulatory requirements of this action do not significantly or uniquely affect small governments because those governments have already undertaken the obligation to comply with the CAA.

E. 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.

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

This action does not have tribal implications as specified in Executive Order 13175. In this action, the EPA is not addressing any tribal implementation plans. This action is limited to states. Thus, Executive Order 13175 does not apply to this action.

G. 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, in prescribing the EPA's action for states regarding their obligations for SIPs under the CAA, it implements specific standards established by Congress in statutes.

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

This action is not a “significant energy action” because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. This action merely prescribes the EPA's action for states regarding their obligations for SIPs under the CAA.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations. The action is intended to ensure that all communities and populations across the affected states, including minority, low-income and indigenous populations overburdened by pollution, receive the full human health and environmental protection provided by the CAA. This action concerns states' obligations regarding the treatment they give, in rules included in their SIPs under the CAA, to excess emissions during startup, shutdown and malfunctions. This action requires that certain states bring their treatment of these emissions into line with CAA requirements, which will lead to certain sources' having greater incentives to control emissions during such events.

K. Determination Under Section 307(d)

Pursuant to CAA section 307(d)(1)(V), the Administrator determines that this action is subject to the provisions of section 307(d). Section 307(d) establishes procedural requirements specific to rulemaking under the CAA. Section 307(d)(1)(V) provides that the provisions of section 307(d) apply to

“such other actions as the Administrator may determine.”

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).

XV. Judicial Review

The Administrator determines that this action is “nationally applicable” within the meaning of section 307(b)(1) of the CAA. This action in scope and effect extends to numerous judicial circuits because the action on the Petition extends to states throughout the country. In these circumstances, section 307(b)(1) and its legislative history authorize the Administrator to find the action to be of “nationwide scope or effect” and thus to indicate the venue for challenges to be in the D.C Circuit. Thus, any petitions for review must be filed in the U.S. Court of Appeals for the District of Columbia Circuit.

In addition, pursuant to CAA section 307(d)(1)(V), the EPA is determining that this rulemaking action is subject to the requirements of section 307(d), which establish procedural requirements specific to rulemaking under the CAA. In the event there is a judicial challenge to this action and a court determines that the EPA has erred with respect to any portion of this action, the EPA intends the components of this action to be severable.

XVI. Statutory Authority

The statutory authority for this action is provided by CAA section 101 *et seq.* (42 U.S.C. 7401 *et seq.*).

List of Subjects in 40 CFR Part 52

Environmental protection, Affirmative defense, Air pollution control, Carbon dioxide, Carbon dioxide equivalents, Carbon monoxide, Excess emissions, Greenhouse gases, Hydrofluorocarbons, Incorporation by reference, Intergovernmental relations, Lead, Methane, Nitrogen dioxide, Nitrous oxide, Ozone, Particulate matter, Perfluorocarbons, Reporting and recordkeeping requirements, Startup, shutdown and malfunction, State implementation plan, Sulfur hexafluoride, Sulfur oxides, Volatile organic compounds.

Dated: May 22, 2015.

Gina McCarthy,
Administrator.

[FR Doc. 2015–12905 Filed 6–11–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-HQ-OAR-2021-0863; FRL-9250-01-OAR]

Findings of Failure To Submit State Implementation Plan Revisions in Response to the 2015 Findings of Substantial Inadequacy and SIP Calls To Amend Provisions Applying To Excess Emissions During Periods of Startup, Shutdown, and Malfunction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final action.

SUMMARY: The Environmental Protection Agency (EPA) is taking final action to find that 12 States and local air pollution control agencies failed to submit State Implementation Plan (SIP) revisions required by the Clean Air Act (CAA) in a timely manner to address EPA's 2015 findings of substantial inadequacy and "SIP calls" for provisions applying to excess emissions during periods of startup, shutdown, and malfunction (SSM). This action triggers certain CAA deadlines for the EPA to impose sanctions if a State does not submit a complete SIP revision addressing the outstanding requirements and to promulgate a Federal Implementation Plan (FIP) if the EPA does not approve the State's submission as a SIP revision.

DATES: This action is effective February 11, 2022.

FOR FURTHER INFORMATION CONTACT:

General questions concerning this notice should be addressed to, Erin Lowder, Office of Air Quality Planning and Standards, Air Quality Policy Division, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711; by telephone (919) 541-5421; or by email at lowder.erin@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. How is the preamble organized?

The information presented in this preamble is organized as follows:

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B. Notice and Comment Under the Administrative Procedure Act (APA)

Section 553(b)(3)(B) of the Administrative Procedure Act (APA), 5 U.S.C. 553(b)(3)(B), provides that, when an agency for good cause finds that notice and public procedures are impracticable, unnecessary, or contrary to the public interest, the agency may issue a rule without providing notice and an opportunity for public comment. The EPA has determined that there is good cause for making this final agency action without prior proposal and opportunity for comment because no significant EPA judgment is involved in making findings of failure to submit SIPs, or elements of SIPs, required by

the Clean Air Act (CAA), where states have made no submissions to meet the requirement. As is discussed in further detail later, pursuant to CAA section 110(k)(1)(B), the EPA "shall determine" no later than 6 months after the date by which a state is required to submit a SIP whether a state has made a submission that meets the minimum completeness criteria established pursuant to CAA section 110(k)(1)(A). EPA exercises no significant judgment in making a determination that a state failed to make a submission and subsequently issuing a finding of failure to submit. Thus, notice and public procedures are unnecessary to take this action. The EPA finds that this constitutes good cause under 5 U.S.C. 553(b)(3)(B).

C. How can I get copies of this document and other related information?

The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2021-0863. Publicly available docket materials are available either electronically through <http://www.regulations.gov> or in hard copy at the EPA Docket Center, EPA/DC, William Jefferson Clinton Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. The telephone number for the Public Reading Room is (202) 566-1744 and the telephone number for the Office of Air and Radiation Docket and Information Center is (202) 566-1742. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

D. Where do I go if I have specific air agency questions?

For questions related to specific air agencies mentioned in this notice, please contact the appropriate EPA Regional Office:

Regional offices	Air agencies
EPA Region 1: Mr. John Rogan, Chief, Air Program Branch, EPA Region 1, 5 Post Office Square, Boston, MA 02109. rogan.john@epa.gov .	Rhode Island.
EPA Region 3: Mr. Mike Gordon, Chief, Planning and Implementation Branch, EPA Region 3, 1650 Arch Street, Philadelphia, PA 19103. gordon.mike@epa.gov .	District of Columbia.

Regional offices	Air agencies
EPA Region 4: Ms. Lynorae Benjamin, Chief, Air Planning and Implementation Branch, EPA Region 4, 61 Forsyth Street SW, Atlanta, GA 30303. <i>benjamin.lynorae@epa.gov</i> .	Alabama; North Carolina—Forsyth; Tennessee—Shelby (Memphis).
EPA Region 5: Mr. Doug Aburano, Manager, Air Program Branch, EPA Region 5, 77 West Jackson Boulevard, Chicago, IL 60604. <i>aburano.douglas@epa.gov</i> .	Illinois; Ohio.
EPA Region 6: Mr. Guy Donaldson, Chief, Air Program Branch, EPA Region 6, 1201 Elm Street, Dallas, TX 75270. <i>donaldson.guy@epa.gov</i> .	Arkansas.
EPA Region 8: Mr. Scott Jackson, Chief, Air Quality Planning Branch, EPA Region 8, Mailcode 8ARD-QP, 1595 Wynkoop Street, Denver, CO 80202. <i>jackson.scott@epa.gov</i> .	South Dakota.
EPA Region 9: Ms. Doris Lo, Manager, Rules Office, Air and Radiation Division, EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105. <i>lo.doris@epa.gov</i> .	California—San Joaquin Valley Air Pollution Control District (APCD).
EPA Region 10: Ms. Debra Suzuki, Chief, Air Program Branch, EPA Region 10, 1200 Sixth Avenue, Seattle, WA 98101. <i>suzuki.debra@epa.gov</i> .	Washington—Energy Facility Site Evaluation Council (EFSEC); Washington—Southwest Clean Air Agency (SWCAA).

II. Background

On June 12, 2015, the EPA finalized an action (2015 SSM SIP Action), which clarified, restated, and updated EPA's national policy regarding SSM provisions in SIPs (2015 Policy).¹ The 2015 Policy explained the EPA's interpretation of certain CAA requirements, affirming that SSM exemption provisions (e.g., automatic exemptions, discretionary exemptions, and overly broad enforcement discretion provisions) and affirmative defense SIP provisions are generally viewed as inconsistent with CAA requirements. At the same time, pursuant to CAA section 110(k)(5), the EPA issued findings of substantial inadequacy for SIP provisions applying to excess emissions during SSM periods for 36 states that were applicable in 45 statewide and local jurisdictions (air agencies).² As part of the 2015 SSM SIP Action, the EPA also issued a "SIP call" (2015 SIP Call) to each of those 45 air agencies. The 2015 SIP Call required air agencies to adopt and submit revisions to the EPA to correct identified SSM-related deficiencies in their SIPs by November 22, 2016. The 2015 SSM SIP Action also responded to a petition for rulemaking alleging specific deficiencies related to SSM provisions in existing SIPs. On July 27, 2015, the 2015 SSM SIP Action was challenged in the United States

Court of Appeals for the District of Columbia Circuit.³

In 2017, the EPA requested that the pending litigation on the final 2015 SSM SIP Action be held in abeyance to allow the new administration time to review the action. In 2020, Regions 4, 6, and 7 took final actions that were inconsistent with the 2015 Policy and the EPA withdrew the corresponding SIP calls previously issued to Texas, North Carolina, and Iowa. These state-specific actions are the subject of pending litigation.⁴ Moreover, in alignment with the SIP call withdrawals for Texas, North Carolina, and Iowa, the EPA issued a Memorandum in October 2020 (2020 Memorandum), which established a new national policy that permitted the inclusion of certain provisions governing SSM periods in SIPs, including those related to exemptions and affirmative defenses. Importantly, the 2020 Memorandum was not a regulatory action and did not alter or withdraw the 2015 SIP Call for any of the 45 air agencies identified in the 2015 SSM SIP Action. The 2020 Memorandum did, however, indicate the EPA's intent at the time to review the remaining SIP calls that were issued in the 2015 SSM SIP Action to determine whether the EPA should maintain, modify, or withdraw particular SIP calls through future agency actions.

On September 30, 2021, the EPA issued a Memorandum (2021 Memorandum) that announced a withdrawal of the 2020 Memorandum and EPA's intent to return to the 2015 Policy and implement it fully. As previously articulated in the 2015

Policy, the 2021 Memorandum states that SSM exemption provisions and affirmative defense provisions included in SIPs will generally be viewed as inconsistent with CAA requirements.

As part of the reinstatement of the 2015 Policy, the EPA intends to implement the pending SIP calls, which remain in place from the 2015 SSM SIP Action. Pursuant to CAA section 110(k)(1)(B), the EPA must determine no later than 6 months after the date by which a state is required to submit a SIP whether a state has made a submission that meets the minimum completeness criteria established pursuant to CAA section 110(k)(1)(A). These criteria are set forth at 40 CFR part 51, appendix V. The EPA refers to the determination that a state has not submitted a SIP submission that meets the minimum completeness criteria, or has not submitted a SIP at all, as a "finding of failure to submit."

For the 2015 SIP Call, as previously discussed, SIP submissions were due by November 22, 2016. The EPA's determinations of whether air agencies made submittals were therefore due on May 22, 2017. The EPA has neither made such determinations nor issued findings of failure to submit. Accordingly, the EPA is now issuing findings of failure to submit to the 12 air agencies that, as of the date of this action, had not submitted SIPs responding to the SIP call: Alabama, Arkansas, California—San Joaquin Valley Air Pollution Control District (APCD), District of Columbia, Illinois, Ohio, North Carolina—Forsyth County, Rhode Island, South Dakota, Tennessee—Shelby County, Washington—Energy Facility Site Evaluation Council (EFSEC), and Washington—Southwest Clean Air Agency (SWCAA). The EPA also notes that on September 8, 2021, a group of non-governmental organizations filed suit in the Northern District of

¹ State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction, 80 FR 33840 (June 12, 2015).

² For convenience, the EPA refers to "air agencies" in this action collectively when meaning to refer in general to states, the District of Columbia, and local air permitting authorities that are currently administering, or may in the future administer, EPA-approved implementation plans.

³ *Environ. Comm. Fl. Elec. Power v. EPA, et al.*, No. 15–1239 (D.C. Cir.) (and consolidated cases).

⁴ *Sierra Club, et al. v. EPA, et al.*, No. 20–1115 (D.C. Cir. Apr. 7, 2020); *Sierra Club, et al. v. EPA, et al.*, No. 20–1229 (D.C. Cir. June 29, 2020); *Sierra Club, et al. v. EPA, et al.*, No. 21–1022 (D.C. Cir. January 2021).

California alleging that the EPA is in violation of its mandatory duty to issue findings of failure to submit for those states that have not yet responded to the 2015 SIP Call.⁵

III. Consequences of Findings of Failure To Submit

If the EPA finds that a state has failed to make the required SIP submittal or that a submitted SIP is incomplete, then CAA section 179(a) establishes specific consequences, after a period of time, including the imposition of mandatory sanctions under CAA section 179(b) for the affected areas or states. The two applicable sanctions enumerated in CAA section 179(b) are: (1) The 2-to-1 emission offset requirement for all new and modified major sources subject to the nonattainment NSR program, and (2) restrictions on highway funding. Additionally, a finding that a state has failed to submit a complete SIP triggers an obligation under CAA section 110(c) for the EPA to promulgate a FIP no later than 2 years after issuance of the finding of failure to submit if the affected state has not submitted, and the EPA has not approved, the required SIP submittal.

With respect to mandatory sanctions, if the EPA has not affirmatively determined that a state has made the required complete SIP submittal within 18 months⁶ of the effective date of this final action, then, pursuant to CAA section 179(a) and (b) and 40 CFR 52.31, the offset sanction identified in CAA section 179(b)(2) will apply in the affected nonattainment area or state. If the EPA has not affirmatively determined that the state has made the required complete SIP submittal within 6 months after the offset sanction is imposed, then the highway funding sanction will apply in the affected nonattainment area(s), in accordance with CAA section 179(b)(1) and 40 CFR 52.31.⁷ The sanctions will not take effect if, within 18 months after the effective date of these findings, the EPA affirmatively determines that the state has made a complete SIP submittal addressing the deficiency for which the finding was made. Additionally, if the state makes the required SIP submittal and the EPA takes final action to approve the submittal within 2 years of the effective date of these findings, the EPA is not required to promulgate a FIP.

IV. Findings of Failure To Submit for Air Agencies That Failed To Make a SIP Submittal in Response to EPA's 2015 SIP Call for Provisions Applying to Excess Emissions During SSM Periods

Based on a review of SIP submittals received and deemed complete as of the date of signature of this action, the EPA finds that 12 air agencies have failed to submit SIP revisions in response to the 2015 SSM SIP Call that were statutorily due no later than November 22, 2016. These affected air agencies are Alabama, Arkansas, California—San Joaquin Valley APCD, District of Columbia, Illinois, Ohio, North Carolina—Forsyth County, Rhode Island, South Dakota, Tennessee—Shelby County, Washington—EFSEC, and Washington—SWCAA.

V. Environmental Justice Considerations

The purpose of this action is to make findings that the named air agencies failed to provide the identified SIP submissions to the EPA that are required under the CAA. As such, this action, in and of itself, does not adversely affect the level of protection provided for human health or the environment. Moreover, it is intended that the actions and deadlines resulting from this notice will promote greater protection for U.S. citizens, including minority, low-income, or indigenous populations, by ensuring that air agencies meet their statutory obligation to develop and submit SIPs to ensure that areas make progress toward reducing excess emissions during periods of SSM.

VI. Statutory and Executive Order Reviews

A. Executive Orders 12866: Regulatory Planning 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 not an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the provisions of the PRA. This final action does not establish any new information

collection requirement apart from what is already required by law. This action relates to the requirement in the CAA for states to submit SIPs in response to findings of substantial inadequacy under section 110(k)(5).

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. The action is a finding that the named air agencies have not made the necessary SIP submission in response to findings of substantial inadequacy under section 110(k)(5) of the CAA.

E. Unfunded Mandates Reform Act of 1995 (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 finds that several air agencies have failed to submit SIP revisions in response to findings of substantial inadequacy under section 110(k)(5) of the CAA. No tribe is subject to the requirement to submit an implementation plan under the findings of inadequacy relevant to this action. Thus, Executive Order 13175 does not apply to this action.

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern 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 is a finding that several air agencies failed to submit SIP revisions

⁵ *Sierra Club et al. v. Regan et al.*, No. 4:21–cv–06956 (N.D. Cal. Sept 8, 2021).

⁶ C.A.A. 110(k)(5).

⁷ Such highway sanctions would only apply in nonattainment areas. If a state jurisdictional area does not contain any nonattainment areas, then the highway sanctions would not apply in that state.

in response to findings of substantial inadequacy under section 110(k)(5) of the CAA and does not directly or disproportionately affect children.

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

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

J. National Technology Transfer and Advancement Act (NTTAA)

This final action does not involve technical standards.

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

The EPA believes this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations. In finding that several air agencies have failed to submit SIP revisions in response to findings of substantial inadequacy under section 110(k)(5) of the CAA, this action does not directly affect the level of protection provided to 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).

M. Judicial Review

Section 307(b)(1) of the CAA governs judicial review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the United States Court of Appeals for the District of Columbia Circuit: (i) When the agency action consists of "nationally applicable regulations promulgated, or final actions taken, by the Administrator," or (ii) when such action is locally or regionally applicable, but "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination." For locally or regionally applicable final actions, the CAA reserves the EPA complete discretion whether to invoke the exception in (ii).

This final action is "nationally applicable" within the meaning of CAA section 307(b)(1). In the alternative, to the extent a court finds this final action to be locally or regionally applicable,

the Administrator is exercising the complete discretion afforded to him under the CAA to make and publish a finding that this action is based on a determination of "nationwide scope or effect" within the meaning of CAA section 307(b)(1).⁸ This final action consists of findings of failure to submit required SIPs from areas within 10 states and the District of Columbia, located in 8 of the 10 EPA regions, and in 8 different federal judicial circuits.⁹ This final action is also based on a common core of factual findings concerning the receipt and completeness of the relevant SIP submittals. For these reasons, this final action is nationally applicable or, alternatively, the Administrator is exercising the complete discretion afforded to him by the CAA and hereby finds that this final action is based on a determination of nationwide scope or effect for purposes of CAA section 307(b)(1) and is hereby publishing that finding in the **Federal Register**.

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit within 60 days from the date this final action is published in the **Federal Register**. Filing a petition for reconsideration by the Administrator of this final action does not affect the finality of the action for the purposes of judicial review, nor does it extend the time within which a petition for judicial review must be filed, and shall not postpone the effectiveness of such rule or action.

Janet G. McCabe,

Deputy Administrator.

[FR Doc. 2022-00138 Filed 11-11-22; 8:45 am]

BILLING CODE 6560-50-P

⁸ In deciding whether to invoke the exception by making and publishing a finding that this final action is based on a determination of nationwide scope or effect, the Administrator has also taken into account a number of policy considerations, including his judgment balancing the benefit of obtaining the D.C. Circuit's authoritative centralized review versus allowing development of the issue in other contexts and the best use of Agency resources.

⁹ In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. See H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.A.N. 1402-03.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2021-0438; FRL-8773-02-R9]

Limited Approval and Limited Disapproval of California Air Quality Implementation Plan Revisions; Amador Air District; Stationary Source Permits

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is finalizing a limited approval and limited disapproval of a revision to the Amador Air District's (AAD or "District") portion of the California State Implementation Plan (SIP). This revision governs the District's issuance of permits for stationary sources, and focuses on the preconstruction review and permitting of major sources and major modifications under part D of title I of the Clean Air Act (CAA or "Act"). Under the authority of the CAA, this action simultaneously approves a local rule that regulates these emission sources and directs the District to correct rule deficiencies.

DATES: This rule is effective February 11, 2022.

ADDRESSES: The EPA has established a docket for this action under Docket No. EPA-R09-OAR-2021-0438. 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. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Amber Batchelder, EPA Region IX, 75 Hawthorne St., San Francisco, CA 94105; by phone: (415) 947-4174, or by email to batchelder.amber@epa.gov.

