ORAL ARGUMENT NOT YET SCHEDULED

No. 16-1021 (and consolidated case)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

SIERRA CLUB, *et al.*,

Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents.

On Petition for Review of Final Action
of the Environmental Protection Agency
80 Fed. Reg. 72,790 (Nov. 20, 2015)

BRIEF OF INDUSTRY INTERVENOR-RESPONDENTS

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Dated: November 16, 2016

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with Circuit Rule 28(a)(1), Intervenor-Respondents state as follows:

A. Parties and *Amici*

1. Parties, Intervenors, and *Amici* Who Appeared in District Court

These cases are petitions for review of final agency action, not appeals from the ruling of a district court.

2. Parties to the Consolidated Cases

Petitioners

No. 16-1021:	Sierra Club Clean Air Council Environmental Integrity Project Chesapeake Climate Action Network
No. 13-1256:	Sierra Club Clean Air Council Partnership for Policy Integrity Louisiana Environmental Action Network Environmental Integrity Project

Respondents

Nos. 16-1021 & 13-1256:	U.S. Environmental Protection Agency ("EPA")
No. 16-1021:	Gina McCarthy, Administrator, EPA

Intervenors for Respondents

- American Chemistry Council

- American Coke and Coal Chemicals Institute
- American Forest & Paper Association
- American Iron and Steel Institute
- American Municipal Power, Inc.
- American Wood Council
- Biomass Power Association
- Council of Industrial Boiler Owners
- Coalition for Responsible Waste Incineration
- Eastman Chemical Company
- National Association of Manufacturers
- National Oilseed Processors Association
- Southeastern Lumber Manufacturers Association
- Utility Air Regulatory Group

3. *Amici* in This Case

There are no *amici curiae*.

B. Rulings Under Review

Petitioners seek review of EPA's final action entitled "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," published at 80 Fed. Reg. 72,790 (Nov. 20, 2015).

C. Related Cases

U.S. Sugar Corp. v. EPA, 830 F.3d 579 (D.C. Cir. 2016) (No. 11-1108 and consolidated cases), involved different portions of the rules at issue in the present case.

CORPORATE DISCLOSURE STATEMENTS

Intervenor-Respondents submit the following statements pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and Circuit Rule 26.1:

American Chemistry Council ("ACC") represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a $797 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for fourteen percent of all U.S. exports. ACC participates on its members' behalf in administrative proceedings and in litigation arising from those proceedings. ACC has not outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a ten percent (10%) or greater ownership interest in ACC.

American Coke and Coal Chemicals Institute ("ACCCI"), founded in 1944, is an international trade association that represents 100% of the U.S. producers of metallurgical coke used for iron and steelmaking, and 100% of the nation's producers of coal chemicals, who combined have operations in 12 states. It also represents chemical processors, metallurgical coal producers, coal and coke sales agents, and suppliers of equipment, goods, and services to the industry. ACCCI has no parent corporation, and no publicly held company has ten percent (10%) or greater ownership in ACCCI.

American Forest & Paper Association ("AF&PA") serves to advance a sustainable U.S. pulp, paper, packaging, and wood products manufacturing industry through fact-based public policy and marketplace advocacy. AF&PA member companies make products essential for everyday life from renewable and recyclable resources and are committed to continuous improvement through the industry's sustainability initiative – Better Practices, Better Planet 2020. The forest products industry accounts for approximately 4 percent of the total U.S. manufacturing GDP, manufactures approximately $200 billion in products annually, and employs nearly 900,000 men and women. The industry meets a payroll of approximately $50 billion annually and is among the top 10

manufacturing sector employers in 47 states. No parent corporation or publicly held company has a ten percent (10%) or greater ownership interest in AF&PA.

American Iron and Steel Institute ("AISI") serves as the voice of the North American steel industry and represents 19 member companies, including integrated and electric furnace steelmakers, accounting for the majority of U.S. steelmaking capacity with facilities located in 41 states, Canada, and Mexico. AISI also includes approximately 125 associate members who are suppliers to or customers of the steel industry. AISI has no parent corporation, and no publicly held company has ten percent (10%) or greater ownership in AISI.

American Municipal Power, Inc. ("AMP") is a non-profit corporation headquartered in Columbus, Ohio, that provides services on a cooperative, non-profit basis for its member communities operating municipal electric systems. AMP has no parent corporation and no publicly held company has a ten percent (10%) or greater ownership interest in AMP.

American Wood Council ("AWC") is the voice of North American wood products manufacturing, representing over 75% of the industry that provides approximately 400,000 men and women in the United States with family-wage jobs. AWC members make products that are essential to everyday life from a renewable resource that absorbs and sequesters carbon. Staff experts develop state-of-the-art engineering data, technology, and standards for wood products to assure their safe and efficient design, as well as provide information on wood design, green building, and environmental regulations. AWC also advocated for balanced government policies that sustain the wood products industry.

Biomass Power Association ("BPA") is a non-profit, national trade association headquartered in Portland, Maine, and organized under the laws of the state of Maine. BPA has no parent corporation and no publicly held company has a ten percent (10%) or greater ownership interest in BPA. BPA serves as the voice of the U.S. biomass industry in the federal public policy arena. BPA is comprised of 23 member companies who either own or operate biomass power plants and 16 associate and affiliate members who are suppliers to or customers of the industry. BPA's member companies represent approximately 80 percent of the U.S. biomass to electricity sector.

Council of Industrial Boiler Owners ("CIBO") is a trade association of industrial boiler owners, architect-engineers, related equipment manufacturers, and University affiliates representing 20 major industrial sectors. CIBO members have

facilities in every region of the country and a representative distribution of almost every type of boiler and fuel combination currently in operation. CIBO was formed in 1978 to promote the exchange of information about issues affecting industrial boilers, including energy and environmental equipment, technology, operations, policies, laws and regulations. CIBO has not issued shares to the public and has no parent company.

Coalition for Responsible Waste Incineration ("CRWI") is a non-profit trade association as described in Circuit Rule 26.1(b) that provides information about, and conducts advocacy regarding, the use of high temperature combustion which is used at facilities owned or operated by CRWI members. Some of the CRWI's members are regulated by the rule at issue in this proceeding. No publicly held corporation owns ten percent (10%) or more of CRWI, and CRWI does not have a parent corporation.

Eastman Chemical Company ("Eastman") is a publicly traded company (Symbol EMN), incorporated in the State of Delaware, with its headquarters in the city of Kingsport, Tennessee. Eastman has no parent corporation and based upon current ownership filings with the Securities and Exchange Commission, no publicly held company has a ten percent (10%) or greater ownership interest in Eastman.

National Association of Manufacturers ("NAM") is the nation's largest industrial trade association, representing small and large manufacturers in every industrial sector and in all 50 states. The NAM's mission is to enhance the competitiveness of manufacturers by shaping a legislative and regulatory environment conducive to U.S. economic growth and to increase understanding among policymakers, the media, and the general public about the vital role of manufacturing to America's economic future and living standards. The NAM has no parent company and no publicly held company has a ten percent (10%) or greater ownership interest in the NAM.

National Oilseed Processors Association ("NOPA") is a non-profit, national trade association headquartered in the District of Columbia. NOPA has no parent corporation and no publicly held company has a ten percent (10%) or greater ownership interest in NOPA. NOPA represents 12 companies engaged in the production of food, feed, and renewable fuels from oilseeds, including soybeans. NOPA's member companies process more than 1.6 billion bushels of oilseeds annually at 63 plants located in 19 states throughout the country, including 57 plants that process soybeans.

Southeastern Lumber Manufacturers Association ("SLMA") is a trade association that represents independently-owned sawmills, lumber treaters, and their suppliers in 17 states throughout the Southeast. SLMA's members produce more than 2 billion board feet of solid sawn lumber annually, employ over 12,000 people, and responsibly manage over a million acres of forestland. These sawmills are often the largest job creators in their rural communities, having an economic impact that reaches well beyond people that are in their direct employment. SLMA serves as the unified voice of its members on state and federal government affairs and offers various other programs including networking events, marketing and management, and operational issues. No parent corporation or no publicly held company has a ten percent (10%) or greater ownership interest in SLMA.

Utility Air Regulatory Group ("UARG") is a not-for-profit association of individual electric generating companies and national trade associations that participates on behalf of certain of its members in administrative proceedings under the Clean Air Act, and in litigation arising from those proceedings, that affect electric generators. UARG has no outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a 10 percent or greater ownership interest in UARG.

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* Authorities upon which we chiefly rely are marked with asterisks.

FEDERAL REGULATIONS

FEDERAL REGISTER

MISCELLANEOUS

GLOSSARY OF TERMS, ACRONYMS, AND ABBREVIATIONS

the Act	Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*
the Agency	The United States Environmental Protection Agency
CAA	Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*
CEMS	Continuous Emissions Monitoring System
CO	Carbon Monoxide
CO_2	Carbon Dioxide
EPA	The United States Environmental Protection Agency
HAP	Hazardous Air Pollutant
JA	Joint Appendix
MACT	Maximum Achievable Control Technology
ppm	Parts Per Million
RTC	Response to Comments

STATUTES AND REGULATIONS

All applicable statutes and regulations are contained in the Addendum to the Brief of Petitioners or in the attached Addendum.

ISSUES PRESENTED

1. Did the U.S. Environmental Protection Agency ("EPA" or "Agency") reasonably establish a minimum carbon monoxide ("CO") standard of 130 parts per million ("ppm") for non-dioxin volatile organic hazardous air pollutant ("organic HAP") emissions based on evidence that, at this level, combustion of organic HAP is essentially complete?

2. Did EPA reasonably promulgate work practice standards for periods of startup and shutdown – when available emission measurement methodologies do not provide sufficiently accurate information – that recognize both the inherent limitations of control technology and the differences in how individual sources operate?

SUMMARY OF ARGUMENT

Industry Intervenor-Respondents support EPA's response to the Petitioners' challenge to EPA's decision to set minimum CO standards of 130 ppm. The Petitioners raise a number of arguments against the 130 ppm standards, but most are merely attempts to re-litigate the reasonableness of CO as a surrogate. The D.C. Circuit has already evaluated the Petitioners' challenge to the adequacy of

CO as a surrogate, and as such, this issue is beyond the scope of this litigation. *U.S. Sugar Corp. v. EPA*, 830 F.3d 579 (D.C. Cir. 2016) (per curiam).