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§ 63.7480

Citation	Subject	Applies to Subpart CCCCC?	Explanation
§ 63.1	Applicability	Yes.	
§ 63.2	Definitions	Yes.	
§ 63.3	Units and Abbreviations	Yes.	
§ 63.4	Prohibited Activities	Yes.	
§ 63.5	Construction/Reconstruction	Yes.	
§ 63.6(a), (b), (c), (d), (e), (f), (g), (h)(2)–(8).	Compliance with Standards and Maintenance Requirements.	Yes.	
§ 63.6(h)(9)	Adjustment to an Opacity Emission Standard.	Yes.	
§ 63.7(a)(3), (b), (c)–(h)	Performance Testing Requirements	Yes.	
§ 63.7(a)(1)–(2)	Applicability and Performance Test Dates.	No	Subpart CCCCC specifies applicability and dates.
§ 63.8(a)(1)–(3), (b), (c)(1)–(3), (c)(4)(i)–(ii), (c)(5)–(8), (d), (e), (f)(1)–(5), (g)(1)–(4).	Monitoring Requirements	Yes	CMS requirements in § 63.8(c)(4)(i)–(ii), (c)(5), and (c)(6) apply only to COMS for battery stacks.
§ 63.8(a)(4)	Additional Monitoring Requirements for Control Devices in § 63.11.	No	Flares are not a control device for Subpart CCCCC affected sources.
§ 63.8(c)(4)	Continuous Monitoring System (CMS) Requirements.	No	Subpart CCCCC specifies requirements for operation of CMS.
§ 63.8(e)(4)–(5)	Performance Evaluations	Yes	Except COMS performance evaluation must be conducted before the compliance date.
§ 63.8(f)(6)	RATA Alternative	No	Subpart CCCCC does not require CEMS.
§ 63.8(g)(5)	Data Reduction	No	Subpart CCCCC specifies data that can't be used in computing averages for COMS.
§ 63.9	Notification Requirements	Yes	Additional notifications for CMS in § 63.9(g) apply only to COMS for battery stacks.
§ 63.10(a), (b)(1)–(b)(2)(xii), (b)(2)(xiv), (b)(3), (c)(1)–(6), (c)(9)–(15), (d), (e)(1)–(2), (e)(4), (f).	Recordkeeping and Reporting Requirements.	Yes.	Additional records for CMS in § 63.10(c)(1)–(6), (9)–(15), and reports in § 63.10(d)(1)–(2) apply only to COMS for battery stacks.
§ 63.10(b)(2) (xi)–(xii)	CMS Records for RATA Alternative	No	Subpart CCCCC doesn't require CEMS.
§ 63.10(c)(7)–(8)	Records of Excess Emissions and Parameter Monitoring	No	Subpart CCCCC specifies record requirements.
§ 63.10(e)(3)	Exceedances for CMS.	No	Subpart CCCCC specifies reporting requirements.
§ 63.10(e)(3)	Excess Emission Reports	No	Subpart CCCCC specifies reporting requirements.
§ 63.11	Control Device Requirements	No	Subpart CCCCC does not require flares.
§ 63.12	State Authority and Delegations.	Yes.	
§§ 63.13–63.15	Addresses, Incorporation by Reference, Availability of Information.	Yes.	

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

SOURCE: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

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(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b) through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3 and 11 through 15 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam out-

put, in Table 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Table 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using Equation 1 of § 63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Table 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iv) of this section, but on or after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart. If you operate an existing boiler or process heater, you can choose to comply with alternative limits as discussed in paragraph (a)(1)(v) of this section, but on or after October 6, 2025 you must comply with the emission limits in Table 2 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010, and before May 20, 2011, you may comply with the emission limits in Table 11 or 14 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011, and before December 23, 2011, you may comply with the emission limits in Table 12 or 14 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011, and before April 1, 2013, you may comply with the emission limits in Table 13 or 14 to this subpart until January 31, 2016.

(iv) If you operate a new boiler or process heater, you must comply with either the emission limits in Table 1 to this subpart or the emission limits in Table 14 to this subpart until you must comply with the emission limits in Table 1.

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(v) If you operate an existing boiler or process heater, you must comply with either the emission limits in Table 2 to this subpart or the emission limits in Table 15 to this subpart until you must comply with the emission limits in Table 2.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of

less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015; 87 FR 60840, Oct. 6, 2022]

§ 63.7501 [Reserved]**GENERAL COMPLIANCE REQUIREMENTS****§ 63.7505 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. For gaseous fuels, you may not use fuel

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analyses to comply with the TSM alternative standard or the HCl standard. Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in § 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015; 87 FR 60841, Oct. 6, 2022]

TESTING, FUEL ANALYSES, AND INITIAL COMPLIANCE REQUIREMENTS

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart through performance (stack) testing, your initial compliance requirements include all the following:

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Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

EIS_{actual} = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

EI_{baseline} = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy sav-

ings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 in paragraph (f) of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 or 15 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this paragraph (f) to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 or 15 to this subpart.

Equation 20 to paragraph (f)

$$E_{adj} = E_m \times (1 - ECredits) \quad (\text{Eq. 20})$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 to paragraph (c)(3)(i) of this section for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the

credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015; 87 FR 60845, Oct. 6, 2022]

CONTINUOUS COMPLIANCE REQUIREMENTS**§ 63.7535 Is there a minimum amount of monitoring data I must obtain?**

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or

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out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with pe-

riods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 15 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or re-established during performance tests.

(2) As specified in § 63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the

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with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

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(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning

the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 15 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to

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its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in § 63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in § 63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.*, CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain

records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field’s secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber’s liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of “startup” in § 63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in § 63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer’s procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer’s statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

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(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015; 87 FR 60846, Oct. 6, 2022]

§ 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence,

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measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

OTHER REQUIREMENTS AND INFORMATION**§ 63.7565 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g), except as specified in § 63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(3) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under §§ 63.7500(a)(2) and 63.7522(g)(2).

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(4) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7186, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

12-month rolling average means the arithmetic mean of the previous 12 months of valid fuel analysis data. The 12 months should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

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Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing

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and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be "capable of combusting" fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the

appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit

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of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (*e.g.*, steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (*e.g.*, product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an

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“as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The

refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water

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boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (*e.g.*, for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (*e.g.*, if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this sub-

part, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet

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scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a

gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum mercury concentration of 40 micrograms/cubic meters of gas.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material,

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other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

- (i) Boiler combustion management.
- (ii) Boiler thermal energy recovery, including
 - (A) Conventional feed water economizer,
 - (B) Conventional combustion air preheater, and
 - (C) Condensing economizer.
- (iii) Boiler blowdown thermal energy recovery.
- (iv) Primary energy resource selection, including
 - (A) Fuel (primary energy source) switching, and
 - (B) Applied steam energy versus direct-fired energy versus electricity.
- (v) Insulation issues.
- (vi) Steam trap and steam leak management.
- (vi) Condensate recovery.
- (viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

- (i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.
- (ii) Familiarity with operating and maintenance practices for steam or process heating systems.
- (iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.
- (iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.
- (v) Boiler-steam turbine cogeneration systems.
- (vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is

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combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, see § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in § 63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the meas-

ured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy

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(such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Start-up ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based

emission limits would be the appropriate emission limit from Table 1, 2, 14, or 15 to this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S_1), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition ($MW_{(3)}$) and would be calculated using Equation 1 to this definition. In the case of boilers supplying steam to one or more common headers, S_1 , S_2 , and $MW_{(3)}$ for each boiler would be calculated based on its (steam energy) contribution (fraction of total steam energy) to the common header.

Equation 1 to the definition *Steam Output*

$$SO_M = S_1 + S_2 + (MW_{(3)} \times CFn) \quad (\text{Eq. 1})$$

Where:

SO_M = Total steam output for multi-function boiler, MMBtu.

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu.

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to paragraph (2) of this definition, MMBtu.

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh.

CFn = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh.

CFn for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1.

CFn for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2.

CFn for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes

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air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the

regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in §241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous

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fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance,

or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Useful thermal energy means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, <http://www.astm.org>), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, <http://www.asme.org>), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11,

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<http://www.iso.org/iso/home.htm>), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 <http://www.stadards.org.au>), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, + 44 (0)20 8996 9001, <http://www.bsigroup.com>), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, <http://www.csa.ca>), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium + 32 2 550 08 11, <http://www.cen.eu/cen>), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, + 49 211 6214-230, <http://www.vdi.eu>). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.*, California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.*, Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015; 87 FR 60846, Oct. 6, 2022]

TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS ^c

As stated in §63.7500, you must comply with the following applicable emission limits:

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TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED
BOILERS AND PROCESS HEATERS^c

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.1E–04 ^a lb per MMBtu of heat input.	2.9E–04 ^a lb per MMBtu of steam output or 2.7E–03 ^a lb per MWh.	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E–07 ^a lb per MMBtu of heat input.	8.7E–07 ^a lb per MMBtu of steam output or 1.1E–05 ^a lb per MWh.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	1.1E–03 lb per MMBtu of steam output or 1.4E–02 lb per MWh; or (2.7E–05 lb per MMBtu of steam output or 2.9E–04 lb per MWh).	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	1.2E–01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.

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TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED
BOILERS AND PROCESS HEATERS^c—Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	590 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	6.1E-01 lb per MMBtu of steam output or 6.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input).	1.4E-02 lb per MMBtu of steam output or 1.9E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh).	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen.	4.3E-01 lb per MMBtu of steam output or 5.1 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input).	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (5.2E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh).	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	4.1E-03 lb per MMBtu of heat input; or (8.4E-06 ^a lb per MMBtu of heat input).	5.0E-03 lb per MMBtu of steam output or 5.8E-02 lb per MWh; or (1.1E-05 ^a lb per MMBtu of steam output or 1.2E-04 ^a lb per MWh).	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	220 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 10-day rolling average).	0.18 lb per MMBtu of steam output or 2.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (8.0E-03 lb per MMBtu of heat input).	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (8.1E-03 lb per MMBtu of steam output or 1.2E-01 lb per MWh).	Collect a minimum of 2 dscm per run.

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TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED
BOILERS AND PROCESS HEATERS^c—Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 10-day rolling average).	3.5E–01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.5E–03 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	3.4E–03 lb per MMBtu of steam output or 3.5E–02 lb per MWh; or (5.2E–05 lb per MMBtu of steam output or 5.5E–04 lb per MWh).	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3-percent oxygen.	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.1E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	2.0E–02 lb per MMBtu of steam output or 1.6E–01 lb per MWh; or (5.1E–05 lb per MMBtu of steam output or 4.1E–04 lb per MWh).	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	180 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen ^d , 30-day rolling average).	0.22 lb per MMBtu of steam output or 2.0 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	3.3E–02 lb per MMBtu of steam output or 3.7E–01 lb per MWh; or (5.5E–04 lb per MMBtu of steam output or 6.2E–03 lb per MWh).	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel.	a. HCl	1.5E–04 ^a lb per MMBtu of heat input.	1.7E–04 ^a lb per MMBtu of steam output or 2.1E–03 ^a lb per MWh.	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E–07 ^a lb per MMBtu of heat input.	5.3E–07 ^a lb per MMBtu of steam output or 6.7E–06 ^a lb per MWh.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.

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TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED
BOILERS AND PROCESS HEATERS^c—Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
16. Units designed to burn light liquid fuel.	b. Filterable PM (or TSM).	1.9E-03 lb per MMBtu of heat input; or (6.1E-06 ^a lb per MMBtu of heat input).	2.1E-03 lb per MMBtu of steam output or 2.7E-02 lb per MWh; or (6.7E-6 ^a lb per MMBtu of steam output or 8.5E-5 ^a lb per MWh).	Collect a minimum of 3 dscm per run.
	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.1E-03 ^a lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input).	1.2E-03 ^a lb per MMBtu of steam output or 1.6E-02 ^a lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh).	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input).	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh).	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.16 lb per MMBtu of steam output or 1.0 lb per MWh.	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input.	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh.	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input.	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
	d. Filterable PM (or TSM).	7.3E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input).	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh).	Collect a minimum of 3 dscm per run.

^a If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^b Incorporated by reference, see § 63.14.

^c If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in Table 14 to this subpart. On and after October 6, 2025 you must comply with the emission limits in this Table 1.

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^dAn owner or operator may determine compliance with the carbon monoxide emissions limit using CO₂ as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A–7, and EPA Method 19 equations in 40 CFR part 60, appendix A–7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60847, Oct. 6, 2022]

TABLE 2 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR EXISTING BOILERS AND PROCESS HEATERS ^d

As stated in § 63.7500, you must comply with the following applicable emission limits:
[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.0E–02 lb per MMBtu of heat input.	2.3E–02 lb per MMBtu of steam output or 0.26 lb per MWh.	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.4E–06 lb per MMBtu of heat input.	6.2E–06 lb per MMBtu of steam output or 6.9E–05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm. Collect a minimum of 2 dscm per run.
2. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	3.9E–02 lb per MMBtu of heat input; or (5.3E–05 lb per MMBtu of heat input).	4.1E–02 lb per MMBtu of steam output or 4.8E–01 lb per MWh; or (5.6E–05 lb per MMBtu of steam output or 6.5E–04 lb per MWh).	
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	150 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.14 lb per MMBtu of steam output or 1.6 lb per MWh; 3-run average.	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	1.1 lb per MMBtu of steam output or 13 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.4E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input).	4.0E-02 lb per MMBtu of steam output or 4.8E-01 lb per MWh; or (2.4E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh).	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen.	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.2E-01 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input).	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (5.9E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh).	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	210 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	2.1E-01 lb per MMBtu of steam output or 2.3 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	7.4E-03 lb per MMBtu of heat input; or (6.4E-05 lb per MMBtu of heat input).	9.2E-03 lb per MMBtu of steam output or 0.11 lb per MWh; or (8.0E-05 lb per MMBtu of steam output or 9.0E-04 lb per MWh).	Collect a minimum of 1 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solid.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 10-day rolling average).	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average.	1 hr minimum sampling time.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid.	b. Filterable PM (or TSM).	4.1E–02 lb per MMBtu of heat input; or (8.0E–03 lb per MMBtu of heat input).	4.2E–02 lb per MMBtu of steam output or 5.8E–01 lb per MWh; or (8.1E–03 lb per MMBtu of steam output or 0.12 lb per MWh).	Collect a minimum of 2 dscm per run.
	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 10-day rolling average).	8.4E–01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.8E–01 lb per MMBtu of heat input; or (2.0E–03 lb per MMBtu of heat input).	2.5E–01 lb per MMBtu of steam output or 2.6 lb per MWh; or (2.8E–03 lb per MMBtu of steam output or 2.8E–02 lb per MWh).	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid.	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen.	2.4 lb per MMBtu of steam output or 12 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (5.8E–03 lb per MMBtu of heat input).	5.5E–02 lb per MMBtu of steam output or 2.8E–01 lb per MWh; or (1.6E–02 lb per MMBtu of steam output or 8.1E–02 lb per MWh).	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	4.4E–01 lb per MMBtu of heat input; or (4.5E–04 lb per MMBtu of heat input).	5.5E–01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E–04 lb per MMBtu of steam output or 6.3E–03 lb per MWh).	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel.	a. HCl	1.1E–03 lb per MMBtu of heat input.	1.4E–03 lb per MMBtu of steam output or 1.6E–02 lb per MWh.	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	7.3E–07 lb per MMBtu of heat input.	8.8E–07 lb per MMBtu of steam output or 1.1E–05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 ^b collect a minimum of 2 dscm.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	5.9E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input).	7.2E-02 lb per MMBtu of steam output or 8.2E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh).	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input).	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh).	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.2E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input).	2.7E-01 lb per MMBtu of steam output or 3.1 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh).	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.16 lb per MMBtu of steam output or 1.0 lb per MWh.	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input.	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh.	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input.	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 2 dscm.
	d. Filterable PM (or TSM).	7.3E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input).	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh).	Collect a minimum of 3 dscm per run.

^a If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provisions of §63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^b Incorporated by reference, see § 63.14.

Pt. 63, Subpt. DDDDD, Table 3**40 CFR Ch. I (7–1–24 Edition)**

^cAn owner or operator may determine compliance with the carbon monoxide emissions limit be determined using CO₂ as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A–7, and EPA Method 19 equations in 40 CFR part 60, appendix A–7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

^dBefore October 6, 2025 you may comply with the emission limits in Table 15 to this subpart. On and after October 6, 2025], you must comply with the emission limits in this Table 2.

[87 FR 60849, Oct. 6, 2022]

TABLE 3 TO SUBPART DDDDD OF PART 63—WORK PRACTICE STANDARDS

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater.	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid.	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater.	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units.	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in § 63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575: a. A visual inspection of the boiler or process heater system. b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified. f. A list of cost-effective energy conservation measures that are within the facility's control. g. A list of the energy savings potential of the energy conservation measures identified.

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If your unit is . . .	You must meet the following . . .
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 15 to this subpart during startup.	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis. c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using paragraph (1) of the definition of "startup" in §63.7575, once you start firing fuels that are not clean fuels you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using paragraph (2) of the definition of "startup" in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels^a. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e). d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.
6. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart during shutdown.	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

^aAs specified in §63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the "fuel firing + 1 hour" requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (e.g., scrubber).

Pt. 63, Subpt. DDDDD, Table 11**40 CFR Ch. I (7–1–24 Edition)**

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

TABLE 11 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	0.022 lb per MMBtu of heat input.	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis.	a. Mercury	8.0E–07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis.	a. Mercury	2.0E–06 lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
4. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
5. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
6. Stokers designed to burn coal/solid fossil fuel.	a. CO (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
7. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.

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If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
8. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
9. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
11. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 ^a lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
12. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	8.0E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

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If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
14. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run
16. Units designed to burn liquid fuel.	a. HCl	4.4E–04 lb per MMBtu of heat input.	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run
	b. Mercury.	4.8E–07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
17. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E–02 lb per MMBtu of heat input; or (7.5E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
18. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–03 ^a lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run
19. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.3E–02 lb per MMBtu of heat input; or (8.6E–04 lb per MMBtu of heat input).	Collect a minimum of 4 dscm per run
20. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. HCl	1.7E–03 lb per MMBtu of heat input.	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E–06 lb per MMBtu of heat input.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.

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Pt. 63, Subpt. DDDDD, Table 12

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	d. Filterable PM (or TSM).	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

^aIf you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote ^a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^bIncorporated by reference, see § 63.14.

^cAn owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60855, Oct. 6, 2022]

TABLE 12 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER MAY 20, 2011, AND BEFORE DECEMBER 23, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	3.5E-06 ^a lb per MMBtu of heat input ...	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel.	a. CO (or CEMS) ...	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS) ...	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS) ...	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS) ...	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.

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If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (4.0E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS) ...	260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	9.8E–03 lb per MMBtu of heat input; or (8.3E–05 ^a lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS) ...	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS) ...	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.2E–03 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS) ...	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel.	a. HCl	4.4E–04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E–07 ^a lb per MMBtu of heat input ...	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E–02 lb per MMBtu of heat input; or (7.5E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
16. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E–03 ^a lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.3E–02 lb per MMBtu of heat input; or (8.6E–04 lb per MMBtu of heat input).	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.

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If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
	d. Filterable PM (or TSM).	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

^a If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^b Incorporated by reference, see § 63.14.

^c An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60857, Oct. 6, 2022]

TABLE 13 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER DECEMBER 23, 2011, AND BEFORE APRIL 1, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	0.022 lb per MMBtu of heat input.	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.

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If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
4. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E–02 lb per MMBtu of heat input; or (2.6E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E–01 lb per MMBtu of heat input; or (4.0E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E–03 lb per MMBtu of heat input; or (8.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.6E–02 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
11. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.

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If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	b. Filterable PM (or TSM) . . .	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
	a. CO (or CEMS) . . .	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
13. Units designed to burn liquid fuel.	b. Filterable PM (or TSM) . . .	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
	a. HCl . . .	1.2E-03 lb per MMBtu of heat input.	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
14. Units designed to burn heavy liquid fuel.	b. Mercury . . .	4.9E-07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
	a. CO (or CEMS) . . .	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
15. Units designed to burn light liquid fuel.	b. Filterable PM (or TSM) . . .	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
	a. CO (or CEMS) . . .	130 ^a ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 1-day block average).	1 hr minimum sampling time.
16. Units designed to burn liquid fuel that are non-continental units.	b. Filterable PM (or TSM) . . .	1.1E-03 ^a lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
	a. CO . . .	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 3-hour rolling average).	1 hr minimum sampling time.
17. Units designed to burn gas 2 (other) gases.	b. Filterable PM (or TSM) . . .	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
	a. CO . . .	130 ppm by volume on a dry basis corrected to 3 percent oxygen.	1 hr minimum sampling time.
	b. HCl . . .	1.7E-03 lb per MMBtu of heat input.	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury . . .	7.9E-06 lb per MMBtu of heat input.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.

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If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	d. Filterable PM (or TSM) . . .	6.7E–03 lb per MMBtu of heat input; or (2.1E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

^aIf you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^bIncorporated by reference, see § 63.14.

^cAn owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A–7, and EPA Method 19 equations in 40 CFR part 60, appendix A–7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60859, Oct. 6, 2022]

TABLE 14 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS^c

As stated in § 63.7500, you may continue to comply with the following applicable emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel..	a. HCl	2.2E–02 lb per MMBtu of heat input.	2.5E–02 lb per MMBtu of steam output or 0.28 lb per MWh.	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E–07 ^a lb per MMBtu of heat input.	8.7E–07 ^a lb per MMBtu of steam output or 1.1E–05 ^a lb per MWh.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	1.1E–03 lb per MMBtu of steam output or 1.4E–02 lb per MWh; or (2.7E–05 lb per MMBtu of steam output or 2.9E–04 lb per MWh).	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input).	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh).	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen.	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input).	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh).	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average.	1 hr minimum sampling time.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
10. Suspension burners designed to burn biomass/bio-based solids.	b. Filterable PM (or TSM).	9.8E–03 lb per MMBtu of heat input; or (8.3E–05 ^a lb per MMBtu of heat input).	1.2E–02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E–04 ^a lb per MMBtu of steam output or 1.2E–03 ^a lb per MWh).	Collect a minimum of 3 dscm per run.
	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 10-day rolling average).	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	3.1E–02 lb per MMBtu of steam output or 4.2E–01 lb per MWh; or (6.6E–03 lb per MMBtu of steam output or 9.1E–02 lb per MWh).	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 10-day rolling average).	3.5E–01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.2E–03 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	4.3E–03 lb per MMBtu of steam output or 4.5E–02 lb per MWh; or (5.2E–05 lb per MMBtu of steam output or 5.5E–04 lb per MWh).	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3-percent oxygen.	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	3.0E–02 lb per MMBtu of steam output or 2.8E–01 lb per MWh; or (5.1E–05 lb per MMBtu of steam output or 4.1E–04 lb per MWh).	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen, ^d 30-day rolling average).	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	3.3E–02 lb per MMBtu of steam output or 3.7E–01 lb per MWh; or (5.5E–04 lb per MMBtu of steam output or 6.2E–03 lb per MWh).	Collect a minimum of 3 dscm per run.