The only issue regarding CO in this case is whether EPA appropriately chose 130 ppm, corrected to 3-percent oxygen, as the minimum level at which CO standards should be set. At this level of CO, combustion of organic HAPs is essentially complete. Further organic HAP emissions reductions are not accomplished by lowering the CO standards below 130 ppm. The record supports EPA's action here, and none of the Petitioners' arguments undermine EPA's reasoning or the record evidence.

EPA also complied with the Clean Air Act ("CAA" or "Act") when it established reasonable work practices for periods of startup and shutdown, codified in Table 3 to Subpart DDDDD of Part 63. *See* 80 Fed. Reg. 72,790, 72,824 (Nov. 20, 2015) (JA____, JA____). The record shows that establishing and enforcing numeric emission standards is not feasible during startup, including the alternative definition of startup, and during shutdown, because the necessary measurement methodologies cannot be applied or are not accurate during these time periods. In making that determination, EPA reasonably relied on the only information, and metric, available to it.

The work practice standards EPA promulgated for those periods also are reasonable and comply with the statutory requirements. EPA's work practice

standards require sources to do everything they can reasonably do. For startup, they require sources to use clean fuels for ignition and, after converting to primary fuel, to engage emission controls as soon as the necessary operating conditions are achieved. The shutdown work practice standards require, when combusting primary fuel, continued engagement of those emission controls that can feasibly be operated at the lower temperatures experienced during the shutdown. If sources must use a non-primary fuel to complete the shutdown process, they must use a clean fuel.

The Petitioners' arguments, some of which were not properly presented to the Agency during the rulemaking, boil down to disagreements with EPA's scientific and technical determinations regarding the level of reduction that can be reasonably achieved during those periods, to which this Court should defer.

ARGUMENT

I. EPA Properly Justified Setting the Minimum Level of the CO Standards at 130 PPM.

A. Arguments Relating to the Adequacy of CO as a Surrogate Must Be Dismissed Because the D.C. Circuit Has Already Addressed These Arguments.

As EPA explained in its Response Brief, several of the Petitioners' arguments must be dismissed because they actually constitute back-door attempts to re-litigate the reasonableness of CO as a surrogate for organic HAPs. In *U.S. Sugar*, the D.C. Circuit evaluated challenges to EPA's decision to use CO as a

surrogate. 830 F.3d at 628-30. Because these arguments have been decided or are within the scope of the D.C. Circuit's remand in *U.S. Sugar*, they are beyond the scope of this litigation.

EPA selected CO as a surrogate for organic HAP emissions because both CO and organic HAP emissions are the products of incomplete combustion and there is a strong positive correlation between emissions of both pollutants from industrial boilers. EPA determined that maintaining good combustion efficiency would minimize emissions of both.

In *U.S. Sugar*, the Petitioners challenged the adequacy of CO as a surrogate on two grounds. First, they argued using CO as a surrogate for organic HAPs is arbitrary because record evidence shows a "breakdown" in the relationship between CO and organic HAPs at levels below 130 ppm. 830 F.3d at 630. This Court rejected this argument, ruling that it must defer to EPA's scientific judgment that "this apparent breakdown was most likely caused by the difficulty of measuring the regulated HAP at such extremely low emission levels, rather than by a flaw in the correlation between CO and organic HAPs." *Id.* ("This is precisely the sort of scientific judgment to which we must defer and accordingly, we do so on this point. The Petitioners fail to provide any reason to believe that organic HAP emissions can, in fact, be accurately measured at such low levels." (internal citation omitted)).

The Petitioners also alleged that EPA failed to consider whether organic HAP emissions can be reduced through technologies or methods other than maintaining good combustion efficiency. This Court found that EPA did not provide a sufficient explanation for why it concluded that non-combustion controls are not available or effective for controlling organic HAP emissions. *Id.* at 629. The Court remanded without vacating the CO standards based on the likelihood that EPA could provide a sufficient explanation. *Id.* at 630 ("[I]t is likely that the EPA will be able to adequately explain its use of CO on remand after properly considering the matter.").

In the instant case, the Petitioners rely heavily on these two arguments in what clearly constitutes an attempt to re-litigate these arguments. But, because these arguments were already decided or are within the scope of the D.C. Circuit's remand in *U.S. Sugar*, they are beyond the scope of this litigation.

Therefore, the following arguments are not properly before this Court in this case:

- The claim that EPA cannot determine the relationship between CO and organic HAP emissions below 130 ppm, Brief of Petitioners ("Pet. Br.") at 15, 21, 29 (I.A.), because the D.C. Circuit has already rejected this exact argument.
- The argument that certain organic HAPs (such as polycyclic organic matter) can be controlled by means other than combustion efficiency, Pet. Br. at 32 n.5 (I.B.1.), 36-39 (I.C.), because this issue is within the scope of the D.C. Circuit's remand to EPA in *U.S. Sugar*.

B. The Record and Rulemaking History Supports EPA's Decision to Set a Minimum CO Standard of 130 PPM.

EPA's decision to set a minimum CO standard of 130 ppm is amply supported by record evidence. EPA set the standards at 130 ppm because "organic HAP emissions are extremely low" at that level, such that setting the standard at a lower level "will not provide reductions in organic HAP emissions." 78 Fed. Reg. 7138, 7145 (Jan. 31, 2013) (JA____, JA____). In other words, EPA reasonably chose 130 ppm as the standard because it represents the CO level at which combustion of organic HAPs is essentially complete.