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[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
14. Units designed to burn liquid fuel.	a. HCl	4.4E-04 lb per MMBtu of heat input.	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh.	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07 ^a lb per MMBtu of heat input.	5.3E-07 ^a lb per MMBtu of steam output or 6.7E-06 ^a lb per MWh.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 ^a lb per MMBtu of heat input).	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 ^a lb per MMBtu of steam output or 1.1E-03 ^a lb per MWh).	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.1E-03 ^a lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input).	1.2E-03 ^a lb per MMBtu of steam output or 1.6E-02 ^a lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh).	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input).	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh).	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.16 lb per MMBtu of steam output or 1.0 lb per MWh.	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input.	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh.	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input.	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.

Pt. 63, Subpt. DDDDD, Table 15

40 CFR Ch. I (7–1–24 Edition)

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	d. Filterable PM (or TSM).	6.7E–03 lb per MMBtu of heat input; or (2.1E–04 lb per MMBtu of heat input).	1.2E–02 lb per MMBtu of steam output or 7.0E–02 lb per MWh; or (3.5E–04 lb per MMBtu of steam output or 2.2E–03 lb per MWh).	Collect a minimum of 3 dscm per run.

^a If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^b Incorporated by reference, see § 63.14.

^c If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in this Table 14. On and after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart.

^d An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A–7, and EPA Method 19 equations in 40 CFR part 60, appendix A–7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60860, Oct. 6, 2022]

TABLE 15 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR EXISTING BOILERS AND PROCESS HEATERS ^D

As stated in § 63.7500, you may continue to comply with following emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E–02 lb per MMBtu of heat input.	2.5E–02 lb per MMBtu of steam output or 0.27 lb per MWh.	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E–06 lb per MMBtu of heat input.	6.4E–06 lb per MMBtu of steam output or 7.3E–05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	4.0E–02 lb per MMBtu of heat input; or (5.3E–05 lb per MMBtu of heat input).	4.2E–02 lb per MMBtu of steam output or 4.9E–01 lb per MWh; or (5.6E–05 lb per MMBtu of steam output or 6.5E–04 lb per MWh).	Collect a minimum of 2 dscm per run.

Environmental Protection Agency

Pt. 63, Subpt. DDDDD, Table 15

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average.	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input).	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh).	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen.	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input).	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh).	Collect a minimum of 1 dscm per run.

Pt. 63, Subpt. DDDDD, Table 15

40 CFR Ch. I (7–1–24 Edition)

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
9. Fluidized bed units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 30-day rolling average).	4.6E–01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.1E–01 lb per MMBtu of heat input; or (1.2E–03 lb per MMBtu of heat input).	1.4E–01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E–03 lb per MMBtu of steam output or 1.7E–02 lb per MWh).	Collect a minimum of 1 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solid.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 10-day rolling average).	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	5.1E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	5.2E–02 lb per MMBtu of steam output or 7.1E–01 lb per MWh; or (6.6E–03 lb per MMBtu of steam output or 9.1E–02 lb per MWh).	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid.	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen, ^c 10-day rolling average).	8.4E–01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.8E–01 lb per MMBtu of heat input; or (2.0E–03 lb per MMBtu of heat input).	3.9E–01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E–03 lb per MMBtu of steam output or 2.8E–02 lb per MWh).	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid.	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen.	2.4 lb per MMBtu of steam output or 12 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (5.8E–03 lb per MMBtu of heat input).	5.5E–02 lb per MMBtu of steam output or 2.8E–01 lb per MWh; or (1.6E–02 lb per MMBtu of steam output or 8.1E–02 lb per MWh).	Collect a minimum of 2 dscm per run.

Environmental Protection Agency

Pt. 63, Subpt. DDDDD, Table 15

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
13. Hybrid suspension grate units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen, 30-day rolling average).	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input).	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh).	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel.	a. HCl	1.1E-03 lb per MMBtu of heat input.	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh.	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input.	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 ^b collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input).	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh).	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input).	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh).	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test.	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input).	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh).	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen.	0.16 lb per MMBtu of steam output or 1.0 lb per MWh.	1 hr minimum sampling time.

§ 63.7680**40 CFR Ch. I (7–1–24 Edition)**

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. HCl	1.7E–03 lb per MMBtu of heat input.	2.9E–03 lb per MMBtu of steam output or 1.8E–02 lb per MWh.	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E–06 lb per MMBtu of heat input.	1.4E–05 lb per MMBtu of steam output or 8.3E–05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 2 dscm.
	d. Filterable PM (or TSM).	6.7E–03 lb per MMBtu of heat input or (2.1E–04 lb per MMBtu of heat input).	1.2E–02 lb per MMBtu of steam output or 7.0E–02 lb per MWh; or (3.5E–04 lb per MMBtu of steam output or 2.2E–03 lb per MWh).	Collect a minimum of three dscm per run.

^aIf you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^bIncorporated by reference, see § 63.14.

^cAn owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A–7, and EPA Method 19 equations in 40 CFR part 60, appendix A–7, must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

^dBefore October 6, 2025 you may comply with the emission limits in this Table 15. On and after October 6, 2025, you must comply with the emission limits in Table 2 to this subpart.

[87 FR 60863, Oct. 6, 2022]

Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries

SOURCE: 69 FR 21923, Apr. 22, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.7680 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart.

§ 63.7681 Am I subject to this subpart?

You are subject to this subpart if you own or operate an iron and steel foundry that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subpart if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year as defined in § 63.2.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/785-1705

CONSTRUCTION PERMIT - REVISED¹
NESHAP SOURCE - NSPS SOURCE

PERMITTEE

CITGO Petroleum Corporation
Attn: Michael G. Mee
135th Street and New Avenue
Lemont, Illinois 60439

Application No.: 17060030

I.D. No.: 197090AAI

Applicant's Designation:

Date Received: September 3, 2020

Subject: Two Boilers

Date Issued: September 15, 2020

Location: 135th Street and New Avenue, Lemont

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of two boilers, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s).

If you have any questions on this permit, please contact Jason Schnepf at 217/524-3724.

Raymond E. Pilapil

Raymond E. Pilapil
Manager, Permit Section
Bureau of Air

REP:JMS:tan

cc: Office of Community Relations
CES

¹ This permit has been revised at the request of the Permittee to lower the permitted emissions of volatile organic material (VOM) of these boilers based on the results of emissions testing. This permit was also revised at the Permittee's request to address the timing for required periodic emission testing in months rather than in years, e.g., within 61 months rather than within five years.

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in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

- ii. 40 CFR 60.102a(a), which provides that the owner or operator shall comply with the emissions limitations in 40 CFR 60.102a(g) on and after the date on which the initial performance test, required by 40 CFR 60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated or 180 days after initial startup, whichever comes first.

- c. The affected boilers are subject to the NSPS for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Db, and the applicable requirements of the General Provisions of the NSPS, 40 CFR 60 Subpart A. In particular, as the Permittee is the owner or operator of the affected boilers, the following requirements apply:

- i. 40 CFR 60.44b(1)(1), which provides that, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date is first, no owner or operator shall cause to be discharged into the atmosphere from a subject boiler, that is not a low heat release rate, any gases that contain NO_x (expressed as NO₂) in excess of 0.20 lb/mmBtu heat input.

Note: The boilers are subject to a more stringent limit, 0.0135 lb/mmBtu, pursuant to Condition 2.1.7(c).

- ii. 40 CFR 60.44b(i), which provides that compliance with the emission limits under 40 CFR 60.44b is determined on a 30-day rolling average basis.
- iii. 40 CFR 60.44b(h), which provides that the NO_x standards under 40 CFR 60.44b apply at all times including periods of startup, shutdown, or malfunction.

Note: The refinery fuel gas for the affected boiler is expected to meet a definition for "natural gas" in 40 CFR 60.41b so that the affected boiler is subject to limits for NO_x pursuant to 40 CFR 60 Subpart Db.

2.1.4-2 Applicable State Emission Standards

- a. Each affected boiler is subject to 35 IAC 212.122(a), which provides that no person shall cause or allow the emission of smoke or other particulate matter into the atmosphere from any subject fuel combustion emission unit having an opacity greater than 20 percent, except as provided in 35 IAC 212.122(b).
- b. i. Each affected boiler is subject to 35 IAC 216.121, which provides that no person shall cause or allow the emission of CO into the atmosphere from any subject fuel combustion

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emission source to exceed 200 ppm, corrected to 50 percent excess air.

ii. Notwithstanding the above, subject to the following terms and conditions, the Permittee is authorized to operate an affected boiler in violation of 35 IAC 216.121 during startup. This authorization is provided pursuant to 35 IAC 201.149, 201.161 and 201.262, as the Permittee has applied for such authorization in its application, generally describing the efforts that will be used "...to minimize startup emissions, duration of individual starts, and frequency of startups."

- A. This authorization does not relieve the Permittee from the continuing obligation to demonstrate that all reasonable efforts are made to minimize startup emissions, duration of individual startups and frequency of startups.
- B. The Permittee shall conduct startup of the affected boilers in accordance with written procedures which shall be maintained at the refinery, that are specifically developed to minimize emissions from startups.
- C. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Condition 2.1.10(i) and 2.1.11(f).
- D. As provided by 35 IAC 201.265, this authorization for excess emissions during startup does not shield a Permittee from enforcement for any violation of applicable emission standard(s) that occurs during startup and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.

c. Each affected boiler is subject to 35 IAC 217 Subpart D (NO_x General Requirements) and Subpart E (Industrial Boilers). In particular, the affected boilers are subject to 35 IAC 217.164(a), which provides that the NO_x emissions from a subject boiler burning gaseous fuel shall not exceed 0.08 lb/mmBtu, on an ozone season and annual average basis.

Note: The boilers are subject to a more stringent limit, 0.0135 lb/mmBtu, pursuant to Condition 2.1.7(c).

2.1.5 Nonapplicability Provisions

Because of the Sunset Provisions in 35 IAC 217.451, the affected boilers are not subject to provisions of 35 IAC 217 Subpart U: NO_x Control and Trading Program for Specified NO_x Generating Units other

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2.1.9-2 Operational Instrumentation Requirements

- a. The Permittee shall equip, operate, and maintain instrumentation on the SCR system for each affected boiler for the SCR reagent injection rate, flue gas temperature at the inlet of the SCR catalyst and other operating parameters of the SCR system that are relevant to effective control of emissions.
- b. If the data measured by this instrumentation is not automatically recorded on an hourly average basis, the Permittee shall maintain the records of the data from this instrumentation at least once per shift.

2.1.10 Recordkeeping Requirements

- a. For each affected boiler, the Permittee shall comply with the applicable recordkeeping requirements of NESHAP, including 40 CFR 63.7555.
- b. For each affected boiler, the Permittee shall comply with the applicable recordkeeping requirements of the NSPS, 40 CFR 60.49b, including:
 - i. The owner or operator shall record and maintain records of the amounts of each fuel combusted during each day. [40 CFR 60.49b(d)(1)]
 - ii. The owner or operator shall maintain records of the following information for each unit operating day: [40 CFR 60.49b(g)]
 - A. Calendar date.
 - B. The average hourly NO_x emission rates (expressed as NO₂) (ng/J or lb/mmBtu heat input) measured or predicted.
 - C. The 30-day average NO_x emission rates (ng/J or lb/mmBtu heat input) calculated at the end of each unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 unit operating days.
 - D. Identification of the unit operating days when the calculated 30-day average NO_x emission rates are in excess of the NO_x emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.
 - E. Identification of the unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

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- v. For SO₂, the emissions based on fuel gas usage and sulfur content of the fuel gas, in tons/month and tons/year.
- vi. For GHG emissions, the annual emissions of GHGs, as CO₂e, on a calendar year basis, with supporting documentation.
- h. For each affected boiler, the Permittee shall maintain records of the following information related to boiler maintenance and repair.
 - i. Documentation for the manufacturer's recommendations for boiler maintenance.
 - ii. A log or other records for the maintenance and repair including date and description of activities performed.
- i. The Permittee shall maintain records for each tune-up of an affected boiler that is conducted pursuant to Condition 2.1.6(a)(ii).
- j. The Permittee shall maintain the following records for each affected boiler related to startups:
 - i. Date and duration of each startup, i.e., start time and time normal operation is achieved.
 - ii. For each startup in which refractory must be dried and cured after maintenance and each other startup if normal operation was not achieved within 30 hours:
 - A. A detailed description of the startup, including whether startup was conducted in accordance with the written procedures required by Condition 2.1.4(d)(ii)(B)(2) and why the startup could not have been completed more quickly.
 - B. An explanation why established startup procedures could not be performed, if not performed.
 - C. Whether exceedance of 35 IAC 216.121 may have occurred during startup. If an exceedance may have occurred, an explanation of the severity and duration of the exceedance and whether the exceedance ended before the conclusion of startup.
- k. The Permittee shall maintain records of the following information:
 - i. The dates when each affected boiler initially operates and when each existing boiler (Boiler A, B, C, D, E-2, F-2 and G) is permanently shut down.
 - ii. Beginning on the date that the first affected boiler initially operates, records of CO, NO_x, SO₂, VOM, PM and

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PM₁₀/PM_{2.5} emissions of the affected boilers and Boilers A, B, C, D, E-2, F-2 and G, (tons/month and tons/year), which records shall be maintained until permanent shutdown of all existing Boilers A, B, C, D, E-2, F-2 and G.

Note: This condition does not replace the recordkeeping requirements of Condition 2.1.10(g).

2.1.11 Reporting Requirements

- a. For each affected boiler, the Permittee shall comply with the applicable reporting and notification requirements of NESHAP, including 40 CFR 63.7550 and 63.7545.
- b. For each affected boiler, the Permittee shall comply with the applicable notification and reporting requirements of the NSPS, 40 CFR 60.49b, including:
 - i. The owner or operator shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include the information in 40 CFR 60.49b(a)(1)-(4).
 - ii. The owner or operator shall submit to the Illinois EPA and USEPA the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in 40 CFR 60 Appendix B.
 - iii. The owner or operator shall submit excess emission reports for any excess emissions that occurred during the reporting period. [40 CFR 60.49b(h)]
 - iv. The owner or operator shall submit reports containing the information recorded under 40 CFR 60.49b(g). [40 CFR 60.49b(i)]
- c. For each affected boiler, the Permittee shall comply with the notification and reporting requirements in the NSPS, including 40 CFR 60.7 and 60.108a(a).
- d. For each affected boiler, the Permittee shall comply with the applicable reporting requirements of 35 IAC 217.156.
- e. For each affected boiler, the Permittee shall notify the Illinois EPA of deviations from the requirements of this permit. Unless otherwise provided by the applicable reporting requirement of the NSPS or NESHAP, these notifications shall be submitted within 30 days of such occurrence. Reports shall describe the deviation, the probable cause of such deviation, the corrective actions taken, and any preventive measures taken.
- f. For startups of each affected boiler, the Permittee shall submit semi-annual startup reports to the Illinois EPA. These reports

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may be submitted along with other semi-annual reports required for the source, e.g., CAAPP semi-annual reports, and shall include the following information for startups of the affected boiler during the reporting period:

- i. A list of the startups for each affected boiler, including the date, duration and description of each startup, accompanied by a copy of the records pursuant to Condition 2.1.10(j)(ii) for each startup for which such records were required.
- ii. If there have been no startups for an affected boiler during the reporting period, this shall be stated in the report.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2002-0058; FRL-9936-20-OAR]

RIN 2060-AS09

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; notice of final action on reconsideration.

SUMMARY: This action sets forth the Environmental Protection Agency's (EPA's) final decision on the issues for which it granted reconsideration on January 21, 2015, that pertain to certain aspects of the January 31, 2013, final amendments to the "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Boiler MACT). The EPA is retaining a minimum carbon monoxide (CO) limit of 130 parts per million (ppm) and the particulate matter (PM) continuous parameter monitoring system (CPMS) requirements, consistent with the January 2013 final rule. The EPA is making minor changes to the proposed definitions of startup and shutdown and work practices during these periods, based on public comments received. Among other things, this final action addresses a number of technical corrections and clarifications of the rule. These corrections will clarify and improve the implementation of the January 2013 final Boiler MACT, but do not have any effect on the environmental, energy, or economic impacts associated with the proposed action. This action also includes our final decision to deny the requests for reconsideration with respect to all issues raised in the petitions for reconsideration of the final Boiler MACT for which we did not grant reconsideration.

DATES: This rule is effective November 20, 2015.

ADDRESSES: Docket ID No. EPA-HQ-OAR-2002-0058 contains supporting information for this action on the Boiler MACT. All documents in the docket are listed in the <http://www.regulations.gov> index. 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, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the EPA Docket Center, EPA/DC, EPA WJC West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744 and the telephone number for the Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For further information, contact Mr. Jim Eddinger, Energy Strategies Group, Sector Policies and Programs Division (D243-01), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5426; fax number: (919) 541-5450; email address: eddinger.jim@epa.gov.

SUPPLEMENTARY INFORMATION:

Acronyms and Abbreviations. The following acronyms and abbreviations are used in this document.

ACC American Chemistry Council
 AF&PA American Forest and Paper Association
 API American Petroleum Institute
 CAA Clean Air Act
 CEMS Continuous emissions monitoring systems
 CFR Code of Federal Regulations
 CIBO/ACC Council of Industrial Boiler Owners
 CISWI Commercial and Industrial Solid Waste Incineration
 CO Carbon monoxide
 CO₂ Carbon dioxide
 CPMS Continuous parameter monitoring systems
 CRA Congressional Review Act
 EGU Electric Utility Steam Generating Unit
 EPA U.S. Environmental Protection Agency
 ESP Electrostatic precipitator
 FSI Florida Sugar Industry
 HCl Hydrogen chloride
 Hg Mercury
 HSG Hybrid suspension/grate
 ICI Industrial, Commercial, Institutional
 ICR Information collection request
 MACT Maximum achievable control technology
 MATS Mercury Air Toxics Standards
 mmBtu/hr Million British thermal units per hour
 NAICS North American Industrial Classification System
 NEDACAP Natural Environmental Development Association's Clean Air Project
 NESHAP National emission standards for hazardous air pollutants
 NHPC New Hope Power Company
 NO_x Nitrogen oxides
 NSPS New source performance standards

NTTAA National Technology Transfer and Advancement Act
 O₂ Oxygen
 OMB Office of Management and Budget
 ORD EPA Office of Research and Development
 PAH Polycyclic aromatic hydrocarbons
 PCB Polychlorinated biphenyls
 PM Particulate matter
 POM Polycyclic organic matter
 ppm Parts per million
 SO₂ Sulfur dioxide
 SSM Startup, shutdown, and malfunction
 SSP Startup and shutdown plan
 the Court United States Court of Appeals for the District of Columbia Circuit
 TSM Total selected metals
 TTN Technology Transfer Network
 UARG Utility Air Regulatory Group
 UMRA Unfunded Mandates Reform Act
 U.S.C. United States Code
 WWW World Wide Web

Organization of this Document. The following outline is provided to aid in locating information in this preamble.

- I. General Information
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 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
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 - D. Unfunded Mandates Reform Act (UMRA)
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 - F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
 - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act (NTTAA)

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
K. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

Categories and entities potentially affected by this reconsideration action

include those listed in Table 1 of this preamble:

TABLE 1—REGULATED ENTITIES

Category	North American Industrial Classification System (NAICS) code ^a	Examples of potentially regulated entities
Any industry using a boiler or process heater as defined in the final rule.	211	Extractors of crude petroleum and natural gas.
	321	Manufacturers of lumber and wood products.
	322	Pulp and paper mills.
	325	Chemical manufacturers.
	324	Petroleum refineries, and manufacturers of coal products.
	316, 326, 339	Manufacturers of rubber and miscellaneous plastic products.
	331	Steel works, blast furnaces.
	332	Electroplating, plating, polishing, anodizing, and coloring.
	336	Manufacturers of motor vehicle parts and accessories.
	221	Electric, gas, and sanitary services.
	622	Health services.
	611	Educational services.

^aNorth American Industrial Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this final action. To determine whether your facility would be affected by this final action, you should examine the applicability criteria in 40 CFR 63.7490 of subpart DDDDD. If you have any questions regarding the applicability of this final action to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. How do I obtain a copy of this document and other related information?

The docket number for this final action regarding the Major Source Boiler MACT (40 CFR part 63, subpart DDDDD) is Docket ID No. EPA-HQ-OAR-2002-0058.

World Wide Web. In addition to being available in the docket, an electronic copy of this final action is available on the Technology Transfer Network (TTN) Web site. Following signature, the EPA posted a copy of the final action at <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in United States Court of Appeals for the District of Columbia Circuit (the Court) by January 19, 2016. Under CAA section 307(d)(7)(B), 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. Note, 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 these requirements.

II. Background Information

On March 21, 2011, the EPA established final emission standards for industrial, commercial, and institutional (ICI) boilers and process heaters at major sources to meet hazardous air pollutant (HAP) standards reflecting the application of maximum achievable control technology (MACT)—the Boiler MACT (76 FR 15608). On January 31, 2013, the EPA promulgated final amendments to the Boiler MACT (78 FR 7138). Following that action, the Administrator received 13 petitions for reconsideration that identified certain issues that petitioners claimed warranted further opportunity for public comment.

The EPA received petitions dated March 28, 2013, from New Hope Power Company (NHPC) and the Sugar Cane Growers Cooperative of Florida. The EPA received a petition dated March 29, 2013, from the Eastman Chemical Company (Eastman). The EPA received petitions dated April 1, 2013, from Earthjustice, on behalf of Sierra Club, Clean Air Council, Partnership for Policy Integrity, Louisiana Environmental Action Network, and Environmental Integrity Project (hereinafter referred to as Sierra Club);

American Forest and Paper Association on behalf of American Wood Council, National Association of Manufacturers, Biomass Power Association, Corn Refiners Association, National Oilseed Processors Association, Rubber Manufacturers Association, Southeastern Lumber Manufacturers Association, and U.S. Chamber of Commerce (hereinafter referred to as AF&PA); the Florida Sugar Industry (FSI); Council of Industrial Boiler Owners, American Municipal Power, Inc., and American Chemistry Council (hereinafter referred to as CIBO/ACC); American Petroleum Institute (API); and the Utility Air Regulatory Group (UARG) which also submitted a supplemental petition on July 3, 2013. Finally, the EPA received a petition dated July 2, 2013, from the Natural Environmental Development Association's Clean Air Project (NEDACAP) and CIBO. The EPA received revised petitions from CIBO/ACC on July 1, 2014, and on July 11, 2014, from Eastman. Both of these were revised to withdraw one of the issues raised in their initial submittal.