The term "combustion" describes the chemical reactions that transform fuel and oxygen into heat energy and combustion byproducts. If complete combustion could be achieved, the only products of combustion would be carbon dioxide ("CO_2"), water, and heat. 2011 RTC,[1] Vol. 2 at 11, Comment Excerpt No. 9 (JA____);[2] Coalition for Responsible Waste Incineration Comments at 3-4 (Mar. 9,

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[1] EPA's Responses to Public Comments on EPA's *National Emission Standards for Hazardous Air Pollutants for Major Source Industrial Commercial Institutional Boilers and Process Heaters*, Vol. 2 (Nov. 2011), EPA-HQ-OAR-2002-0058-3289 ("2011 RTC") (JA____-____).

[2] *See also* 2011 RTC, Vol. 2 at 33, Comment Excerpt No. 249 (endorsing comments filed by the American Petroleum Institute ("API") and National Petrochemical and Refiners Association ("NPRA") that explain why CO is a good surrogate for organic HAPs) (JA____); Attachment C to API and NPRA Comments (Aug. 23, 2010), EPA-HQ-OAR-2002-0058-2960 (cited in 2011 RTC, Vol. 2, at 28, Comment Excerpt No. 125 (JA____)) (JA____); *see also* API and American Fuel & Petrochemical Manufacturers 2012 Comments at 33-34 (Feb. 21,

2015), EPA-HQ-OAR-2002-0058-3917 ("CRWI Comments") (JA____-____). But in practice, combustion is rarely complete, especially when using complex carbon-based fuels (such a biomass and fossil fuels) that industrial boilers typically use. 2011 RTC, Vol. 2 at 11, Comment Excerpt No. 9 (JA____).

Incomplete combustion causes the formation of CO and certain organic HAPs as byproducts. But, CO is much more difficult to combust than organic HAPs. As a result, significant levels of CO can be measured even after combustion of organic HAPs is essentially complete. This means that CO functions as a "conservative surrogate for volatile HAPs from industrial boilers." American Forest & Paper Association, et al., Comments at 24 (Mar. 9, 2015), EPA-HQ-OAR-2002-0058-3913 ("Coalition Comments") (JA____).

EPA has long recognized the strong positive correlation between CO emissions and emissions of organic compounds. *See, e.g.,* EPA, "National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II); Final Rule," 70 Fed. Reg. 59,402, 59,461-62 (Oct. 12, 2005) (noting 1991 Resource Conservation and Recovery Act rulemaking and number of maximum achievable control technology ("MACT") standards using CO as a surrogate for emissions of organic compounds). Many times in the past,

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2012), EPA-HQ-OAR-2002-0058-3677 (explaining how CO still remains after organic HAPs are oxidized) (JA____).

EPA has used CO as a surrogate for emissions of organic compounds and has set the CO standard at a level assuring essentially complete combustion of organic compounds. Coalition Comments at 24-26 (JA____-____).

For example, in 1991 EPA used CO as a surrogate for organic compound emissions from boilers and industrial furnaces in a rulemaking issued under the Resource Conservation and Recovery Act. *Id.* at 24 (JA____); *see also* CRWI Comments at 5-9 (JA____-____). EPA set a CO standard at 100 ppm corrected to 7% oxygen to ensure sufficient combustion of organic compounds by boilers.[3] Coalition Comments at 24 (JA____); CRWI Comments at 9 (JA____).

In 2005, EPA used the same level of CO emissions – 100 ppm corrected to 7% oxygen – when it established the MACT standard for organic HAP emissions from hazardous waste combustion sources. Coalition Comments at 25 (JA____); CRWI Comments at 9 (JA____). EPA recognized that some sources could achieve lower CO levels but rejected a lower CO standard for several reasons. 70 Fed. Reg. at 59,462. EPA knew from its data that organic HAP emissions "are extremely low when sources operate under the good combustion conditions required to achieve carbon monoxide levels in the range of zero to 100 [ppm by volume]." *Id.* (footnote omitted).

[3] 100 ppm at 7% oxygen is equivalent to 130 ppm at 3% oxygen. Coalition Comments at 25 (JA____); 78 Fed. Reg. at 7145 (JA____).

Because CO is more difficult to combust than organic HAPs, EPA concluded that a lower CO standard would not provide any "significant reductions in organic HAP emissions." *Id.* And most importantly, EPA knew that setting a lower standard "blindly using a mathematical approach" was improper "because the best performing sources may not be able to replicate their emission levels (and other sources may not be able to duplicate those emission levels) using the exact types of good combustion practices they used during the compliance test documented in our data base." *Id.*

It was in this context that EPA established the minimum CO standard of 130 ppm in the rulemakings at issue here. As noted in the *U.S. Sugar* litigation, there is a strong positive correlation between CO emissions and organic HAP emissions in this source category. *See* Joint Br. of Industry Intervenor-Resp'ts at 13-15, 20-22, *U.S. Sugar Corp. v. EPA*, 830 F.3d 579 (D.C. Cir. 2016) (No. 11-1108), Doc. No. 1537227 (discussing record evidence). When EPA granted reconsideration of the 2011 Rule, commenters supplied data demonstrating that complete combustion of organic HAPs occurs at 130 ppm. 78 Fed. Reg. at 7144-45 (explaining changing standards to 130 ppm in final 2013 Rule based on data and comments that demonstrate it is the level below which there is no further reduction in organic HAP emissions) (JA____-____); 80 Fed. Reg. 3090, 3096 (Jan. 21, 2015) (same) (JA____, JA____). Because further organic HAP reductions do not occur below

130 ppm, a lower CO standard would have falsely suggested better performance with respect to organic HAPs and would have required needless reductions in CO levels without corresponding decreases in organic HAP emissions.

Substantial record evidence supports EPA's decision to establish a CO standard of 130 ppm. *See* CRWI Comments at 3 (JA____); Memorandum from Eastern Research Group to Jim Eddinger, EPA (Aug. 2012), EPA-HQ-OAR-2002-0058-3836 ("2012 MACT Floor Memo") (JA____-____). The efficacy of a 130 ppm CO standard is well-illustrated by two graphs in the record, which plainly show that emissions of organic HAP fall to near-zero when CO emissions are still measured in the hundreds of ppm. 2012 MACT Floor Memo at Appendix H Charts H-1b and H-1c (JA____, JA____) (reproduced herewith).

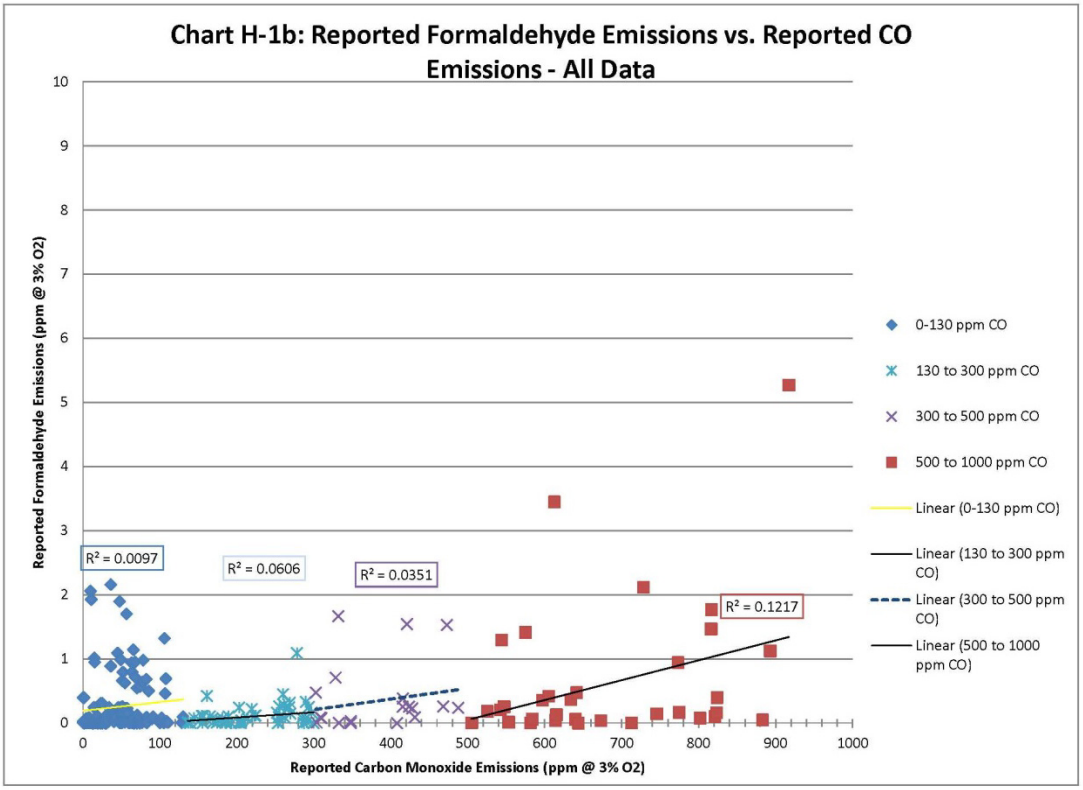
Chart H-1b: Reported Formaldehyde Emissions vs. Reported CO Emissions - All Data
Reported Formaldehyde Emissions (ppm @ 3% O2)
Reported Carbon Monoxide Emissions (ppm @ 3% O2)
R² = 0.0097
R² = 0.0606
R² = 0.0351
R² = 0.1217
0-130 ppm CO
130 to 300 ppm CO
300 to 500 ppm CO
500 to 1000 ppm CO
Linear (0-130 ppm CO)
Linear (130 to 300 ppm CO)
Linear (300 to 500 ppm CO)
Linear (500 to 1000 ppm CO)