In response to the petitions, the EPA reconsidered and requested comment on several provisions of the January 31, 2013, final amendments to the Boiler MACT. The EPA published the proposed notice of reconsideration in the **Federal Register** on January 21, 2015 (80 FR 3090).

III. Summary of Final Action and Significant Changes Since Proposal

In this notice, we are finalizing amendments associated with certain

issues raised by petitioners in their petitions for reconsideration on the 2013 final amendments to the Boiler MACT. These provisions are: (1) Definitions of startup and shutdown periods and the work practices that apply during such periods; (2) CO limits based on a minimum CO level of 130 ppm; and (3) the use of PM CPMS, including the consequences of exceeding the operating parameter. Additionally, the EPA is finalizing the technical corrections and clarifications that were proposed to correct inadvertent errors in the final rule and to provide the intended accuracy, clarity, and consistency, as well as correcting various typographical errors identified in the rule as published in the Code of Federal Regulations (CFR).

Most of these changes are very similar to those described in the proposed notice of reconsideration on January 21, 2015 (80 FR 3090). However, the EPA has made some changes in this final rule after consideration of the public comments received on the proposed notice of reconsideration. The changes are to clarify applicability and implementation issues raised by the commenters. We address several significant comments in this preamble. For a complete summary of the comments received and our responses thereto, please refer to the memorandum "Response to 2015 Reconsideration Comments for Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants" located in the docket for this rulemaking.

A. Definition of Startup and Shutdown Periods and the Work Practices That Apply During Such Periods

1. Definitions

In the January 31, 2013, final amendments to the Boiler MACT, the EPA finalized revisions to the definition of startup and shutdown periods, which were based on the time during which fuel is fired in the affected unit for the purpose of supplying steam or heat for heating and/or producing electricity or for any other purpose. Petitioners asserted that the definitions were not sufficiently clear. In response to these petitions, we proposed an alternative definition of startup in the January 21, 2015, proposed notice of reconsideration (80 FR 3093). This alternative definition clarified pre-startup testing activities and also expanded to allow for startup after a shutdown event instead of solely the initial startup of the affected unit. The alternative definition of startup as well as the definition of shutdown also

incorporated a new term "useful thermal energy" to replace the term "steam and heat" to address petitioners' concerns of an ambiguous end of the startup period.

In today's action, the EPA is adopting two alternative definitions of "startup," consistent with the proposed rule. The first definition defines "startup" to mean the first-ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity or for any other purpose. Under this definition, startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, producing electricity, or any other purpose. The EPA is also adopting an alternative definition of "startup" which defines the period as beginning with the first-ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler or process heater for the purpose of supplying useful thermal energy for heating, cooling, or process purposes or for producing electricity, and ending four hours after the boiler or process heater supplies useful thermal energy for those purposes. Sources demonstrating compliance using the alternative definition will be required to meet enhanced recordkeeping provisions. These enhancements will document when useful thermal energy is provided, what fuels are used during startup, parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged.

In the January 31, 2013 final rule, the EPA defined "shutdown" to mean the cessation of operation of a boiler or process heater for any purpose, and said this period begins either when none of the steam from the boiler is supplied for heating and/or producing electricity or for any other purpose, or when no fuel is being fired in the boiler or process heater, whichever is earlier. The EPA received petitions for reconsideration of this definition, asking that the agency clarify the term. The EPA proposed a definition of "shutdown" in January 2015 which clarified that shutdown begins when the boiler or process heater no longer makes useful thermal energy (rather than referring to steam supplied by the boiler) for heating, cooling, or process purposes and/or generates electricity, or when no fuel is being fed to the boiler or process heater, whichever is earlier. In today's action, the EPA is adopting a definition of "shutdown" that is consistent with the proposal, with some minor clarifying revisions. "Shutdown" is defined to begin when the boiler or process heater

no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generation of electricity, or when no fuel is being fed to the boiler or process heater, whichever is earlier.

The EPA received several comments on the proposed edits to the definitions of "useful thermal energy," "startup," and "shutdown."

a. Useful Thermal Energy

Several comments supported the alternative definitions of startup and shutdown to include the concept of useful thermal energy, which recognizes that small amounts of steam or heat may be produced when starting up a unit, but the amounts would be insufficient to operate processing equipment and insufficient to safely initiate pollution controls.

One comment stated that an alternative work practice period between the start of fuel combustion until 4 hours after useful thermal energy is supplied is unlawful because the EPA may set work practice standards only for categories or subcategories of sources, not for periods of operation. The comment further noted that work practice standards are allowed only if pollution is not emitted through a conveyance or the application of measurement methodology to a particular class of sources is not practicable, and the EPA has not stated either of these to be the case. The comment also claimed that, because the EPA has changed and extended startup and shutdown periods, the EPA must determine that emissions measurement is impracticable during startup and shutdown as they are now defined, which the EPA has not done.

The EPA recognizes the unique characteristics of ICI boilers and has retained the alternative definition, which incorporates the term "useful thermal energy" in the final rule, with some slight adjustments, as discussed below. The EPA disagrees with the commenter that the reference to "a particular class of sources" in CAA section 112(h)(2) limits the EPA's authority to determine, for a category or subcategory of sources, that it is infeasible to prescribe or enforce an emission standard for those sources during certain identifiable time periods, such as startup and shutdown. Contrary to the commenter's assertion, the EPA did make a determination under CAA section 112(h) that it is not feasible to prescribe or enforce a numeric standard during periods of startup and shutdown, because the application of measurement methodology is impracticable due to technological and economic limitations.

Information provided on the amount of time required for startup and shutdown of boilers and process heaters indicates that the application of measurement methodology for these sources using the required procedures, which would require more than 12 continuous hours in startup or shutdown mode to satisfy all of the sample volume requirements in the rule, is impracticable. In addition, the test methods are required to be conducted under isokinetic conditions (*i.e.*, steady-state conditions in terms of exhaust gas temperature, moisture, flow rate), which is difficult to achieve during these periods where conditions are constantly changing. Moreover, accurate HAP data from those periods is unlikely to be available from either emissions testing (which is designed for periods of steady state operation) or monitoring instrumentation such as continuous emissions monitoring systems (CEMS) (which are designed for measurements occurring during periods other than during startup or shutdown when emissions flow are stable and consistent). Upon review of this information, the EPA determined that it is not feasible to require stack testing, in particular, to complete the multiple required test runs during periods of startup and shutdown due to physical limitations and the short duration of startup and shutdown periods. Based on these specific facts for the Boilers and Process Heater source category, the EPA developed a separate standard for these periods, and we are finalizing amendments to the work practice standards to meet this requirement. As detailed in the response to this commenter in the 2013 final amendments to the Boiler MACT (EPA-HQ-OAR-2002-0058-3511-A1), the EPA continues to maintain that testing is impracticable during periods of startup and shutdown, despite the revisions to the definitions for the two terms as finalized in this action. We set standards based on available information as contemplated by CAA section 112. Compliance with the numeric emission limits (*i.e.*, PM or total selected metals (TSM), hydrogen chloride (HCl), mercury (Hg), and CO) are demonstrated by conducting performance stack tests. The revised definitions of startup and shutdown better reflect when steady-state conditions are achieved, which are required to yield meaningful results from current testing protocols.

Several comments requested that the EPA add the term “flow rate” to the definition of useful thermal energy, consistent with the preamble to the proposed notice of reconsideration (80

FR 3093). The EPA recognizes the importance of flow rate as a parameter for determining when useful thermal energy is being supplied by a boiler or process heater and has added this term to the definition in the final rule.

Two comments argued that for the alternative definitions of startup and shutdown to be useful, the term “useful thermal energy” must incorporate a primary purpose component that assures that the 4-hour startup period is not triggered until useful energy is supplied to the most demanding end use of the boiler. Several comments agreed with the EPA that startup “should not end until such time that all control devices have reached stable conditions” (*see* 80 FR 3094, column 1), but noted that the time frame of 4 hours after a unit supplies useful thermal energy is not workable for some boilers due to site-specific factors and technology differences. One commenter agreed with the EPA that the variation of practices and capabilities among fossil-fuel fired boilers warrants longer periods when work practices apply in lieu of ICI MACT emission limits.

The EPA agrees that the definition of “useful thermal energy” could be further clarified; however, we disagree that basing the end of startup on a primary purpose approach which considers the most demanding end use is an appropriate approach. Often times, ICI boilers can serve more than one purpose. As long as the boiler is providing useful thermal energy to one of its intended purposes, the unit is supplying “useful thermal energy.” The final definition of “useful thermal energy” incorporates the term “flow” to more appropriately reflect when the energy is provided for any primary purpose of the unit. We believe that supplying energy at the minimum temperature, pressure, and flow to any energy use system is the primary purpose of any unit.

b. Startup

Several comments claimed that even with an alternative definition of startup to incorporate the term “useful thermal energy,” the first definition remains unworkable. The act of supplying heat, steam, or electricity does not represent the functional end of the startup period, and some processes are designed such that downstream equipment receives heat and/or steam when fuel is being burned during startup of the boilers and/or process heaters.

The EPA has adjusted the first definition of startup to replace “steam” with “useful thermal energy”. Additionally, the term “useful thermal energy” was revised to incorporate a

minimum flowrate to more appropriately reflect when the energy is provided for any primary purpose of the unit. Together, these changes alleviate the concerns of when the startup period functionally ends. Boilers and process heaters should be considered to be operating normally at all times steam or heat of the proper pressure, temperature and flow rate is being supplied to a common header system or energy user(s) for use as either process steam or for the cogeneration of electricity.

c. Shutdown

Several comments supported the EPA’s proposed definition of shutdown, because the proposed revisions now adequately address the circumstances for some affected units where fuel remaining in the unit on a grate or elsewhere continues to combust although fuel has been cut off and useful thermal energy is no longer generated. Two comments suggested that the definition could be clarified to recognize that the shutdown period begins when no useful steam or electricity is generated, or when fuel is no longer being combusted in the boiler. After the shutdown period ends, some steam may still be generated temporarily, even though the steam is not useful thermal energy (*i.e.*, the steam does not meet the minimum operating temperature, pressure, and flow rate).

The EPA has adjusted the definition of shutdown to replace the phrase “makes useful thermal energy” to “supplies useful thermal energy.” The shutdown period begins when no useful steam or electricity is generated, or when fuel is no longer being combusted in the boiler. The term “supplies” is the preferred phrase in the definition of shutdown instead of “makes” to be consistent with the definition of startup, and is a more accurate term to use to describe the function of the boiler or process heater.

2. Work Practices

The EPA is adopting work practices that apply during the periods of startup and shutdown which reflect the emissions performance achieved by the best performing units. These work practices include use of clean fuels during startup and shutdown. In addition, under the alternate work practice, sources must engage all applicable control devices so that the emissions standards are met no later than four hours after the start of supplying useful thermal energy and must engage PM controls within one hour of first feeding non-clean fuels.

a. Clean Fuels

In the January 31, 2013, final amendments to the Boiler MACT, the EPA finalized a definition of “clean fuels” that could be used during periods of startup and shutdown to satisfy the clean fuels requirement. Petitioners claimed that the list of “clean fuels” was too narrow. In response to these petitions, the EPA proposed revisions to this term in the January 21, 2015, notice of reconsideration to include “other gas 1” fuels, as well as any fuels that meet the applicable TSM, HCl, and Hg emission limits based on fuel analysis. In today’s action, the EPA is finalizing these proposed revisions to the definition of “clean fuels” and also adding “clean dry biomass” to the definition of “clean fuels.”

The EPA received several comments on the proposed changes to the definition of clean fuels. Several comments supported the EPA’s proposal to expand the list of eligible clean fuels for starting up a boiler or process heater to include all gaseous fuels meeting the “other gas 1” classification and any fuel that meets the applicable TSM, HCl, and Hg emission limits using fuel analysis. Another comment claimed that the EPA had not shown that boilers burning “clean fuels” or those fuels newly added to the “clean fuels” list (*i.e.*, other gas 1) can meet CO standards or that emissions of organic HAP will not increase. This comment suggested that allowing sources to emit more CO or organic HAP than is permitted by the standards, is not “consistent with” CAA section 112(d), and is, therefore, unlawful. This comment also expressed concerns that broadening the “clean fuel” definition would allow sources to burn tires as “clean fuel,” provided that they meet fuel analysis requirements for Hg, TSM, and HCl despite the fact that burning tires plainly increases polycyclic aromatic hydrocarbons (PAH).

Based on the comments received, the EPA is finalizing an expanded list of clean fuels to add any fuels that meet the applicable TSM, HCl and Hg emission limits based on fuel analysis. The EPA disagrees with the comment that the clean fuels requirement is inconsistent with CAA section 112(d) because it fails to address emissions of CO or organic HAP. These pollutants are byproducts of the combustion process, and, therefore, emissions are not fuel-dependent and cannot be measured through fuel analysis. For instance, the formation of POM is effectively reduced by good combustion practices (*i.e.*, proper air to fuel ratios). In addition, because these pollutants are byproducts

of the combustion process, the EPA does not expect most units to require post-combustion controls to meet the CO limits once the startup period has ended, but instead will comply by conducting the required tune-up (which serves to reduce HAP emissions at all times, including during startup and shutdown), and adopting other combustion best practices. In contrast, the EPA expects many units to install one or more post-combustion controls to reduce emissions of HCl, Hg, or non-Hg metallic HAP. Because CO and organic HAP are combustion byproducts, emissions of CO and organic HAP are likely to vary little among boilers during startup since combustion practices during that period tend to be similar and well-controlled in order to prevent thermal stresses, and are not dependent on the fuel being combusted, unlike Hg, HCl, and other hazardous metals. Therefore, it is reasonable for EPA to conclude that emissions during startup will reflect the maximum degree of reduction of CO and organic HAP, as well as other HAP, achieved during startup. For these reasons, today’s action retains the proposed requirements to qualify as a clean fuel through fuel analysis data.

Regarding the commenter’s concerns with tires, specifically, the EPA has reviewed the fuel analysis data for tire derived fuel for HCl, Hg, and TSM emissions submitted in the databases used in the final rule. None of the samples indicate that tires could demonstrate compliance with the TSM limit for solid fossil fuels. Thus, the EPA believes that tires would not qualify as a “clean fuel.”

Two commenters asked the EPA to include dry biomass (*i.e.*, moisture content less than 20 percent) in the list of clean fuels allowed during startup and shutdown. The commenters noted that the chemical makeup and combustion characteristics are similar to paper and cardboard which are currently included. Further, dry biomass has low chloride, Hg, and moisture content, burns cleaner than other solid fuels, and produces low HCl, Hg, and CO. The list of clean fuels was expanded to include “clean dry biomass.” The EPA has reviewed boiler information collection request (ICR) fuel analysis data and AP-42 emission factor data for wood combustion. The ICR fuel analysis data for solid fuels often exclude numeric values for certain metallic HAP that were reported as below detection levels. These data show that clean dry biomass can meet the Hg and HCl limits for solid fuels and the TSM levels in dry biomass are 6 times lower than in solid fossil fuels.

Therefore, the EPA has finalized the list of clean fuels to include clean dry biomass. The EPA added the phrase “clean dry biomass” to Table 3 to subpart DDDDD of part 63, item 5.b. The EPA also defined this new term for this subpart drawing on similarly defined term in the “Identification of Non-Hazardous Secondary Materials That Are Solid Waste” rulemaking. Under the final rule, clean dry biomass fuels are now categorically accepted as clean fuels and do not need to demonstrate that the fuel meets the TSM, Hg, and HCl emission limits with each new fuel shipment.

Based on comments received to clarify how the “clean fuel” provision works, the EPA also made several corrections in the final rule. Text in 40 CFR 63.7555(d)(11) is added to acknowledge the possibility for additional clean fuels. Language in 40 CFR 63.7555(d)(11) was revised to replace the phrase “coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases” with “fuels that are not clean fuel.”

For consistency, the phrase “coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases” was replaced with “fuels that are not clean fuel” in Table 3 to subpart DDDDD of part 63, items 5.c and 6.

b. Engaging Pollution Controls

The January 2013 final amendments to the Boiler MACT included a provision for boilers and process heaters when they start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases to engage applicable pollution control devices except for limestone injection in fluidized bed combustion (FBC) boilers, dry scrubbers, fabric filters, selective non-catalytic reduction, and selective catalytic reduction, which must start as expeditiously as possible. The EPA received several petitions for reconsideration of this aspect of the work practice standard expressing safety concerns with engaging electrostatic precipitator (ESP) control devices. These petitions urged the EPA to revise requirements to include ESP energization with the other controls that are to be started as expeditiously as possible rather than when solid fuel firing is first started.

In response to these petitions, the January 2015 proposal included an alternate requirement to engage all control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. Under the proposal, owners or operators would be required to engage PM control within 1 hour of first firing coal/solid

fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases. Owners or operators using this alternative would have to develop and implement a written startup and shutdown plan (SSP) and the SSP must be maintained on site and available upon request for public inspection. The EPA also proposed to allow a source to request a case-by-case extension to the 1-hour period for engaging the PM controls based on evidence of a documented manufacturer-identified safety issue and proof that the PM control device is adequately designed and sized to meet the filterable PM emission limit. The EPA is adopting the proposed requirements with minor revisions.

The EPA received several comments on the proposed revisions for engaging pollution controls. One comment supported the EPA's recognition that some HAP emission control technologies require specific operating conditions before being engaged and should be excluded from operation as soon as primary fuel firing begins. Several comments requested that the EPA add ESPs to the list of controls that must be started as expeditiously as possible, noting that the 1-hour requirement for engaging ESPs is unreasonable. Another comment considered the EPA's decision to set a less stringent work practice standard that allows boilers to operate without pollution controls to be inconsistent with CAA section 112(d)(2) and arbitrary. This commenter also considered the requirement to engage applicable pollution controls "as expeditiously as possible" within the startup period to be inconsistent with CAA section 112(d) and unlawful, as well as arbitrary and capricious. The commenter states that it is not acceptable for a standard to allow sources to do whatever is "possible" for them. The commenter stated that the point of a national standard is to set one limit that governs all the sources to which it applies.

The EPA has established a work practice for periods of startup and shutdown because it is infeasible to measure emissions during these periods. Moreover, accurate HAP data from those periods are unlikely to be available from either emissions testing (which is designed for periods of steady state operation) or monitoring instrumentation such as CEMS (which are designed for measurements occurring during periods other than during startup or shutdown when emissions flow is stable and consistent). The work practice for PM controls was established by evaluating the

performance of the best performing sources as determined by the EPA. For the Mercury and Air Toxics Standards (MATS), the EPA conducted an analysis of nitrogen oxide (NO_x) and sulfur dioxide (SO₂) CEMS data from electric utility steam generating units (EGUs) to determine the best performing sources with respect to NO_x and SO₂ emissions (79 FR 68779 November 19, 2014). The best performing sources are those whose control devices are operational within 4 hours of starting electrical generation. Since the types of controls used on EGUs are similar to those used on industrial boilers and the start of electricity generation is similar to the start of supplying useful thermal energy, we believe that the controls on the best performing industrial boilers would also reach stable operation within four hours after the start of supplying useful thermal energy and have included this timeframe in the proposed alternate definition. This conclusion was supported by the limited information (13 units) the EPA did have on industrial boilers and by information (76 units) submitted by CIBO obtained from an informal survey of its members on the time needed to reach stable conditions during startup. The time reported, in the CIBO survey summary, to reach stable operation after coming online (supplying useful thermal energy) of the best performing units ranged from 1 to 4 hours. See the docketed memorandum "2015 Assessment of Startup Period for Industrial Boilers."

The EPA also maintains that the best performers are able to engage their PM control devices within 1 hour of coal, biomass, or residual oil combustion. In the January 2013 final Boiler MACT rule and in the January 2015 reconsideration proposal, the EPA stated that once an affected unit starts firing coal, biomass, or heavy liquid fuel, all of the applicable control devices had to be engaged (with certain listed exceptions). The listed exceptions did not include ESP for controls of PM emissions and, thus, the EPA's intent was that ESP controls would be engaged (*i.e.*, operational) at the moment non-clean fuel are fired. We did receive comments making us question the ability of most affected units to engage their ESP controls so quickly after first firing non-clean fuel. These comments suggested that there may need to be some flexibility. For this reason, we are providing a 1-hour period of time following the initiation of firing of non-clean fuels before PM controls must be engaged. Therefore, we are finalizing as part of the alternative work practice that

PM control must be engaged within 1 hour of the time non-clean fuels are introduced into the affected unit. We have also added requirements to document that PM control is being achieved through the operation of the PM controls. The requirement to engage and operate the PM controls within 1 hour of non-clean fuels being charged to the units is intended to ensure that PM and HAP reductions will occur as quickly as possible after primary fuel combustion begins. We continue to believe that sources will be able to engage and operate their controls to comply with the standards at the end of startup, and that sources can make physical and/or operational changes at the facility to ensure compliance at the end of startup. As noted before, the EPA believes it appropriate to base its startup and shutdown work practices on those practices employed by the best performers. Because the above information indicates that ESPs can be energized within 1 hour of coal firing being started, we are finalizing that PM controls must be engaged within 1 hour of starting to fire non-clean fuels.

Several commenters were also concerned with compliance deadlines and asked the EPA to provide and finalize a more streamlined procedure for units needing more than 1 hour to safely initiate PM control during startup. They were concerned that their case-by-case extensions would not be approved by the local authority by the compliance deadlines, considering that the EPA must finalize this rule before it is adopted by the state.