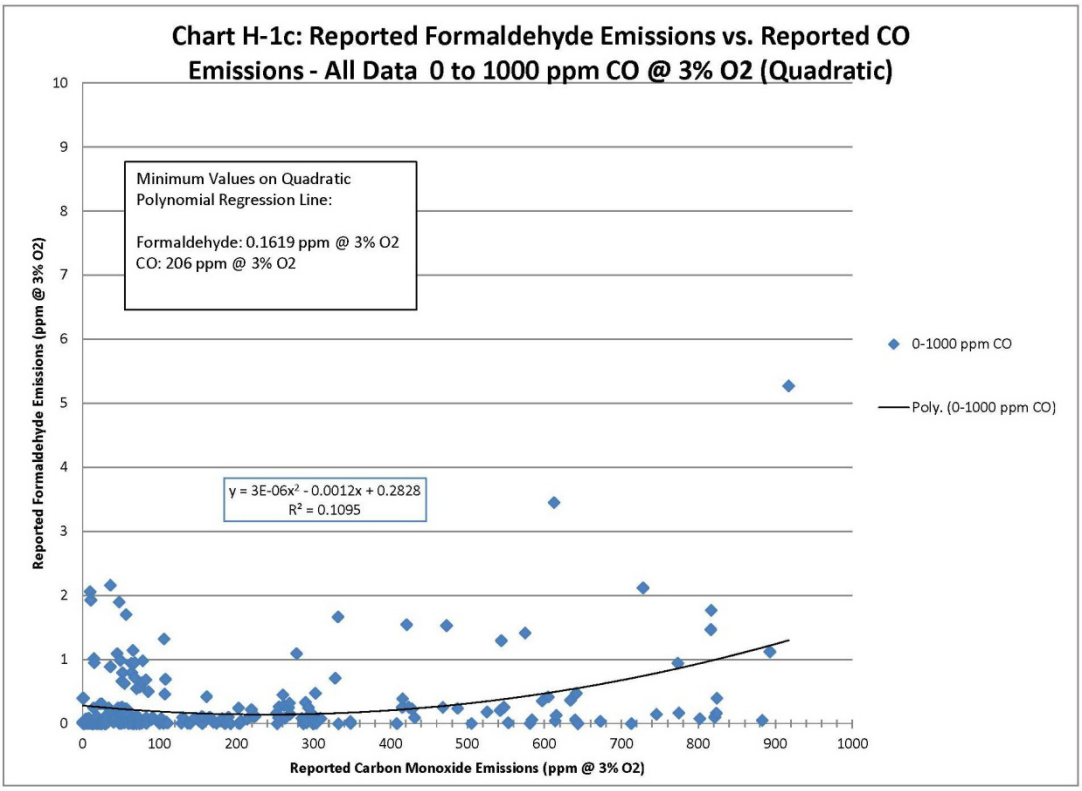
Chart H-1c: Reported Formaldehyde Emissions vs. Reported CO Emissions - All Data 0 to 1000 ppm CO @ 3% O2 (Quadratic)
Minimum Values on Quadratic Polynomial Regression Line:
Formaldehyde: 0.1619 ppm @ 3% O2
CO: 206 ppm @ 3% O2
y = 3E-06x² - 0.0012x + 0.2828
R² = 0.1095
Reported Formaldehyde Emissions (ppm @ 3% O2)
Reported Carbon Monoxide Emissions (ppm @ 3% O2)
0-1000 ppm CO
Poly. (0-1000 ppm CO)

These data support EPA's conclusion that, below measured CO values of 130 ppm, no further reduction in organic HAP emissions should be expected.

C. EPA's Decision to Set the CO Standards at 130 PPM Satisfies Section 112(d).

EPA complied with Section 112(d) when it established the CO standards at 130 ppm. The Petitioners incorrectly allege that EPA improperly calculated the MACT floor because there is evidence in the record that sources may emit lower levels of carbon monoxide. *See* Pet. Br. at 26-29. But the Petitioners misinterpret Section 112(d). EPA has met the requirements of Sections 112(d)(2) and (3) because standards at 130 ppm reflect the organic HAP emissions levels achieved by the best performing sources and result in the maximum reduction of organic HAPs achievable. There is no contrary data showing that further reductions of organic HAPs can be obtained through lower CO levels. It would be inconsistent with the law and the applicable scientific principles to require CO reductions that do not result in organic HAP reductions as the Petitioners' strained interpretation of the statute suggests.

Section 112(d)(2) requires EPA to establish emissions standards that reflect "the maximum degree of reduction in emissions of the hazardous air pollutants" that EPA "determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies . . . ." 42 U.S.C. § 7412(d)(2). The word "achievable" in section 112(d)(2) is limited by what the

best-performing sources achieve, as outlined in section 112(d)(3). *Cement Kiln Recycling Coal. v. EPA*, 255 F.3d 855, 861 (D.C. Cir. 2001) (per curiam). This standard is clearly met here.

The record evidence supports EPA's determination that maximum reduction of organic HAPs is achieved at CO levels of 130 ppm. The record evidence does not show that any further organic HAP reductions would occur under the threshold of 130 ppm. Hence, this level represents the "maximum degree of reduction" that EPA has determined "is achievable" for sources in the relevant categories and is consistent with the organic HAP emission reductions that the best-performing sources actually achieve.

The 130 ppm standards also meet the requirements of section 112(d)(3). This section requires EPA to determine the MACT floor for existing sources based on "the average emission limitation achieved by the best performing 12 percent of the existing sources . . . in the category or subcategory for categories and subcategories with 30 or more sources" or as "the average emission limitation achieved by the best performing 5 sources . . . in the category or subcategory for categories or subcategories with fewer than 30 sources." 42 U.S.C. § 7412(d)(3)(A), (B). EPA has discretion in how it makes this determination, as long as EPA's method allows "'a reasonable inference as to the performance of the top 12 percent of units.'" *Cement Kiln Recycling Coal.*, 255 F.3d at 862 (quoting

Sierra Club v. EPA, 167 F.3d 658, 663 (D.C. Cir. 1999)); *see also Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 632 (D.C. Cir. 2000) (stating that section 112(d)(3) requires that "EPA's method of setting emission floors must reasonably estimate the performance of the relevant best performing plants") (citing *Sierra Club*, 167 F.3d at 665).