The EPA is finalizing the provision allowing an owner or operator to apply for a boiler-specific case-by-case alternative timeframe with the requirement to engage PM control devices within 1 hour of firing non-clean fuels. However, the delegated authority will only consider such requests for boilers that can provide evidence of a documented manufacturer-identified safety issue, proof that the PM control device is adequately designed and sized to meet the final PM emission limit, and that it can demonstrate it is unable to safely engage and operate the PM controls. In its request for the case-by-case determination, the owner or operator must provide, among other materials, documentation that: (1) The boiler is using clean fuels to the maximum extent possible to bring the boiler and PM control device up to the temperature necessary to alleviate or prevent the safety issues prior to the combustion of non-clean fuels in the boiler, (2) the boiler has explicitly followed the manufacturer's procedures to alleviate

or prevent the safety issue, (3) the source provides details of the manufacturer's statement of concern, and (4) the source provides evidence that the PM control device is adequately designed and sized to meet the final PM emission limit. In addition, the source will have to indicate the other measures it will implement to limit HAP emissions during periods of startup and shutdown to ensure a control level consistent with the final work practice requirements.

The EPA is finalizing a provision, 40 CFR 63.7555(d)(13), that provides that an owner or operator may apply for an alternative timeframe with the PM controls requirement to the permitting authority. We recognize that there may be very limited circumstances that compel an alternative approach for a specific unit. The EPA has added language to Table 3 to subpart DDDDD of part 63, item 5.c to clarify that a written SSP must be developed. Text was added to Table 3 to subpart DDDDD of part 63—footnote “a” to acknowledge that an alternative timeframe to the PM controls requirement can be granted by the EPA or the appropriate state, local, or tribal permitting authority that has been delegated authority.

B. Revised CO Limits Based on a Minimum CO Level of 130 ppm

In the January 2013 final amendments to the Boiler MACT, the EPA established a CO emission limit for certain subcategories at a level of 130 ppm, based on an analysis of CO levels and associated organic HAP emission reductions. The January 2015 proposal retained these emission limits, but requested additional data to support whether or not these limits were appropriate or should be modified. The EPA is retaining these limits, as discussed below.

The EPA received numerous comments supporting the minimum CO level of 130 ppm, adjusted to 3-percent oxygen (O₂). These comments agreed that the level selected was within the range of where the relationship between CO and organic HAP breaks down. Many of these comments also noted that the level was consistent with other EPA regulations for hazardous waste combustors and industrial furnace rules.

One comment disagreed that the minimum CO level of 130 ppm reflects the CO emissions achieved by the best performers in this subcategory, and contended that this level does not satisfy the requirements of CAA section 112(d)(3). This comment also disagreed with the use of formaldehyde as a surrogate for other organic HAPs and

provided supporting evidence.¹ The commenter concluded that formaldehyde emissions are formed differently than polychlorinated biphenyls (PCBs) and PAHs, and they noted that combustion practices that reduce emissions of PCBs and PAHs (*i.e.* extremely high temperatures) can increase emissions of CO. The comments also noted that the gaseous properties of formaldehyde emissions differ from PCBs and PAH emissions, which are particles.

After consideration of the comments received, the EPA is maintaining a minimum level of 130 ppm CO at 3-percent O₂. The issue of whether or not CO is an appropriate surrogate for formaldehyde (a representative organic HAP in boiler emissions), or non-dioxin organic HAP in general, is outside the scope of this reconsideration, since the reconsideration solicited comment only on the CO limits established at 130 ppm, not on the broader issue of using CO as a surrogate for organic HAP. Moreover, the appropriateness of CO as a surrogate is currently part of ongoing litigation before the Court (*United States Sugar Corporation v. EPA*, pending case No. 11–1108). As noted in the final amendments to the Boiler MACT (78 FR 7145 January 31, 2013), the EPA selected formaldehyde “. . . as the basis of the organic HAP comparison because it is the most prevalent organic HAP in the emission database and a large number of paired tests existed for boilers and process heaters for CO and formaldehyde.” As for the additional evidence submitted with the comments, we do not disagree that the gaseous properties of formaldehyde emissions differ from PCBs and PAH emissions. However, the surrogacy testing conducted by the EPA's Office of Research and Development (ORD) clearly show a high correlation between CO and PAH, similar to the correlation between formaldehyde and CO. Furthermore, as shown in figure 2 of the technical report provided in Attachment A to the commenter letter, PAH emissions decrease with increasing O₂ levels, but then increase with higher levels of excess O₂, similar to the trend we saw in our assessment of the correlation between CO and formaldehyde.

C. PM CPMS

The March 2011 Boiler MACT final rule required units greater than 250 million British thermal units per hour (MMBtu/hr) combusting solid fossil fuel or heavy liquid to install, maintain, and

operate PM CEMS to demonstrate compliance with the applicable PM emission limit (*see* 76 FR 15615, March 21, 2011). In response to petitions for reconsideration challenging PM CEMS, the EPA finalized a CPMS for demonstrating continuous compliance with the PM standards in the January 2013 final amendments to the Boiler MACT. The CPMS requirement allowed sources a number of exceedances of the operating limit before the exceedance would be presumed to be a violation, and also allowed certain low emitting sources to “scale” their site-specific operating limit to 75 percent of the emission standard. The EPA received petitions for reconsideration on the PM CPMS provisions and proposed these provisions again in January 2015 to provide additional opportunity for comment.

Several comments expressed concern about the cost and burden of the PM CPMS requirements. The combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate for assuring continuous compliance with the emissions limitations. Without recurring testing, the EPA would have no way to know if parameter ranges established during initial performance testing remained viable in the future.

Several comments also contended that the CPMS limit should be based on the highest reading during the initial performance test instead of the average of the readings during each of the three test runs. The EPA disagrees with the commenters. Requiring PM CPMS to correspond to the average of three PM test runs rather than the single highest test run during the performance test alleviates the potential for setting an operating limit that corresponds to an emissions result higher than the emission standard, which could occur if the limit corresponded to the highest reading.² The EPA reiterates the statement in the January 2015 preamble that a 4th deviation of the PM CPMS operating limit in a 12-month period is a presumptive violation of the emissions standard. However, this is just a presumption which may be rebutted with evidence from the process controls, control monitoring parameters, repair logs, and associated Method 5 performance tests. In addition, the operating limit is based on a 30-day rolling average, which provides for additional cushion on variability of PM

¹ See Exhibit A from commenter, EPA-HQ-OAR-2002-0058–3919–A1.

² S. Johnson, memo to Docket ID No. EPA-HQ-OAR-2011–0817, “Establishing an Operating Limit for PM CPMS,” November 2012.

readings beyond just the initial performance test.

Based on comments, the EPA is maintaining the PM CPMS requirement as promulgated with minor adjustments as discussed below.

One commenter requested that the word “certify” be removed from 40 CFR 63.7525(b) and (b)(1). The EPA agrees that a PM CPMS is not a “certified” instrument, in that it is not certified through a performance specification. We have removed this language from the final rule.

IV. Technical Corrections and Clarifications

In the January 21, 2015, notice of reconsideration, the EPA also proposed to correct typographical errors and clarify provisions of the final rule that may have been unclear. This section of the preamble summarizes the significant changes made to the proposed corrections and clarifications, as well as corrections and clarifications being finalized based on comment.

A. Opacity Is an Operating Parameter

Commenters contended that the opacity operating limit of 10-percent may be an appropriate indicator of compliance with the applicable Boiler MACT PM limits for some boilers, but it is not an appropriate indicator of compliance for all boilers in all solid fuel subcategories.

Commenters also contend that the 10-percent opacity level is an “operating limit,” not an emission limit, and is utilized as an indicator of compliance with the Boiler MACT PM limit. Operating limit requirements are provided in Table 4 to subpart DDDDD of part 63, and include opacity. Emission limits are included in Tables 1 and 2 to subpart DDDDD of part 63 and do not include opacity. Commenters added that the language in 40 CFR 63.7500(a)(2) creates a conflict. By requiring a facility to request an alternate opacity parameter limit via 40 CFR 63.6(h)(9), the commenters claim that the EPA will be subjecting units to a more stringent PM standard than the established MACT floor because this process will not be feasible to complete prior to the compliance date. To resolve this issue, commenters asked that the EPA delete 40 CFR 63.7570(b)(2) so it will be clear that a request for an alternate opacity operating parameter limit is accomplished under 40 CFR 63.8(f) per 40 CFR 63.7570(b)(4) and 40 CFR 63.7500(a)(2).

The EPA agrees that the variation in PM limits for various solid fuel subcategories warrants some flexibility and similar variation in opacity limits.

Opacity serves as a surrogate indicator of PM emissions, but was not intended by the EPA as an emission limit under the rule. Rather, it was intended to be an operating limit, which is established on a source-specific basis. Therefore we are revising the opacity operating limit such that affected facilities will have the option to comply with the 10-percent operating limit or a site-specific value established during the performance test based on the highest hourly average, which is consistent with how the other operating limits are established.

To implement this change in the final rule, 40 CFR 63.7570(b) is revised to remove the text currently in paragraph (b)(2), and the phrase “or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation” is added to Table 4 to subpart DDDDD of part 63, item 3; Table 4 to subpart DDDDD of part 63, item 6; and Table 8 to subpart DDDDD of part 63, item 1.c. Table 7 to subpart DDDDD of part 63 is expanded to include the process for establishing operating limits and item c is added.

B. CO Monitoring and Moisture Corrections

Commenters asked that since the applicable CO emission limits of the rule are expressed on a “dry” basis, the EPA should include additional provisions in the final rule to allow carbon dioxide (CO₂) CEMS to be used without petitioning for alternative monitoring procedures. Commenters also observed that 40 CFR 63.7525(a)(2) cross-references other requirements, including 40 CFR part 75, which do not address CO monitoring and do not fully address the moisture correction.

Language is added to 40 CFR 63.7525(a)(2)(vi) to clarify requirements when CO₂ is used to correct CO emissions and CO₂ is measured on a wet basis.

It is also acknowledged that CO concentration on a dry basis corrected to 3-percent O₂ can be calculated using data from the CO₂ CEMS and equations contained in EPA Method 19 instead of during the initial compliance test. Language is added to Table 1 to subpart DDDDD of part 63, as well as footnote “d” and footnote “c” in the following tables: Table 2, Table 12, and Table 13 to subpart DDDDD of part 63.

C. Affirmative Defense for Violation of Emission Standards During Malfunction

The EPA received numerous comments on its proposal to remove from the current rule the affirmative defense to civil penalties for violations

caused by malfunctions. Several commenters supported the removal of the affirmative defense for malfunctions. Other commenters opposed the removal of the affirmative defense provision.

First, commenters (AF&PA and Georgia-Pacific) urged the EPA to publish a new or supplemental statement of basis and purpose for the proposed rule that explains (and allows for public comment on) the appropriateness of applying the boiler/process heater emission standards to malfunction periods without an affirmative defense provision.

Second, a commenter (AF&PA) argued the affirmative defense was something that the EPA considered necessary when the current standards were promulgated; it was part of the statement of basis and purpose for the standards required to publish under CAA section 307(d)(6)(A).

Third, commenters (CIBO/ACC) argued that the EPA should not remove the affirmative defense until the issue is resolved by the Court. Furthermore commenters argued the *NRDC* Court decision that the EPA cites as the reason for eliminating the affirmative defense provisions does not compel the EPA’s proposed action here to remove the affirmative defense in this rule.

Fourth, several commenters argued that without affirmative defense, or adjusted standards, the final rule provides sources no means of demonstrating compliance during malfunctions.

Fifth, commenters (AF&PA, Class of ’85 Regulatory Response Group, CIBO/ACC, American Electric Power, NHPC) urged the EPA to establish work practice standards that would apply during periods of malfunction instead of the emission rate limits or a combination of work practices and alternative numerical emission limitation. The EPA can address malfunctions using the authority Congress gave it in CAA sections 112(h) and 302(k) to substitute a design, equipment, work practice, or operational standard for a numerical emission limitation.

The Court recently vacated an affirmative defense in one of the EPA’s CAA section 112(d) regulations. *NRDC v. EPA*, No. 10–1371 (D.C. Cir. April 18, 2014) 2014 U.S. App. LEXIS 7281 (vacating affirmative defense provisions in the CAA section 112(d) rule establishing emission standards for Portland cement kilns). The Court found that the EPA lacked authority to establish an affirmative defense for private civil suits and held that under the CAA, the authority to determine civil penalty amounts in such cases lies exclusively with the courts, not the

EPA. Specifically, the Court found: “As the language of the statute makes clear, the courts determine, on a case-by-case basis, whether civil penalties are ‘appropriate.’” *see NRDC*, 2014 U.S. App. LEXIS 7281 at *21 (“[U]nder this statute, deciding whether penalties are ‘appropriate’ in a given private civil suit is a job for the courts, not EPA.”). As a result, the EPA is not including a regulatory affirmative defense provision in the final rule. The EPA notes that removal of the affirmative defense does not in any way alter a source’s compliance obligations under the rule, nor does it mean that such a defense is never available.

Second, the EPA notes that the issue of establishing a work practice standard for periods of malfunctions or developing standards consistent with performance of best performing sources under all conditions, including malfunctions, was raised previously; see the discussion in the March 21, 2011 preamble to the final rule (76 FR 15613). In the most recent notice of proposed reconsideration (80 FR 3090, January 21, 2015), the EPA proposed to remove the affirmative defense provision, in light of the *NRDC* decision. The EPA did not propose or solicit comment on any revisions to the requirement that emissions standards be met at all times, or on alternative standards during periods of malfunctions. Therefore, the question of whether the EPA can and should establish different standards during malfunction periods, including work practice standards, is outside the scope of this final reconsideration action. The EPA further notes that this issue is currently before the Court in the pending case *United States Sugar Corporation v. EPA*, pending case No. 11–1108.

Finally, in the event that a source fails to comply with an applicable CAA section 112(d) standard as a result of a malfunction event, the EPA’s ability to exercise its case-by-case enforcement discretion to determine an appropriate response provides sufficient flexibility in such circumstances as was explained in the preamble to the proposed rule. Further, as the Court recognized, in an EPA or citizen enforcement action, the Court has the discretion to consider any defense raised and determine whether penalties are appropriate. Cf. *NRDC*, 2014 U.S. App. LEXIS 7281 at *24 (arguments that violation were caused by unavoidable technology failure can be made to the courts in future civil cases when the issue arises). The same is true for the presiding officer in EPA administrative enforcement actions.

D. Definition of Coal

The last part of the definition of coal published in the final amendments to the Boiler MACT on January 31, 2013 (78 FR 7186), reads as follows: “Coal derived gases are excluded from this definition [of coal].” In the January 2015 proposal (80 FR 3090), the EPA proposed to modify this definition to read as follows: “Coal derived gases and liquids are excluded from this definition [of coal].” The EPA characterized its proposed change to the definition as one of several “clarifying changes and corrections.” This proposed change was based on a question received on whether coal-derived liquids were meant to be included in the coal definition.

The EPA received several comments disagreeing with the proposed change to the definition of coal, and indicating such a change would have a substantive effect on some affected facilities. One

commenter who operates a facility with coal-derived liquids contended that the composition and emission profile of these liquids more closely resemble the coal from which they are derived than any of light or heavy liquid fuels used to set standards for the liquid fuel categories. The commenter added that the delegated authority for this facility, North Dakota Department of Health, accepted an applicability determination for the facility to classify the coal derived liquid fuels as the coal/solid-fossil fuel subcategory. This commenter also noted that coal-derived liquid fuels are treated as coal/solid fossils in other related rules such as 40 CFR part 60, subpart Db.

Based on these comments, the EPA is not finalizing any changes to the definition of coal. The definition published on January 31, 2013 (78 FR 7186), remains unchanged. As noted by the commenters, treating coal liquids as coal is consistent with the ICI boiler NSPS (40 CFR part 60, subpart Db), and EPA agrees with the commenters that coal derived liquids are more similar to coal solid fuels than liquid fuels.

E. Other Corrections and Clarifications

In finalizing the rule, the EPA is addressing several other technical corrections and clarifications in the regulatory language based on public comments that were received in response to the January 2015 proposal and other feedback as a result of implementing the rule. In addition to the changes outlined in Table 1 of the January 21, 2015, proposed notice of reconsideration (80 FR 3098), the EPA is finalizing several other changes, as outlined in Table 2 of this preamble.

TABLE 2—SUMMARY OF TECHNICAL CORRECTIONS AND CLARIFICATIONS SINCE JANUARY 2015 PROPOSAL

Section of subpart DDDDD (40 CFR part 63)	Description of correction (40 CFR part 63)
63.7495(h)	Replaced “January 31, 2016” with “the compliance date of this subpart” to cover sources that might be making changes between January 31, 2016, and the extended compliance date of January 31, 2017.
63.7500(a)(1)	Fixed the term “common heaters” to “common headers.”
63.7515(e)	Revised to clarify that a source may take multiple samples during a month and the 14-day separation does not apply.
63.7521(g)(2)(ii)	Replaced the word “notification” with the word “identification” so the sentence reads as follows: “For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.”
63.7521(g)(2)(vi)	Revised this paragraph to indicate that, when using a fuel supplier’s fuel analysis, the owner or operator is not required to submit the information in 40 CFR 63.7521(g)(2)(iii). Commenters found difficulties when they purchased fuel from another source.
63.7525(a)(2)(vi)	Language was added because 40 CFR part 75 does not address CO monitoring and does not fully address the moisture correction. See section IV.B of the preamble.
63.7525(b) and (b)(1)	Removed the word certify since PM CPMS does not have a performance specification. See section III.C of the preamble.

TABLE 2—SUMMARY OF TECHNICAL CORRECTIONS AND CLARIFICATIONS SINCE JANUARY 2015 PROPOSAL—Continued

Section of subpart DDDDD (40 CFR part 63)	Description of correction (40 CFR part 63)
63.7525(g)(3)	Revised the paragraph to clarify that the pH monitor is to be calibrated each day and not performance evaluated which is covered in 40 CFR 63.7525(g)(4).
63.7530(c)(3), (c)(4), and (c)(5)	Revised equations 7, 8, and 9 to clarify that for “Qi” the highest content of chlorine, Hg, and TSM is used only for initial compliance and the actual fraction is used for continuous compliance demonstration.
63.7530(d)	- Paragraphs 63.7530(d) and 63.7545(e)(8)(i) contained requirements that were similar in that they both required the submittal of a signed statement or certification of compliance that an initial tune-up of the subject unit has been completed. - Paragraph 63.7530(d) was deleted and 63.7545(e)(8)(i) was modified to clarify that the requirement to include a signed statement that the tune-up was conducted is applicable to all of the boilers and process heaters covered by 40 CFR part 63, subpart DDDDD.
63.7530(e)	Amended paragraph to clarify that the energy assessment is also considered to have been completed if the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.
63.7540(a)(2)	Corrected the typographical error in the proposed regulatory text so that it has the proper cross-reference: 40 CFR 63.7555(d).
63.7540(a)(10)(i)	Revised to provide owners and operators the flexibility to perform burner inspections at any time prior to tune-up.
63.7540(a)(12)	Revised this paragraph to clarify the O₂ set point for a source not subject to emission limits.
63.7540(a)(14)(i) and (15)(i)	Clarified the length of the performance test depending on the basis of the rolling average for each operating parameter, for internal rule consistency.
63.7545(e)	Clarification that notification for these sources is due within 60 days.
63.7545(e)(2)(iii)	Added a requirement to state the basis of the 30-day rolling average for each operating parameter, for internal rule consistency.
63.7545(e)(8)(i)	- Paragraphs 63.7530(d) and 63.7545(e)(8)(i) contained requirements that were similar in that they both required the submittal of a signed statement or certification of compliance that an initial tune-up of the subject unit has been completed. - Paragraph 63.7530(d) was deleted and 63.7545(e)(8)(i) was modified to clarify that the requirement to include a signed statement that the tune-up was conducted is applicable to all of the boilers and process heaters covered by 40 CFR part 63, subpart DDDDD.
63.7550(b)(1)	Clarified that the first reporting period for units submitting an annual, biennial, or 5 year compliance report ends on December 31 within 1, 2, or 5 years, as applicable, after the initial compliance date.
63.7550(b)(5)	Paragraph was included in the March 2011 rule and in the December 2011 reconsideration proposal, but inadvertently removed from the January 2013 final. The text has been reinserted.
63.7550(c)(5)(xvi)	Clarification that a rolling average is not an arithmetic mean. An arithmetic mean requires more space in a data acquisition system and more effort to review the information for accuracy. Furthermore, the intent is that ALL readings for CEMS and only deviations for non-CEMS are required.
63.7555(d)(11) and (12)	- Text added to clarify that the new requirements apply only if startup definition 2 is selected. - Changed from “fired” to “fed” to alleviate concerns about units firing solid fuels on a grate or in a FBC where the residual material in the unit keeps burning after fuel feed to the unit is stopped. - Changed from the list of fuels (“coal/solid fossil fuel, biomass/biobased solids, heavy liquid fuel, or gas 2 (other) gases”) to “fuels that are not clean fuels” as an acknowledgement that additional clean fuels could be named.
63.7570(b)(1)	- Removed “non-opacity” since opacity is not an emission limit, but instead an operating limit. - Added “except as specified in § 63.7555(d)(13)” to clarify the procedures for requesting an alternative timeframe with the PM controls requirement to the permitting authority.
63.7575	Revised definition of energy assessment to include both process heaters and boilers.
63.7575	Revised definition of minimum sorbent injection rate to clarify that the ratio of sorbent to sulfur applies only to fluidized bed boilers that do not have sorbent injection systems installed.
63.7575	- Revised definition of 30-day rolling average for internal rule consistency. - Revised definition of liquid fuel to remove “comparable fuels as defined under 40 CFR 261.38.” This section of the part 261 was vacated by the Court.
63.7575	Edited definition of operating day and added a definition of rolling average to clarify the procedures for demonstration of compliance.
Table 1 to subpart DDDDD (footnotes c and d)	Revised footnote “c” to change “January 31, 2013” to “April 1, 2013” to make consistent with effective date of final rule.