EPA's approach to setting the MACT floors here reasonably inferred the performance of the best-performing sources in each source category. EPA determined that ensuring good combustion conditions is the only significant method for controlling organic HAP emissions from industrial boilers. *See Nat'l Ass'n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1135 (D.C. Cir. 2013); *Nat'l Lime Ass'n,* 233 F.3d at 633; *Cement Kiln Recycling Coal.*, 255 F.3d at 863. To understand the efficacy of this control method, EPA reviewed data on CO emissions and the destruction of organic HAPs. As detailed in section I.B, EPA determined from these data that when combustion conditions achieve CO emissions levels of 130 ppm, essentially all organic HAPs capable of being combusted have been combusted. EPA's method for setting the MACT floor satisfied Section 112(d)(3) because it "reasonably estimate[d] the performance of the relevant best performing plants." *Nat'l Lime Ass'n*, 233 F.3d at 632. And the record evidence shows that EPA has supported this conclusion with "'substantial evidence—not mere assertions.'" *Nat'l Ass'n of Clean Water Agencies*, 734 F.3d

at 1131 (quoting *Ne. Md. Waste Disposal Auth. v. EPA*, 358 F.3d 936, 954 (D.C. Cir. 2004) (per curiam)). Nothing more is required of EPA here.

As explained above, the Petitioners' suggestion that EPA should have considered control measures other than combustion controls was decided in *U.S. Sugar* and, therefore, is not at issue here. Consequently, *Cement Kiln Recycling Coalition* and *Northeast Maryland Waste Disposal Authority* are not relevant because those cases turned on the question of whether EPA properly considered all available emissions control measures. *National Lime Ass'n* is controlling precedent in this case.

The Petitioners have failed to show that EPA's approach is an unreasonable way to estimate the performance of the top performers. The D.C. Circuit has already rejected the argument that there is only one single way for EPA to calculate the MACT floors. *See Nat'l Lime Ass'n,* 233 F.3d at 631-32. EPA has discretion to estimate the performance of the best performing units by any reasoned method that is adequately supported. EPA reasonably exercised its discretion by reviewing data related to the completeness of combustion of organic HAPs and its CO surrogate. The Petitioners argue for their preferred interpretation of Section 112(d)(3) but fail to establish why EPA's interpretation is unreasonable. *See, e.g., Van Hollen, Jr. v. Fed. Election Comm'n,* 811 F.3d 486, 495 (D.C. Cir. 2016) (*Chevron* deference constitutes a transfer of authority to the agency "not to

find the best meaning of the text, but to formulate legally binding rules to fill in gaps based on policy judgments made *by the agency rather than Congress*") (internal quotation marks and citation omitted) (emphasis in original).

Furthermore, under these facts, the Petitioners' preferred method is inconsistent with the structure and purpose of Section 112(d)(3). A statutory interpretation "that is inconsistent with the design and structure of the statute as a whole does not merit deference." *Utility Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2442 (2014) (internal quotation marks and citation omitted). The Petitioners want EPA to mechanically apply a mathematic calculation of CO emission data without evaluating that data in context. But ignoring the chemical relationship that forms the basis for using CO as a surrogate in the first place is unscientific and contrary to the purpose of Section 112(d)(3). *Id.* at 2442 (rejecting "EPA's rigid insistence" to interpret the Clean Air Act without evaluating the regulatory structure of the relevant statutory provisions).

Lastly, there is no policy reason for requiring a standard below 130 ppm. The record shows that reducing CO levels below 130 ppm does not further reduce organic HAP emissions. A lower CO standard would serve no purpose. And it certainly would not meet any goal of Section 112(d) because nothing in Section 112(d) authorizes meaningless emission standards.

In sum, a CO standard of 130 ppm ensures essentially complete combustion of organic HAPs. Nothing more is needed or warranted.

II. The Work Practice Standards Are Reasonable and Comply with the Clean Air Act.

A. EPA Determined, Consistent with CAA § 112(h), that the Technological Limitations of Emissions Measurement During Startup and Shutdown Warrant Establishment of Work Practice Standards For All Industrial Boilers.

EPA has met all of the requirements necessary to set work practice standards for periods of startup and shutdown. EPA determined that work practice standards are justified under Section 112(h) because it is not practicable to apply emission measurement methodologies accurately during startup and shutdown for the class of boilers that are major sources.[4] Petitioners fail to address this evidence directly, instead arguing (1) that EPA failed to satisfy Section 112(h) for a "particular class of sources" when it allowed individual operators to opt between two definitions of startup, and (2) that EPA arbitrarily relied on data from coal-fired boilers used to generate electricity (i.e., electric generating units) to determine when industrial boilers reach steady state conditions sufficient to obtain accurate measurements. Pet. Br. at 39-51.