TABLE 2—SUMMARY OF TECHNICAL CORRECTIONS AND CLARIFICATIONS SINCE JANUARY 2015 PROPOSAL—Continued

Section of subpart DDDDD (40 CFR part 63)	Description of correction (40 CFR part 63)
Table 4 to subpart DDDDD	- Revised footnote “d” to clarify that CO concentration on a dry basis corrected to 3-percent O₂ can be calculated using data from the CO₂ CEMS and equations contained in EPA Method 19 instead of an initial compliance test. - This revision also applies to footnote “c” in the following tables: Table 2, Table 12, and Table 13 to subpart DDDDD. - Items 3, 4, and 6, insert “or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation” to be consistent with other operating limits. - Item 7, insert 30-day rolling average before the term “operating load” since the load parameter includes an averaging time. - Added a footnote to clarify that an acid gas scrubber is a control device that uses an alkaline solution.
Tables 4 and 8 to subpart DDDDD	Continuous compliance is based on monthly fuel analysis and there are no operating limits related to fuel. Fuel analysis language is deleted from Table 4, item 7 and moved to Table 8, line 8.
Table 6 to subpart DDDDD	- Clarification: References to Equations 7, 8, and 9 in 40 CFR 63.7530 are incorrect in items 1.g, 2.g, and 4.g of Table 6. - Move EPA Method 1631, EPA Method 1631E, and EPA 821–R–01–013 from line 1.a to 1.f because these methods cover the analytical method, not the sample collection method. - Remove ASTM D4177 and D4057 from line 1.e and 2.e because these are sampling methods, not methods for determining moisture.
Table 7 to subpart DDDDD (item 5)	- Revised Table 7—item 5 by adding “highest hourly” to resolve an inconsistency with Table 4—item 8 and Table 8—item 10. - Added a footnote to clarify how to set operating parameters when multiple tests are conducted. - Added a footnote to clarify that future tests can confirm operating scenarios.
Table 8 to subpart DDDDD (lines 9.c, 10.c, and 11.c; footnotes).	Revised to clarify how to set operating parameters, such as load, when multiple performance test conditions are required. The wording in Table 8, lines 9.c, 10.c, and 11.c was revised to be consistent with the wording in lines 2.c, 4.c, 5.c, 6.c, and 7.c.
Table 10 to subpart DDDDD	- For 63.6(g), revised the 3rd column to say “Yes, except §63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).” The edit is consistent with the revision to 40 CFR 63.7555(d)(13). - For 63.6(h)(2) to (h)(9), revised the 3th column to say “No.” The edit is consistent with the revision to 40 CFR 63.7570(b).
Table 13 to subpart DDDDD	Revise the heading to change “January 31, 2013” to “April 1, 2013” to make consistent with effective date of final rule.

V. Other Actions We Are Taking

Section 307(d)(7)(B) of the CAA states that “[o]nly 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. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time 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, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the

appropriate circuit (as provided in subsection (b)).”

As to the first procedural criterion for reconsideration, a petitioner must show why the issue could not have been presented during the comment period, either because it was impracticable to raise the issue during that time or because the grounds for the issue arose after the period for public comment (but within 60 days of publication of the final action). The EPA is denying the petitions for reconsideration on a number of issues because this criterion has not been met. In many cases, the petitions reiterate comments made on the proposed December 2011 rule during the public comment period for that rule. On those issues, the EPA responded to those comments in the final rule and made appropriate revisions to the proposed rule after consideration of public comments received. It is well established that an agency may refine its proposed approach without providing an

additional opportunity for public comment. *See Community Nutrition Institute v. Block*, 749 F.2d at 58 and *International Fabricare Institute v. EPA*, 972 F.2d 384, 399 (D.C. Cir. 1992) (notice and comment is not intended to result in “interminable back-and-forth[.]” nor is agency required to provide additional opportunity to comment on its response to comments) and *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 547 (D.C. Cir. 1983) (“notice requirement should not force an agency endlessly to repropose a rule because of minor changes”).

In the EPA’s view, an objection is of central relevance to the outcome of the rule only if it provides substantial support for the argument that the promulgated regulation should be revised. *See Union Oil v. EPA*, 821 F.2d 768, 683 (D.C. Cir. 1987) (the Court declined to remand the rule because petitioners failed to show substantial likelihood that the final rule would have

been changed based on information in the petition). See also the EPA's Denial of the Petitions to Reconsider the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202 of the Clean Air Act, 75 FR at 49556, 49561 (August 13, 2010). See also, 75 FR at 49556, 49560–49563 (August 13, 2010) and 76 FR at 4780, 4786–4788 (January 26, 2011) for additional discussion of the standard for reconsideration under CAA section 307(d)(7)(B).

This action includes our final decision to deny the requests for reconsideration with respect to all issues raised in the petitions for reconsideration of the final boiler and process heater rule for which we did not grant reconsideration.

In this final decision, several changes that are corrections, editorial changes, and minor clarifications have been made. These changes made petitioners' comments moot. Therefore, we are denying reconsideration of these issues, as described below.

A. Petitioners' Comments Impacted by Technical Corrections

1. Operating Capacity Limitation

Issue 1: The petitioners (AF&PA, CIBO/ACC) requested that the EPA resolve language conflicts in Tables 4, 7, and 8. Specifically, they claimed there is a conflict as to whether you use the highest hourly average operating load times 1.1 as the operating limit or the test average operating load times 1.1 as the operating limit. The petitioners contended that Table 7 to subpart DDDDD of part 63, item 5 should be revised to clearly state that the limit is set based on the highest hourly average during the performance test times 1.1.

Response to Issue 1: Item 5.c of Table 7 to subpart DDDDD of part 63 has been revised to correctly state, consistent with Tables 4 and 8 to subpart DDDDD of part 63, that the highest hourly average of the three test run averages during the performance test should be multiplied by 1.1 (110 percent) and used as your operating limit. The petitioners' comments are, therefore, now moot and we are denying reconsideration on this issue.

2. Averaging Time for Operating Load Limits

Issue 2: Petitioners (CIBO/ACC) requested clarification of operating load limits. The rule implies that the 110-percent load limit established during a performance test is instantaneous. The area source ICI boiler rule operating load requirement includes a 30-day rolling average period (see Table 7 to

subpart DDDDD of part 63, Item 9–78 FR 7521). By contrast, the EPA did not add the 30-day rolling average to the Boiler MACT rule operating load requirement (see Table 8 to subpart DDDDD of part 63, Item 10–78 FR 7205). The EPA did, however, add the 30-day average to other requirements (see Table 8 to subpart DDDDD of part 63, items 2, 4, 5, 6, 7, 9, 11–78 FR 7204–7205).

The petitioners note that operating parameter limits were raised in public comments submitted on the 2013 Boiler MACT. Specifically, a commenter (AF&PA) requested a change be made in Table 4 to subpart DDDDD of part 63, item 8 (add “30-day average” prior to “operating load”). The operating parameter ranges are established using test data obtained at steady state, so a 30-day averaging period allows for some fluctuations that will occur over the range of operating conditions.

Response to Issue 2: Table 8 to subpart DDDDD of part 63 has been amended to clarify that operating load compliance is demonstrated with a 30-day average, as specified in 40 CFR 63.7525(d). Table 4 to subpart DDDDD of part 63, item 7 (previously item 8 as noted by the petitioner), has also been clarified to reflect that the affected source must maintain the 30-day rolling average operating load of each unit. The petitioners' comments are, therefore, now moot and we are denying reconsideration on this issue.

3. A Gas Fired Boiler, Capacity >25MW, Is an EGU, It Is Not Subject to UUUUU, and Should Not Be Subject to the Boiler MACT

Issue 3: Petitioners (UARG/NHPC) alleged that the EPA has broadened the applicability of 40 CFR part 63, subpart DDDDD with regard to EGUs by stating that only “[a]n electric utility steam generating unit (EGU) covered by subpart UUUUU of [part 63]” is “not subject to” the Boiler MACT. Because 40 CFR part 63, subpart UUUUU does not cover all EGUs, the language in 40 CFR 63.7491(a) seems unlawful because it suggests that some boilers that are EGUs could be subject to 40 CFR part 63, subpart DDDDD. Under 40 CFR 63.9983(b), natural gas-fired EGUs (as defined in 40 CFR part 63, subpart UUUUU) are not subject to 40 CFR part 63, subpart UUUUU, but would not seem to be exempt from 40 CFR part 63, subpart DDDDD. Narrowing the exclusion in 40 CFR 63.7491(a) cannot be a “logical outgrowth” of the proposed rule.

The petitioners point out that “Natural gas-fired electric utility steam generating unit” is defined in 40 CFR part 63, subpart UUUUU as “an electric

utility steam generating unit meeting the definition of ‘fossil fuel-fired’ that is not a coal-fired, oil-fired, or integrated gasification combined cycle (IGCC) electric utility steam generating unit and that burns natural gas for more than 10.0 percent of the average annual heat input during any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year” 40 CFR 63.10042. As a result, natural gas-fired EGUs for purposes of 40 CFR part 63, subpart UUUUU include those units that combust only natural gas as well as those units that combust natural gas for more than the proportion(s) specified in 40 CFR 63.10042 and some other fuel(s) (e.g., oil) for the remainder of heat input, as long as they are not an IGCC unit and do not combust coal or oil in sufficient quantity to meet the definition of “coal-fired” or “oil-fired” EGU.

The petitioners refer to CAA section 112(n)(1)(A), which requires the EPA to conduct a health study of the effects of EGU HAP emissions prior to regulating HAP emissions from EGUs under CAA section 112. Then, if EGU HAP emissions pose a threat to public health, the EPA can regulate those emissions only as “appropriate and necessary.” The EPA already has regulated under 40 CFR part 63, subpart UUUUU all those EGUs for which the Administrator has made the statutorily required finding under CAA section 112(n)(1)(A)—i.e., coal-fired and oil-fired EGUs; the EPA has no basis to regulate any other EGU under 40 CFR part 63, subpart DDDDD. That conclusion is consistent with the EPA's March 21, 2011, final rule and proposed rule on reconsideration, both of which made clear that no boiler meeting the definition of EGU was subject to 40 CFR part 63, subpart DDDDD.

Petitioners also allege that issues regarding the EGU definition in 40 CFR part 63, subpart DDDDD were raised in public comments submitted on the 2013 Boiler MACT. Specifically, the commenter (UARG) requested that the EGU definition in 40 CFR part 63, subpart DDDDD be consistent with relevant definitions in 40 CFR part 63, subpart UUUUU, and remain that way even after the EPA finalizes its revisions to 40 CFR part 63, subpart UUUUU. The EPA should revise the definition in 40 CFR 63.7575 of subpart DDDDD to incorporate, rather than restate, the definition of applicable “fossil fuel-fired” EGU in 40 CFR 63.10042 of the MATS rule.

Response to Issue 3: As stated in the June 2010 proposal (75 FR 32016), it is and has always been the EPA's intent that biomass boilers are regulated under

either the Boiler MACT or the area source ICI boiler rules. The 2010 Boiler MACT proposal stated:

The CAA specifically requires that fossil fuel-fired steam generating units of more than 25 megawatts that produce electricity for sale (*i.e.*, utility boilers) be reviewed separately by EPA. Consequently, this proposed rule would not regulate fossil fuel-fired utility boilers greater than 25 megawatts, but would regulate fossil fuel-fired units less than 25 megawatts and all utility boilers firing a non-fossil fuel that is not a solid waste.

The Boiler MACT defines the biomass/bio-based solid subcategory as any boiler or process heater that burns at least 10-percent biomass or bio-based solids on an annual heat input basis. The EPA disagrees with the commenter who recommends that EPA simply adopt provisions from the MATS rule into the Boiler MACT rule. We considered what would be the maximum amount of fuel that can be co-fired in a boiler that is designed to burn a different fuel type. We are aware that boilers are designed for specific fuel types and will frequently encounter operational problems if a fuel with characteristics other than those originally specified is fired in amounts above a certain level. The purpose of 63.7491(a) is, in part, to identify a threshold of natural gas operation above which EPA is reasonably certain that the unit is designed to operate on natural gas. At a level below that threshold, the EPA cannot be certain that the unit is not of a different type, designed to burn other fuels. In this final rule, the EPA edited text in 40 CFR 63.7491(a) from “An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 90 percent natural gas on an annual heat input basis.” to “. . . at least . . . 85 percent . . .” This change was made to address variation in heat input of biomass fuels. This clarification does not change the underlying applicability of biomass EGU boilers under the Boiler MACT rule.

With respect to the petitioners’ reference to CAA section 112(n)(1)(A), the EPA disagrees that this provision is relevant here, as biomass boilers are not EGUs, but instead are classified as ICI boilers. Therefore, because the petitioners did not demonstrate that it was impracticable to comment on this issue during the comment period on the 2010 proposed rule, the EPA is denying reconsideration on this issue.

4. Use of the Publication Date Rather Than the Effective Date of the Rule To Establish Various Compliance and Reporting Dates

Issue 4: Petitioner (API) alleged that the compliance schedules are based on the date of publication rather than the effective date. Using the publication date rather than the effective date conflicts with certain CAA provisions and certain 40 CFR, part 63 general provisions.

Response to Issue 4: With respect to existing units, the petitioner’s allegation is incorrect. Section 112(i)(3)(A) of the CAA states “After the effective date of any emission standard . . . the Administrator shall establish a compliance date . . . for . . . existing source, which shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date . . .” However, it is appropriate that compliance provisions applicable to new units should be based on the effective date because, otherwise, as stated in 40 CFR 63.7495(a), new units would be required to comply with the subpart by the publication date even though the amendments have not yet taken effect. Wherever January 31, 2013, was specified for new affected units as a compliance date or a basis for compliance activity, the date has been revised to April 1, 2013. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

5. Existing EGUs That Become Subject to the Boiler MACT After January 31, 2013 Do Not Get the Intended 180-Day Period for Demonstrating Compliance

Issue 5: Petitioner (UARG, supplemental July 3, 2013, petition) objected to the language in 40 CFR 63.7510(i), which states that “For an existing EGU that becomes subject after January 31, 2013, you must demonstrate compliance within 180 days after becoming an affected source” (78 FR 7165). The petitioner argued the provision is inconsistent with the existing source compliance dates in 40 CFR 63.7495(b) and (f), which require compliance by January 31, 2016, and the existing source deadline for demonstrating compliance in 40 CFR 63.7510(e), which requires completion of the initial compliance demonstration within 180 days after the January 31, 2016, compliance date (78 FR at 7162–63, 7165).

Response to Issue 5: For consistency and to correct the inadvertent error of failing to change the date, the compliance date in 40 CFR 63.7510(i)

has been revised from 2013 to 2016. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

6. Using Fuel Analysis Rather Than Performance Testing Required Use of the 90th Percentile Confidence Level; a Monthly Average Is More Appropriate

Issue 6: Petitioner (Eastman) requested clarification of the methodology that provides facilities with multiple combustion units the ability to demonstrate compliance with the limits through emissions averaging across affected units. Specifically, the petitioner urged modification of Table 6 to 40 CFR part 63, subpart DDDDD to delete references to equations requiring use of the 90th percentile.

Response to Issue 6: Edits to Table 6 to subpart DDDDD of 40 CFR part 63 have been made to delete the inadvertent references to equations requiring the use of the 90th percentile. These equations are required only for determining initial compliance as specified in 40 CFR 63.7530(c). The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

7. Gas 1 Unit Requirements

Issue 7: Petitioner (CIBO/NEDACAP) alleged that to meet 40 CFR 63.7555(i) and (j) recordkeeping requirements, each regulated gas 1 boiler, regardless of size, needs electronic controls, a recording device, individual gas meters, and sensors to detect both steam/hot water flow and fuel cycling events. The petitioner further claimed that records of startup and shutdown for gas 1 units are irrelevant to emission control or enforcement of the Boiler MACT requirements because their installation and operation provide no environmental benefits.

Response to Issue 7: The startup and shutdown recordkeeping provisions in 40 CFR 63.7555(i) and (j) have been removed. These paragraphs were inadvertently not deleted when the rule was amended. These paragraphs were intended to be deleted because 40 CFR 63.7555(d) was amended incorporating these recordkeeping requirements. These recordkeeping requirements are intended only for sources subject to emission standards, whereas 40 CFR 63.7555(i) and (j) have the unintended purpose of requiring sources not subject to emission standards to startup and shutdown recordkeeping requirements. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

8. Gas 1 Reporting Requirements

Issue 8: Petitioner (CIBO/NEDACAP) asked for clarity with respect to the operating time reporting in 40 CFR 63.7550(c)(5)(iv) for gas 1 units. Specifically, “operating time” is not a defined term and it is unclear whether operating time must be reported separately for each unit. Furthermore, the petitioner alleged that operating time (like records of startup and shutdown) adds no information that is useful in determining compliance, nor is it useful in calculating emissions from reported units, since emissions are related to fuel combusted, not to total operating time.

Response to Issue 8: Operating time reporting in 40 CFR 63.7550(c)(5)(iv) has been removed from 40 CFR 63.7550(c)(1), which effectively removes the reporting requirement for gas 1 units. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

9. Sampling for Other Gas 1 Fuels

Issue 9: Petitioner (CIBO/NEDACAP) asked for clarifying text in 40 CFR 62.7521 to parallel Table 6 to subpart DDDDD of part 63, item 3.b alternative compliance approach for cases where sampling and analysis of the fuel gas itself are not possible or practical.

Response to Issue 9: Text describing the compliance procedures, applicable to other gas 1 fuels in 40 CFR 63.7521(f), has been amended as a technical correction. When the rule was amended the EPA added a second compliance procedure that was intended to be an alternative approach but the amendments inadvertently failed to add the “or” after the first compliance procedure. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

10. Fuel Analysis Plan for Gas 1 Sampling

Issue 10: Petitioner (CIBO/NEDACAP) alleged that the Fuel Analysis Plan requirements for other gas 1 fuels are more onerous than those required for solid and liquid fuels. There is no logical reason to require submission of the fuel analysis plan to the Administrator for review and approval for other gas 1 fuels when only alternative analytical methods listed in Table 6 to subpart DDDDD of part 63 are used; 40 CFR 63.7521(g) should be amended.

Response to Issue 10: Administrator review and approval for other gas 1 fuels requirement in 40 CFR 63.7521(g) has been revised to clarify the intended scope of the Fuel Analysis Plan

requirements and to be consistent with 40 CFR 63.7521(b)(1). As specified in 40 CFR 63.7521(b)(1), a fuel analysis plan is required to be submitted for Administrator review and approval only when alternative methods other than those listed in Table 6 to subpart DDDDD of part 63 are used. The petitioner’s comments are, therefore, now moot and we are denying reconsideration on this issue.

11. Affirmative Defense

Issue 11: Petitioner (FSI) asked that the EPA amend the affirmative defense provisions included in 40 CFR 63.7501 or otherwise clarify in the rule the scope of the affirmative defense for violations that occur during malfunctions. The petitioner also asked that subpart A of 40 CFR part 63, which defines emission standard as “a national standard, limitation, prohibition, or other regulation promulgated in a subpart of this part pursuant to sections 112(d), 112(h), or 112(f) of the Act,” provide additional guidance concerning the proper interpretation of 40 CFR 63.7501.

Response to Issue 11: The EPA has removed affirmative defense provisions from 40 CFR part 63, subpart DDDDD, as discussed in section IV.C of this preamble. Because the petitioner has not demonstrated that it was impracticable to comment on this issue during the public comment period on the December 2011 proposed rule, and because the issue is now moot, the EPA is denying this petition.

B. Petitions Related to Ongoing Litigation

1. Authority To Require an Energy Assessment

Issue 12: Petitioners (AF&PA/FSI) alleged that a beyond the floor requirement of an energy assessment is outside EPA’s authority for setting emissions standards under CAA section 112(d)(1) “for each category or subcategory of major sources and area sources.” The EPA has defined the source category for these rules to include only specified types of boilers and process heaters and, therefore, those are the only sources for which the EPA may set standards under these rules.

The petitioners also alleged that the energy assessment requirement is not an “emissions standard” as that term is defined in the CAA and, therefore, the EPA does not have authority to prescribe such requirements. Furthermore, as a practical matter, even if energy efficiency projects are implemented, there is no guarantee that there will be a corresponding reduction

in HAP emissions from affected boilers and process heaters.

Response to Issue 12: Petitioners have not demonstrated that it was impracticable to comment on these issues during the public comment period on the proposed Boiler MACT. In fact, petitioners provided the same comments during that comment period, and subsequently challenged EPA’s establishment of the energy assessment requirement. That issue is currently pending before the Court in *U.S. Sugar v. EPA* (No. 11–1108). Therefore the EPA is denying the petition for reconsideration of this issue.

2. Energy Assessment Requirement

Issue 13: Issues regarding the owner or operator obligations after the energy assessment is completed were raised in public comments submitted on the 2013 Boiler MACT. Specifically, commenters (AF&PA/FSI) asked that the EPA confirm that the Boiler MACT does not require a facility owner or operator to implement any of the recommendations contained in the energy assessment report.

Response to Issue 13: Comments on this issue have been previously submitted and the EPA responded to those comments. AF&PA made this same comment during the public comment period on the Boiler MACT, and the EPA responded to that in the Beyond-the-Floor Analysis Section (pp. 1428–1702) of the February 2011 Response To Comment document, explaining that the rule does not require owners and operators to implement the recommendations of the energy assessment, but that the EPA expects that sources will do so in order to realize the cost savings from those recommendations. Because petitioners have not demonstrated that it was impracticable to comment on these issues during the public comment period on the proposed Boiler MACT, the EPA is denying the petition for reconsideration of this issue.

C. Other Petitions

1. Expanded Exemption for Limited Use Units

Issue 14: Petitioner (Sierra Club) objected to the 2013 Boiler MACT proposed rule, which revised the definition of “limited-use units” to include all units that operate at 10 percent of their full annual capacity (78 FR 7144). A unit that operated full time at 10-percent capacity would qualify, as would a unit that operated for one-third of the year at 30-percent capacity. The petitioner also disputed the EPA’s finding that “it is technically infeasible

to schedule stack testing for these limited use units since these units serve as back up energy sources and their operating schedules can be intermittent and unpredictable.”

Response to Issue 14: The EPA is denying the petition for reconsideration on this issue because the petitioner previously submitted comments on this issue, and the EPA responded to those comments in finalizing the definition of a limited use unit at that time (76 FR 15633, March 21, 2011).

The 2013 revision in the final amendments to the Boiler MACT was a logical outgrowth of the comments received during the public comment period. *See NRDC v. Thomas*, 838 F.2d 1224, 1242 (D.C. Cir. 1988) and *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d at 547 (the agency may make changes to proposed rule without triggering new round of comments, where changes are logical outgrowth of proposal and comments).

2. Failure to Set Standards Requiring MACT (*i.e.*, Beyond the Floor)

Issue 15: Petitioner (Sierra Club) asserted that the EPA failed to assure that the standards it revised in the final rule reflect the maximum achievable degree of reduction in emissions, as required by CAA section 112(d)(2). The commenter noted that for existing sources, 10 of the Hg standards, five of the PM standards, and 11 of the CO limits were revised in the final rule. The petitioner also noted that two of the PM limits and 11 of the CO limits for new sources were weakened in the final rule. The petitioner asserted that the EPA did not propose any of these changes, nor did it discuss them in its proposed rule (78 FR 7145).

Response to Issue 15: The EPA is denying the petition for reconsideration on this issue because the changes to the standards between the 2011 and 2013 final rules were based only on changes to the underlying dataset to reflect unit shutdowns or corrections to emission test run data and on changes made to the subcategories after consideration of comments received on the proposed rule. These changes were discussed in the MACT Floor Memorandum for the final rule (*See* Docket ID No.: EPA-HQ-2002-0058-3836), as well as documented in the database for the final rule (*See* Docket ID No.: EPA-HQ-OAR-2002-0058-3835). There were no significant changes to the methodology used to calculate the MACT standards. Therefore, the petition does not raise an issue of central relevance to this rulemaking as it does not demonstrate that there is a substantial likelihood that

the final rule would have changed based on the information in the petition.

3. Beyond the Floor PM Standards

Issue 16: The petitioner (Sierra Club) objected to the EPA's final “beyond the floor” PM standards for certain categories of new biomass units. The petitioner claimed that the EPA did not provide an explanation of its conclusion that “[w]e did not identify any beyond the floor options for existing source PM limits or new and existing limits for other pollutants as technically feasible or cost effective” (78 FR 7145). The petitioner alleged that such cursory and unexplained conclusion that no beyond the floor standards are technically feasible or cost effective is both unlawful and arbitrary. Moreover, the petitioner also alleges that because the EPA did not propose the standards contained in the 2013 rule and did not discuss changing the level of these standards in its proposed rule, it was “impracticable” to object to the EPA's failure to set more stringent standards during the public comment period. 42 United States Code (U.S.C.) 7607(d)(7)(B). Likewise, the petitioner indicated it was impracticable to object to the EPA's rationale for not setting more stringent standards.

Response to Issue 16: The EPA disagrees with the petitioner's claim that we failed to set standards based on the degree of emission reduction that can be achieved. The EPA must consider cost, non-air quality health and environmental impacts, and energy requirements in connection with any standards that are more stringent than the MACT floor (beyond the floor controls). The EPA's beyond the floor analysis did evaluate these factors in determining PM standards for certain categories of new biomass units.

To the extent the petitioner is concerned about the degree of emission reduction that can be achieved, that issue does not warrant reconsideration. The EPA made changes based on new data and changes to subcategories, but the methodology essentially remained the same, including the beyond the floor methodology in the final rule. The petitioner did not provide data or information that was unavailable at the time the EPA proposed the rule. Therefore, the EPA is denying reconsideration of this issue.

4. No Allowance for Liquid Firing in Gas 1 or Gas 2 Units; Other Subcategories Allow for Less Than 10 Percent Annual Heat Input

Issue 17: Petitioners (API, CIBO/ACC) contended that the gas 1 subcategory should place no restriction on liquid

(*e.g.*, oil) firing during startup. In the 2013 final amendments to the Boiler MACT, there is no allowance for liquid fuel firing in units in the gas 1 or gas 2 subcategories except under the gas curtailment or interruption provisions, whereas other subcategories allow use of liquid fuels for less than 10-percent annual heat input basis (78 FR 7193). The definition for the gas 1 subcategory should read “Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns at least 90-percent natural gas, refinery gas, and/or other gas 1 fuels on a heat input basis on an annual average and less than 10 percent of any solid or liquid fuel.” The definitional change would simplify the process of determining whether a unit qualifies for the gas 1 subcategory.

Issues regarding the consistency between the exempt unit description in 40 CFR part 63, subpart DDDDD and the definition of an oil-fired EGU in 40 CFR part 63, subpart UUUUU were raised in public comments submitted on the 2013 Boiler MACT. Specifically, a commenter (DTE Energy) argued that subpart UUUUU allows for “high” usage in one calendar year without becoming an affected unit so long as the 10-percent annual average heat input during 3 consecutive calendar years is not exceeded.

Response to Issue 17: Because the EPA received comments that gas 1 subcategory units should allow for limited use of liquid fuel in the June 4, 2010, proposal and petitioners have not demonstrated that it was impractical for them to comment, we are denying the petition for reconsideration on this issue.

In addition, the petitioners have provided no new data or information that calls into question the underlying determination.

5. Refine and Clarify the Scope of the Subcategory for Hybrid Suspension/Grate Boilers

Issue 18: Petitioner (SugarCane Growers) asked that the definition of a hybrid suspension/grate (HSG) boiler needs clarification; there are facilities that are unsure whether their boilers fit within the HSG subcategory. Specifically, the petitioner requested that the definition add a phrase referring to the fact that an HSG boiler is “highly integrated into the production process via steam connections with the sugar mill and the boiler primarily combusts fuels that are generated on-site by the mill.”

Response to Issue 18: The EPA has made a minor technical correction to the final HSG boiler definition that helps clarify the intent of the subcategory. The

moisture content threshold of 40 percent on an as-fired annual heat input basis is to be demonstrated by monthly fuel analysis. By requiring demonstration on a monthly fuel analysis, the moisture in the fuel piles will need to be consistently high from month to month in order to meet the 40 percent moisture threshold. Beyond this minor clarification, the EPA is denying this petition for reconsideration because the petition does not demonstrate that the petitioner lacked the opportunity to comment on this definition, and we continue to believe that the definition is specifically clear as to whether specific boilers fit within the definition. The definition reflects a logical outgrowth of the comments received during the comment period. (see 76 FR 15634, March 21, 2011).

6. Applicability Based on Commercial and Industrial Solid Waste Incineration (CISWI) Recordkeeping Requirements

Issue 19: The petitioner (API) alleged that it is unreasonable to have Boiler MACT applicability determined based on a recordkeeping requirements contained in the CISWI rule, and added that nothing in the Boiler MACT proposal requested comment on the CISWI definition of traditional fuels. The petitioner alleged that any unit that uses any material not specifically listed in the traditional fuels definition is a CISWI unit, rather than a Boiler MACT unit, unless it keeps specific records that the CISWI rule requires. The definitions of CISWI unit in the February 7, 2013, final amendments to the CISWI NSPS standard and the associated emission guideline include the sentence "If the operating unit burns materials other than traditional fuels as defined in § 241.2 that have been discarded, and you do not keep and produce records as required by [§ 60.2740(u) or § 60.2175(v)], the operating unit is a CISWI unit."

Response to Issue 19: The EPA is denying this petition because it is not of central relevance. The issue addresses recordkeeping requirements in the CISWI rule, not requirements in the Boiler MACT. To ensure that owners or operators of units combusting materials review and apply the non-waste provisions in the Solid Waste Definition Rule, the EPA requires owners or operators that combust materials that are not clearly listed as traditional fuels document how the materials meet the legitimacy criteria and/or the processing requirements in the Solid Waste Definition Rule. Failure of a source owner or operator to correctly apply the non-waste criteria would result in incorrect self-assessments as to whether

their combustion units are subject to CISWI. Requiring sources to document how the non-waste criteria apply to the materials combusted will both improve self-assessments of applicability, and will assist the EPA and states in the proper identification of sources subject to CISWI.

7. Definitions for Rolling Averages Are Inconsistent With Other Rule Requirements, and Increase Burdens

Issue 20: The petitioner (API) alleged that both 10- and 30-day rolling average definitions, if read literally, say owners or operators must average a total of 240 or 720 hours of valid data, regardless of the calendar period they span, rather than requiring that only hours within the last 240 or 720 calendar hours that contain valid data be averaged. As a result, since the number of hours of valid data over any calendar period is constantly varying, the time period covered by each average will vary. Individual hours will be counted in varying numbers of averages, and all units at a facility will end up on different, constantly varying averaging schedules. This approach is also inconsistent with the definition of "daily block average," which calls for averaging all valid data occurring within each daily 24-hour period and includes other averaging requirements. Revisions to the definitions of 10-day rolling average and 30-day rolling average should be amended.

Response to Issue 20: The EPA is denying this petition because it is not of central relevance to this rulemaking for the reasons set forth below. The definitions of 10- and 30-day rolling averages include the word "valid." Valid data excludes hours during startup and shutdown and data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan. Further, the 30-day rolling average for CO CEMS has been revised to clarify that for CO CEMS, the 720 hours should be consecutive, but not necessarily continuous to reflect intermittent operations.

8. CO Limits for Hybrid Suspension Grate Boilers

Issue 21: The petitioner (FSI) alleged that the CO CEMS emission limit for existing HSG boilers is set at the same level as the CO CEMS limit for new HSG boilers, because the EPA has CO CEMS data for only one HSG boiler. The CO CEMS limit for existing boilers should be revised to account for the variability in the emissions data for existing HSG boilers, as reflected by the EPA's stack test data for such boilers.

Response to Issue 21: CO CEM data were only available for one unit. Therefore, the alternative CO CEMS-based limit is the same for both new and existing units. The petitioner could have provided additional data to the EPA prior to the close of the comment period for the final rule. Indeed, the EPA modified several emission limits upon receipt of new data. Setting emission limits based on available data is consistent with MACT floor methodology. Therefore, the EPA is denying the petition for reconsideration.

9. Correction of Math Error

Issue 22: The petitioner (FSI) alleged that a math (*i.e.*, conversion) error was committed when converting stack test data within the EPA's emissions database. According to the petitioner, this error significantly affected the EPA's determination of the MACT floor for CO emissions from the existing HSG boilers. The petitioner stated that the EPA should correct this error and then use its existing emissions database to re-determine the CO emission limit for existing HSG boilers. The petitioner calculated a revised CO emission limit for existing HSG boilers of 3,500 ppm by dry volume at 3-percent O₂.

Response to Issue 22: As discussed in section IV.E of this preamble, the EPA has finalized the correction to the CO limit for this subcategory.

10. Conducting Tune-ups at Seasonally Operated Boilers

Issue 23: The petitioner (FSI) alleged that collecting meaningful CO data before and after an annual tune-up will be problematic because HSG boilers are operated on a seasonal basis and the annual tune-ups will be performed between the annual harvest seasons. With regard to these seasonally operated boilers, the Boiler MACT should explicitly acknowledge that the "before" measurement will be taken at the end of one harvest season and the "after" measurement will be taken at the beginning of a different harvest.

Response to Issue 23: The EPA is denying reconsideration on this issue. The EPA believes the rule is sufficiently clear on the timing of a tune-up and refers the petitioner to 40 CFR 63.7540(a)(10). If the unit is not operating on the required date for a tune-up (*i.e.*, because it is a seasonal boiler, or because it is down for maintenance, for example), the tune-up must be conducted within 30 days of startup. Before and after measurements are not seasons apart, instead they are within minutes or hours (depending on how long it takes to make adjustments). See the tune-up guide for additional

guidance (http://www.epa.gov/ttn/atw/boiler/imptools/boiler_tune-up_guide-v1.pdf).

VI. Impacts of This Final Rule

This action finalizes certain provisions and makes technical and clarifying corrections, but does not promulgate substantive changes to the January 2013 final Boiler MACT (78 FR 7138). Therefore, there are no environmental, energy, or economic impacts associated with this final action. The impacts associated with the Boiler MACT are discussed in detail in the January 2013 final amendments to the Boiler MACT.

VII. 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. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the information collection activities contained in the existing regulations (40 CFR part 63, subpart DDDDD) and has assigned OMB control number 2060–0551. This action is believed to result in no changes to the information collection requirements of the January 2013 final amendments to the Boiler MACT, so that the information collection estimate of project cost and hour burden from the final Boiler MACT have not been revised.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This action finalizes the EPA's response to petitions for reconsideration on three issues of the Boiler MACT as well as minor changes to the rule to correct and clarify implementation issues raised by stakeholders.

D. 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. This rule promulgates amendments to the January 2013 final Boiler MACT provisions, but the amendments are mainly clarifications to existing rule language to aid in implementation, or are being made to maintain consistency with other, more recent, regulatory actions. Therefore, the action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

E. 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.

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

This action does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. This action clarifies certain components of the January 2013 final Boiler MACT. Thus, Executive Order 13175 does not apply to this action.

G. 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 any such environmental health risks or safety risks.

H. 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.

I. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve any new technical standards from those contained in the March 21, 2011, final rule. Therefore, the EPA did not consider the use of any voluntary consensus standards. See 76 FR 15660–15662 for the NTTAA discussion in the March 21, 2011, final rule.

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

The EPA believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations because it does not affect the level of protection provided to human health or the environment.

The environmental justice finding in the January 2013 final amendments to the Boiler MACT remain relevant in this action, which finalizes three aspects of the Boiler MACT as well as finalizing minor changes to the rule to correct and clarify implementation issues raised by stakeholders.

K. Congressional Review Act (CRA)

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

List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances.

Dated: November 5, 2015.

Gina McCarthy,
Administrator.

For the reasons cited in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

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

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

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

Subpart DDDDD—[Amended]

■ 2. Section 63.7491 is amended by revising paragraphs (a), (j), and (l) and adding paragraph (n) to read as follows:

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

* * * * *

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

* * * * *

(j) Temporary boilers and process heaters as defined in this subpart.

* * * * *

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

* * * * *

(n) Residential boilers as defined in this subpart.

■ 3. Section 63.7495 is amended by revising paragraphs (a), (e), and (f) and adding paragraphs (h) and (i) to read as follows:

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

* * * * *

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of § 60.2145(a)(2) and (3) or § 60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

* * * * *

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of

this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

■ 4. Section 63.7500 is amended by revising paragraphs (a)(1) introductory text, (a)(1)(ii), (a)(1)(iii), and (f) to read as follows:

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) * * *

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of § 63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

* * * * *

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011 and before April 1, 2013, you may comply with the emission limits in

Table 1 or 13 to this subpart until January 31, 2016.

* * * * *

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

§ 63.7501 [Removed and Reserved]

■ 5. Section 63.7501 is removed and reserved.

■ 6. Section 63.7505 is amended by revising paragraphs (a), (c), and (d) introductory text and adding paragraph (e) to read as follows:

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

* * * * *

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

* * * * *

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in § 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

■ 7. Section 63.7510 is amended by revising paragraphs (a) introductory text, (a)(2)(ii), (c), (e), (g), and (i) and adding paragraph (k) to read as follows:

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance (stack) testing, your initial compliance requirements include all the following:

* * * * *

(2) * * *

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to § 63.7521 and Table 6 to this subpart.

* * * * *

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

* * * * *

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for

your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495.

* * * * *

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7515(d) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7515(d).

* * * * *

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

* * * * *

(k) For affected sources, as defined in § 63.7490, that switch subcategories consistent with § 63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

■ 8. Section 63.7515 is amended by revising paragraphs (d), (e), and (h) to read as follows:

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

* * * * *

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or

reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

* * * * *

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

* * * * *

■ 9. Section 63.7521 is amended by:

■ a. Revising paragraph (a).

- b. Revising paragraph (c) introductory text.
 - c. Revising paragraph (c)(1)(ii).
 - d. Revising paragraph (f) introductory text.
 - e. Revising paragraphs (g) introductory text, (g)(2)(ii), and (g)(2)(vi).
 - f. Revising paragraph (h).
- The revisions read as follows:

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in

§ 63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) * * *

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.

* * * * *

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

* * * * *

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

* * * * *

(2) * * *

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

* * * * *

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in § 63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

* * * * *

■ 10. Section 63.7522 is amended by:

- a. Revising paragraphs (c), (d), (f)(1) introductory text, (g)(1), (g)(3) introductory text, and (i).
- b. Revising parameters "En" and "ELi" of Equation 6 in paragraph (j)(1).

The revisions read as follows:

§ 63.7522 Can I use emissions averaging to comply with this subpart?

* * * * *

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in § 63.7495.

* * * * *

(f) * * *

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

* * * * *

(g) * * *

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

* * * * *

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

* * * * *

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) * * *

(1) * * *

* * * * *

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).
 Eli = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu or ppm.

* * * * *

■ 11. Section 63.7525 is amended by:

- a. Revising paragraphs (a) introductory text, (a)(1), (a)(2) introductory text, (a)(3), and (a)(5).
- b. Adding paragraph (a)(2)(vi).
- c. Revising paragraphs (b) introductory text, (b)(1) introductory text, and (b)(1)(iii).
- d. Revising paragraphs (g)(3) and (4).
- e. Revising paragraphs (m) introductory text and (m)(2).

The revisions and addition read as follows:

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO₂)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS and oxygen (or CO₂) analyzer by the compliance date specified in § 63.7495. The CO and oxygen (or CO₂) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under § 63.7 of this chapter, in order that compliance with the CO emissions limit be determined using CO₂ as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter

(if an CO₂ analyzer is used); the site-specific monitoring plan developed according to § 63.7505(d); and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

* * * * *

(vi) When CO₂ is used to correct CO emissions and CO₂ is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O₂ both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.*, a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (*e.g.*, hourly average wet- and dry basis O₂ values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO₂) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO₂) data concurrently. Collect at least four CO and oxygen (or CO₂) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

* * * * *

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen

(or corrected to an CO₂ percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19–19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A–7 for calculating the average CO concentration from the hourly values.

* * * * *

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

* * * * *

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

* * * * *

(g) * * *

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the

manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

* * * * *

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO₂ CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

* * * * *

(2) For on-going quality assurance (QA), the SO₂ CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO₂ CEMS has a span value of 30 ppm or less.

* * * * *

■ 12. Section 63.7530 is amended by:

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

■ b. Revising parameter "Qi" of Equation 7 in paragraph (b)(1)(iii), Equation 8 in paragraph (b)(2)(iii), and Equation 9 in paragraph (b)(3)(iii).

■ c. Revising parameter "n" of Equation 14 in paragraph (b)(4)(ii)(D).

■ d. Revising paragraph (b)(4)(ii)(F).

■ e. Redesignating paragraphs (b)(4)(iii) through (viii) as paragraphs (b)(4)(iv) through (ix) and adding new paragraph (b)(4)(iii).

■ f. Revising parameters "Ci90" and "Qi" of Equation 16 in paragraph (c)(3), parameters "Hgi90" and "Qi" of Equation 17 in paragraph (c)(4), and parameters "TSMi90" and "Qi" of Equation 18 in paragraph (c)(5).

■ g. Removing and reserving paragraph (d).

■ h. Revising paragraphs (e), (h), and (i)(3).

The revisions and additions read as follows:

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CEMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) * * *

(iii) * * *

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(2) * * *

(iii) * * *

Qi = Fraction of total heat input from fuel type, i, based on the fuel

mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(3) * * *

(iii) * * *

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(4) * * *

(ii) * * *

(D) * * *

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

* * * * *

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure

drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO₂ CEMS is to install and operate the SO₂ according to the requirements in § 63.7525(m) establish a maximum SO₂ emission rate equal to the highest hourly average SO₂ measurement during the most recent three-run performance test for HCl.

(c) * * *

(3) * * *

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for

Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(4) * * *

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(5) * * *

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

* * * * *

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

* * * * *

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of this subpart.

(i) * * *

(3) You establish a unit-specific maximum SO₂ operating limit by collecting the maximum hourly SO₂ emission rate on the SO₂ CEMS during

the paired 3-run test for HCl. The maximum SO₂ operating limit is equal to the highest hourly average SO₂ concentration measured during the HCl performance test.

■ 13. Section 63.7533 is amended by revising paragraph (e) to read as follows:

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

* * * * *

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in § 63.7495.

* * * * *

■ 14. Section 63.7535 is amended by revising paragraphs (c) and (d) to read as follows:

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

* * * * *

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when

the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

■ 15. Section 63.7540 is amended by:

- a. Revising paragraph (a)(2).
- b. Revising paragraphs (a)(3) introductory text and (a)(3)(iii).
- c. Revising paragraphs (a)(5) introductory text and (a)(5)(iii).
- d. Revising paragraph (a)(8)(ii).
- e. Revising paragraph (a)(10) introductory text.
- f. Revising paragraph (a)(10)(i).
- g. Revising paragraph (a)(10)(vi) introductory text.
- h. Revising paragraphs (a)(12).
- i. Revising paragraphs (a)(14)(i) and (a)(15)(i).
- j. Revising paragraphs (a)(17) introductory text and (a)(17)(iii).
- k. Revising paragraph (a)(18)(i).
- l. Revising paragraph (a)(19)(iii).
- m. Revising paragraph (d).

The revisions read as follows:

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) * * *

(2) As specified in § 63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

* * * * *

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

* * * * *

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

* * * * *

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

* * * * *

(8) * * *

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is subject to numeric emission limits.

* * * * *

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a

piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

* * * * *

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

* * * * *

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

* * * * *

(14) * * *

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

* * * * *

(15) * * *

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating

days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

* * * * *

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

* * * * *

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

* * * * *

(18) * * *

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

* * * * *

(19) * * *

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

* * * * *

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

■ 16. Section 63.7545 is amended by revising paragraphs (e) introductory text, (e)(8)(i), adding paragraph (e)(2)(iii), and revising paragraph (h) introductory text to read as follows:

§ 63.7545 What notifications must I submit and when?

* * * * *

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at § 63.7495(b).

* * * * *

(2) * * *

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

* * * * *

(8) * * *

(i) "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in § 63.7540(a)(10)(i) through (vi)."

* * * * *

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

* * * * *

■ 17. Section 63.7550 is amended by revising paragraphs (b), (c)(1) through (4), (c)(5)(viii) and (xvi), adding paragraph (c)(5)(xviii), and revising paragraph (d) introductory text, (d)(1), and (h) to read as follows:

§ 63.7550 What reports must I submit and when?

* * * * *

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in § 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in § 63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this

chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) * * *

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5) * * *

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that

demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

* * * * *

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO₂, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

* * * * *

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of § 63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

* * * * *

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in § 63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure

specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<http://www.epa.gov/ttn/chief/ert/index.html>), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT

Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

■ 18. Section 63.7555 is amended by:

- a. Adding paragraph (a)(3).
- b. Removing paragraph (d)(3).
- c. Redesignating paragraphs (d)(4) through (11) as paragraphs (d)(3) through (10).
- d. Revising newly designated paragraphs (d)(3), (d)(4), and (d)(8).
- e. Adding new paragraph (d)(11) and paragraphs (d)(12) and (d)(13).
- f. Removing paragraphs (i) and (j).

The additions and revisions read as follows:

§ 63.7555 What records must I keep?

(a) * * *

(3) For units in the limited use subcategory, you must keep a copy of

the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

* * * * *

(d) * * *

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

* * * * *

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel

analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

* * * * *

(11) For each startup period, for units selecting paragraph (2) of the definition of "startup" in § 63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of "startup" in § 63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (e.g., CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of "startup" in § 63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of

definition of "startup" in § 63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

* * * * *

■ 19. Section 63.7570 is amended by revising paragraph (b) to read as follows:

§ 63.7570 Who implements and enforces this subpart?

* * * * *

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g), except as specified in § 63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(3) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under §§ 63.7500(a)(2) and 63.7522(g)(2).

(4) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

■ 20. Section 63.7575 is amended by:
■ a. Revising the definition for "30-day rolling average."

■ b. Removing the definition for "Affirmative defense."

■ c. Adding in alphabetical order a definition for "Clean dry biomass."

■ d. Revising the definition for "Energy assessment."

■ e. Adding in alphabetical order a definition for "Fossil fuel."

■ f. Revising the definitions for "Hybrid suspension grate boiler," "Limited-use boiler or process heater," "Liquid fuel," "Load fraction," "Minimum sorbent injection rate," "Operating day," and "Oxygen trim system."

■ g. Adding in alphabetical order a definition for "Rolling average".

■ h. Revising the definitions for "Shutdown," "Startup," "Steam output," and "Temporary boiler."

■ i. Adding in alphabetical order a definition for "Useful thermal energy."

The revisions and additions read as follows:

§ 63.7575 What definitions apply to this subpart?

* * * * *

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

* * * * *

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

* * * * *

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

* * * * *

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

* * * * *

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

* * * * *

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (e.g., if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

* * * * *

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur

measured during the most recent performance test.

* * * * *

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

* * * * *

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

* * * * *

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in § 63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is

being combusted in the boiler or process heater.

* * * * *

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S₁), the energy content of turbine steam sent to process plus energy in electricity

according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this

definition ($MW_{(3)}$) and would be calculated using Equation 21 of this section. In the case of boilers supplying steam to one or more common heaters,

S_1 , S_2 , and $MW_{(3)}$ for each boiler would be calculated based on the its (steam energy) contribution (fraction of total steam energy) to the common heater.

$$SO_M = S_1 + S_2 + (MW_{(3)} \times CF_n) \quad (\text{Eq. 21})$$

Where:

SO_M = Total steam output for multi-function boiler, MMBtu

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to (2) above, MMBtu

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh

CF_n = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh

CF_n for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8

CF_n PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7

CF_n PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1

CF_n for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2

CF_n for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2

* * * * *

Temporary boiler means any gaseous or liquid fuel boiler or process heater

that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

* * * * *

Useful thermal energy means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

* * * * *

■ 21. Table 1 to subpart DDDDD of part 63 is amended by:

■ a. Revising rows “3.a”, “4.a”, “5.a”, “6.a”, “7.a”, “9.a”, “10.a”, “11.a”, and “13.a”.

■ b. Revising footnote “c”; and

■ c. Adding footnote “d”.

The revisions and addition read as follows:

As stated in § 63.7500, you must comply with the following applicable emission limits:

TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	* * *	* * *	* * *	
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.

TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS—Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	1.2E–01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average.	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	5.8E–01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average.	1 hr minimum sampling time.
9. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	2.2E–01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average.	1 hr minimum sampling time.
10. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 10-day rolling average).	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average.	1 hr minimum sampling time.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 10-day rolling average).	3.5E–01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average.	1 hr minimum sampling time.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^d 30-day rolling average).	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average.	1 hr minimum sampling time.

TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS—Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
*	*	*	*	*

^c If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

^d An owner or operator may request an alternative test method under § 63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

- 22. Table 2 to subpart DDDDD of part 63 is amended by revising the rows “3.a”, “4.a”, “5.a”, “6.a”, “7.a”, “9.a”, “10.a”, “11.a”, “13.a”, “14.b”, and “16.b” and adding footnote “c” to read as follows:
- As stated in § 63.7500, you must comply with the following applicable emission limits:

TABLE 2 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR EXISTING BOILERS AND PROCESS HEATERS

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
*	*	*	*	*
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average.	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1.3E–01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average.	1 hr minimum sampling time.

TABLE 2 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR EXISTING BOILERS AND PROCESS HEATERS—
Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
7. Stokers/sloped grate/other units designed to burn wet biomass fuel.	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average.	1 hr minimum sampling time.
* * *	* * *	* * *	* * *	* * *
9. Fluidized bed units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	4.6E–01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average.	1 hr minimum sampling time.
* * *	* * *	* * *	* * *	* * *
10. Suspension burners designed to burn biomass/bio-based solid.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average.	1 hr minimum sampling time.
* * *	* * *	* * *	* * *	* * *
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid.	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	8.4E–01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average.	1 hr minimum sampling time.
* * *	* * *	* * *	* * *	* * *
13. Hybrid suspension grate units designed to burn biomass/bio-based solid.	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average.	1 hr minimum sampling time.
* * *	* * *	* * *	* * *	* * *
14. Units designed to burn liquid fuel.	b. Mercury	2.0E–06 ^a lb per MMBtu of heat input.	2.5E–06 ^a lb per MMBtu of steam output or 2.8E–05 lb per MWh.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784, ^b collect a minimum of 2 dscm.

TABLE 2 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS FOR EXISTING BOILERS AND PROCESS HEATERS—
Continued

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
*	*	*	*	*
16. Units designed to burn light liquid fuel.	b. Filterable PM (or TSM)	7.9E-03 ^a lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input).	9.6E-03 ^a lb per MMBtu of steam output or 1.1E-01 ^a lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh).	Collect a minimum of 3 dscm per run.
*	*	*	*	*

^c An owner or operator may request an alternative test method under § 63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

- 23. Table 3 to subpart DDDDD of part 63 is amended by revising the entries for “4,” “5,” and “6” and adding footnote “a” to read as follows:
- As stated in § 63.7500, you must comply with the following applicable work practice standards:

TABLE 3 TO SUBPART DDDDD OF PART 63—WORK PRACTICE STANDARDS

If your unit is . . .	You must meet the following . . .
*	*
4. An existing boiler or process heater located at a major source facility, not including limited use units.	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in § 63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575: a. A visual inspection of the boiler or process heater system. b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified. f. A list of cost-effective energy conservation measures that are within the facility's control. g. A list of the energy savings potential of the energy conservation measures identified. h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

TABLE 3 TO SUBPART DDDDD OF PART 63—WORK PRACTICE STANDARDS—Continued

If your unit is . . .	You must meet the following . . .
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup.	a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis. c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using definition (1) of “startup” in § 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using definition (2) of “startup” in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels^a. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e). d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown.	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

^a As specified in § 63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the “fuel firing + 1 hour” requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (*e.g.*, scrubber).

■ 24. Table 4 to subpart DDDDD of part 63 is revised to read as follows:

As stated in § 63.7500, you must comply with the applicable operating limits:

TABLE 4 TO SUBPART DDDDD OF PART 63—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS.	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.

TABLE 4 TO SUBPART DDDDD OF PART 63—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS—Continued

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
2. Wet acid gas (HCl) scrubber ^a control on a boiler or process heater not using a HCl CEMS.	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on a boiler or process heater not using a PM CPMS.	a. Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average); or b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on a boiler or process heater not using a PM CPMS.	a. This option is for boilers and process heaters that operate dry control systems (<i>i.e.</i> , an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average). b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (<i>i.e.</i> , dry ESP). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler or process heater not using a mercury CEMS.	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on a boiler or process heater not using a PM CPMS.	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
7. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.
8. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O ₂ analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
9. SO ₂ CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO ₂ CEMS, maintain the 30-day rolling average SO ₂ emission rate at or below the highest hourly average SO ₂ concentration measured during the HCl performance test, as specified in Table 8.

^a A wet acid gas scrubber is a control device that removes acid gases by contacting the combustion gas with an alkaline slurry or solution. Alkaline reagents include, but not limited to, lime, limestone and sodium.

■ 25. Table 5 to subpart DDDDD of part 63 is amended by revising the heading to the third column and adding footnote “a” to read as follows:

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

TABLE 5 TO SUBPART DDDDD OF PART 63—PERFORMANCE TESTING REQUIREMENTS

To conduct a performance test for the following pollutant . . .	You must . . .	Using, as appropriate . . .
* . . .	* . . .	* . . .

^a Incorporated by reference, see § 63.14.

■ 26. Table 6 to subpart DDDDD of part 63 is revised to read as follows:

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:

TABLE 6 TO SUBPART DDDDD OF PART 63—FUEL ANALYSIS REQUIREMENTS

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples b. Composite fuel samples c. Prepare composited fuel samples. d. Determine heat content of the fuel type. e. Determine moisture content of the fuel type. f. Measure mercury concentration in fuel sample. g. Convert concentration into units of pounds of mercury per MMBtu of heat content.	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 solid), or ASTM D4177^a (for liquid), or ASTM D4057^a (for liquid), or equivalent. Procedure in § 63.7521(d) or equivalent. 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. 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. ASTM D3173,^a ASTM E871,^a or ASTM D5864,^a or ASTM D240, or ASTM D95^a (for liquid fuels), or ASTM D4006^a (for liquid fuels), or equivalent. ASTM D6722^a (for coal), EPA SW-846-7471B^a or EPA 1631 or EPA 1631E (for solid samples), or EPA SW-846-7470A^a (for liquid samples), or EPA 821-R-01-013 (for liquid or solid), or equivalent. For fuel mixtures use Equation 8 in § 63.7530.
2. HCl	a. Collect fuel samples b. Composite fuel samples c. Prepare composited fuel samples. d. Determine heat content of the fuel type. e. Determine moisture content of the fuel type. f. Measure chlorine concentration in fuel sample. g. Convert concentrations into units of pounds of HCl per MMBtu of heat content.	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. Procedure in § 63.7521(d) or equivalent. 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. ASTM D5865^a (for coal) or ASTM E711^a (for biomass), ASTM D5864, ASTM D240^a or equivalent. 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. 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. 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 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 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. 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 b. Composite fuel samples c. Prepare composited fuel samples. d. Determine heat content of the fuel type. e. Determine moisture content of the fuel type. f. Measure TSM concentration in fuel sample. g. Convert concentrations into units of pounds of TSM per MMBtu of heat content.	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. Procedure in § 63.7521(d) or equivalent. 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. 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. ASTM D3173^a or ASTM E871,^a or D5864, 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. 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). For fuel mixtures use Equation 9 in § 63.7530.

^a Incorporated by reference, see § 63.14.

- 27. Table 7 to subpart DDDDD of part 63 is revised to read as follows:
- As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

TABLE 7 TO SUBPART DDDDD OF PART 63—ESTABLISHING OPERATING LIMITS ^{a b}

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters.	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b).	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM, TSM, or mercury performance test.	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests. (b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers).	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b).	(1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test.	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests. (b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	c. Opacity	i. Establish a site-specific maximum opacity level.	(1) Data from the opacity monitoring system during the PM performance test.	(a) You must collect opacity readings every 15 minutes during the entire period of the performance tests. (b) Determine the average hourly opacity reading for each performance test run by computing the hourly averages using all of the 15-minute readings taken during each performance test run. (c) Determine the highest hourly average opacity reading measured during the test run demonstrating compliance with the PM (or TSM) emission limitation.
2. HCl	a. Wet scrubber operating parameters.	i. Establish site-specific minimum effluent pH and flow rate operating limits according to § 63.7530(b).	(1) Data from the pH and liquid flow-rate monitors and the HCl performance test.	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.

TABLE 7 TO SUBPART DDDDD OF PART 63—ESTABLISHING OPERATING LIMITS ^{a b}—Continued

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
3. Mercury	b. Dry scrubber operating parameters.	i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent.	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test.	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.
	c. Alternative Maximum SO ₂ emission rate.	i. Establish a site-specific maximum SO ₂ emission rate operating limit according to § 63.7530(b).	(1) Data from SO ₂ CEMS and the HCl performance test.	(a) You must collect the SO ₂ emissions data according to § 63.7525(m) during the most recent HCl performance tests. (b) The maximum SO ₂ emission rate is equal to the highest hourly average SO ₂ emission rate measured during the most recent HCl performance tests.
	a. Activated carbon injection.	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b).	(1) Data from the activated carbon rate monitors and mercury performance test.	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.

TABLE 7 TO SUBPART DDDDD OF PART 63—ESTABLISHING OPERATING LIMITS ^{a b}—Continued

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
4. Carbon monoxide for which compliance is demonstrated by a performance test.	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7530(b).	(1) Data from the oxygen analyzer system specified in § 63.7525(a).	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is demonstrated by a performance test.	a. Boiler or process heater operating load.	i. Establish a unit specific limit for maximum operating load according to § 63.7520(c).	(1) Data from the operating load monitors or from steam generation monitors.	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test. (b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the highest hourly average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

^a Operating limits must be confirmed or reestablished during performance tests.

^b If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

■ 28. Table 8 to subpart DDDDD of part 63 is amended by:

■ a. Revising the entries for rows “1.c” and “3.”

■ b. Adding row “8.d”.

■ c. Revising the entries for rows “9.a,” “9.c,” “10,” and “11.c.”

The revisions and addition read as follows:

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

TABLE 8 TO SUBPART DDDDD OF PART 63—DEMONSTRATING CONTINUOUS COMPLIANCE

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation.
3. Fabric Filter Bag Leak Detection Operation.	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(7) are met.
8. Emission limits using fuel analysis.	d. Calculate the HCl, mercury, and/or TSM emission rate from the boiler or process heater in units of lb/MMBtu using Equation 15 and Equations 17, 18, and/or 19 in § 63.7530.

TABLE 8 TO SUBPART DDDDD OF PART 63—DEMONSTRATING CONTINUOUS COMPLIANCE—Continued

If you must meet the following operating limits or work practice standards . . .		You must demonstrate continuous compliance by . . .	
9. Oxygen content		a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(7).	
*	*	*	*
11. SO ₂ emissions using SO ₂ CEMS.		c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test.	
10. Boiler or process heater operating load.		a. Collecting operating load data or steam generation data every 15 minutes.	
		b. Reducing the data to 30-day rolling averages; and	
		c. Maintaining the 30-day rolling average operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test according to § 63.7520(c).	
*	*	*	*
		c. Maintaining the 30-day rolling average SO ₂ CEMS emission rate to a level at or below the highest hourly SO ₂ rate measured during the HCl performance test according to § 63.7530.	

■ 29. Table 9 to subpart DDDDD of part 63 is amended by revising the entries for “1.b” and “1.c” to read as follows:

As stated in § 63.7550, you must comply with the following requirements for reports:

TABLE 9 TO SUBPART DDDDD OF PART 63—REPORTING REQUIREMENTS

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in § 63.7550(d); and	
*	*	*

■ 30. Table 10 to subpart DDDDD of part 63 is amended by revising the rows associated with “§ 63.6(g)” and “§ 63.6(h)(2) to (h)(9)” to read as follows:

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

TABLE 10 TO SUBPART DDDDD OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD

Citation	Subject	Applies to subpart DDDDD
* § 63.6(g)	* Use of alternative stand- ards.	* Yes, except § 63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).
* § 63.6(h)(2) to (h)(9)	* Determining compliance with opacity emission standards.	* No. Subpart DDDDD specifies opacity as an operating limit not an emission stand- ard.
*	*	*

■ 31. Table 11 to subpart DDDDD of part 63 is revised to read as follows:

TABLE 11 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	0.022 lb per MMBtu of heat input.	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis.	a. Mercury	8.0E–07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis.	a. Mercury	2.0E–06 lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
4. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM)	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
5. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
6. Stokers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.

TABLE 11 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011—Continued

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
7. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
8. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
9. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E–02 lb per MMBtu of heat input; or (2.6E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E–02 lb per MMBtu of heat input; or (4.0E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
11. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E–03 lb per MMBtu of heat input; or (8.3E–05 ^a lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
12. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.

TABLE 11 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011—Continued

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	8.0E–03 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
14. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel.	a. HCl	4.4E–04 lb per MMBtu of heat input.	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E–07 ^a lb per MMBtu of heat input.	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
17. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E–02 lb per MMBtu of heat input; or (7.5E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
18. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E–03 ^a lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
19. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test.	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E–02 lb per MMBtu of heat input; or (8.6E–04 lb per MMBtu of heat input).	Collect a minimum of 4 dscm per run.

TABLE 11 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011—Continued

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
20. Units designed to burn gas 2 (other) gases.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. HCl	1.7E–03 lb per MMBtu of heat input.	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E–06 lb per MMBtu of heat input.	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E–03 lb per MMBtu of heat input; or (2.1E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

^a If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^b Incorporated by reference, see §63.14.

^c An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

■ 32. Table 12 to subpart DDDDD of part 63 is revised to read as follows:

TABLE 12 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER MAY 20, 2011, AND BEFORE DECEMBER 23, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	3.5E–06 ^a lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel.	a. Filterable PM (or TSM).	1.1E–03 lb per MMBtu of heat input; or (2.3E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel.	a. Carbon monoxide (CO) (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.

TABLE 12 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER MAY 20, 2011, AND BEFORE DECEMBER 23, 2011—Continued

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (2.6E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel.	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (4.0E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	9.8E–03 lb per MMBtu of heat input; or (8.3E–05 ^a lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.0E–02 lb per MMBtu of heat input; or (6.5E–03 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	3.2E–03 lb per MMBtu of heat input; or (3.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids.	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.0E–02 lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	2.6E–02 lb per MMBtu of heat input; or (4.4E–04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel.	a. HCl	4.4E–04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E–07 ^a lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E–02 lb per MMBtu of heat input; or (7.5E–05 lb per MMBtu of heat input).	Collect a minimum of 2 dscm per run.
16. Units designed to burn light liquid fuel.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	1 hr minimum sampling time.
	b. Filterable PM (or TSM).	1.3E–03 ^a lb per MMBtu of heat input; or (2.9E–05 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

TABLE 12 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER MAY 20, 2011, AND BEFORE DECEMBER 23, 2011—Continued

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
17. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test.	1 hr minimum sampling time.
18. Units designed to burn gas 2 (other) gases.	b. Filterable PM (or TSM). a. CO	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input). 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average.	Collect a minimum of 4 dscm per run. 1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 ^b collect a minimum of 3 dscm.
	d. Filterable PM (or TSM).	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input).	Collect a minimum of 3 dscm per run.

^aIf you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

^bIncorporated by reference, see § 63.14.

^cAn owner or operator may request an alternative test method under § 63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

■ 33. Table 13 to subpart DDDDD of part 63 is amended by:

■ a. Revising the heading of the table.

■ b. Revising rows “2.a”, “3.a”, “4.a”, “5.a”, “6.a”, “8.a”, “9.a”, “10.a”, “12.a”, “14.a”, “15.a”, and “16.a”.

■ c. Adding footnote “c”.

The revisions and addition read as follows:

TABLE 13 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER DECEMBER 23, 2011, AND BEFORE APRIL 1, 2013

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
* 2. Pulverized coal boilers designed to burn coal/solid fossil fuel.	* a. Carbon monoxide (CO) (or CEMS).	* 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	* 1 hr minimum sampling time.
* 3. Stokers designed to burn coal/solid fossil fuel.	* a. CO (or CEMS)	* 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	* 1 hr minimum sampling time.
* 4. Fluidized bed units designed to burn coal/solid fossil fuel.	* a. CO (or CEMS)	* 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	* 1 hr minimum sampling time.
* 5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel.	* a. CO (or CEMS)	* 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	* 1 hr minimum sampling time.

TABLE 13 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER DECEMBER 23, 2011, AND BEFORE APRIL 1, 2013—Continued

If your boiler or process heater is in this sub-category . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Stokers/sloped grate/others designed to burn wet biomass fuel.	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
8. Fluidized bed units designed to burn biomass/bio-based solids.	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
9. Suspension burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids.	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids.	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 30-day rolling average).	1 hr minimum sampling time.
14. Units designed to burn heavy liquid fuel.	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 10-day rolling average).	1 hr minimum sampling time.
15. Units designed to burn light liquid fuel.	a. CO (or CEMS)	130 ^a ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, ^c 1-day block average).	1 hr minimum sampling time.
16. Units designed to burn liquid fuel that are non-continental units.	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average).	1 hr minimum sampling time.

^c An owner or operator may request an alternative test method under § 63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

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