Petitioners mischaracterize EPA's action and rationale. EPA did make the requisite determination for all industrial boilers that emission measurements to

[4] This Court recently upheld EPA's establishment of work practice standards for non-major sources in *U.S. Sugar,* 830 F.3d 579.

establish and demonstrate compliance with numerical emission standards are impracticable during startup, including the longer alternative startup definition, and shutdown. 80 Fed. Reg. at 72,793 (JA____). And, in making that determination, EPA reasonably relied on the information available to it, including information regarding the point at which coal-fired electric generating units are capable of achieving steady state operations consistent with obtaining accurate emissions measurements.

1. EPA Made the Requisite Determination of Impracticability for Startup and Shutdown Periods.

Section 112 provides EPA with two options for setting standards. First, EPA may set an "emission standard" reflective of the degree of emission limitation achieved by the best performing source(s). 42 U.S.C. § 7412(d)(2), (3). Second, if in the Administrator's judgment it is "not feasible" to prescribe or enforce such a numerical emission standard, EPA may instead "promulgate a design, equipment, work practice, or operational standard" that is "consistent with" the provisions of § 112(d). *Id.* § 7412(h)(1). Infeasibility includes circumstances under which the application of measurement methodology is "not practicable due to technological and economic limitations." *Id.* § 7412(h)(2).

To set § 112(d) standards for industrial boilers, EPA collected data using stack test methods. EPA, Response to 2015 Reconsideration Comments for Industrial, Commercial, and Institutional Boilers and Process Heaters National

Emission Standards for Hazardous Air Pollutants at II-3, II-7 (Oct. 2015), EPA-HQ-OAR-2002-0058-3937 ("2015 RTC") (JA____, JA____). EPA determined that it was not practicable to require stack testing during the time periods that such boilers are starting up or shutting down, however, because of the short duration of the periods and the changing stack conditions. EPA, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule," 76 Fed. Reg. 15,608, 15,613, 15,642 (Mar. 21, 2011) ("2011 Rule") (JA____, JA____, JA____); *see also U.S. Sugar*, 830 F.3d at 599 (noting EPA's reasoning in the 2011 Rule). EPA explained that a boiler would need to operate for "more than 12 continuous hours in startup or shutdown mode" in order to produce the useful and reliable emissions data that is necessary to set numerical limits. 76 Fed. Reg. at 15,642 (JA____). And, "[o]perating in startup and shutdown mode for sufficient time to conduct the required test runs could result in higher emissions than would otherwise occur." *Id*.

EPA also concluded that measurement methods other than stack testing cannot be accurately employed during those periods. In particular, continuous emissions monitoring systems ("CEMS") exist for some of the HAPs regulated at industrial boilers. But those CEMS (which are designed for periods of normal operation) have technological limits that make their use during startup and

shutdown impracticable as well. 80 Fed. Reg. at 72,793 (JA____); 2015 RTC at II-8, II-18 (JA____, JA____).

For example, although CEMS to measure hydrogen chloride were commercially available when EPA conducted its information collection effort, EPA had not yet promulgated any performance specifications to ensure that the data from those monitors are of a quality and consistency necessary to prescribe or enforce a standard. Particulate matter CEMS also are commercially available, but data from those monitoring systems collected during startup and shutdown are of uncertain accuracy because the particulate matter CEMS are not (and cannot be) calibrated to a reference method under those conditions. *See* Utility Air Regulatory Group Comments at 14-15 (Mar. 9, 2015), EPA-HQ-OAR-2002-0058-3918 ("UARG Comments") (JA____-____). Issues with data recorded by CO_2 and oxygen CEMS – which are needed to measure emissions on a heat input basis – during startup and shutdown also are well documented. *Id.* Although EPA has for years attempted to compensate for those issues by establishing diluent "caps" that apply in lieu of measured values, those caps are not actual measurements and may not result in accurate data. *Id.* at 15 (JA____). Mercury CEMS and sorbent trap monitoring systems to measure mercury also may not be accurate during startup and shutdown periods because of stratified stack conditions and unstable flow prior

to the point when conditions stabilize. *Id.; see also* 2015 RTC at II-8, II-18 (JA____, JA____).

In short, because stack tests cannot be performed during startup and shutdown, EPA lacked data to set numeric standards for those periods. 80 Fed. Reg. at 72,793 (JA____). EPA also did not have, and could not have collected, accurate HAP data from CEMS. *Id.*; 2015 RTC at II-8 ("it is infeasible to collect valid data in order to establish numerical limits for these periods and EPA does not have data in-hand") (JA____). Although EPA reconsidered both the length of the startup and shutdown periods, and the appropriateness and feasibility of certain aspects of the work practice standards, EPA's justification for prescribing such standards never changed. *See* 80 Fed. Reg. at 72,792-93, 72,795 (JA____-____, JA____); 2015 RTC at II-3, II-6 to II-7 (JA____, JA____-____); EPA, Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 914-15 (Dec. 2012), EPA-HQ-OAR-2002-0058-3846 (JA____-____).

Requiring sources that opt, or are required, to use continuous monitoring systems to operate and report data recorded by those CEMS during startup and shutdown, *see e.g.,* Br. for Resp't EPA ("EPA Br.") at 31-32, 35, is not inconsistent with EPA's determination that such measurements are inaccurate and

thus impracticable as that term is used in Section 112(h). EPA intends to use those data to continue its evaluation of the accuracy of CEMS measurements during startup and shutdown, including the longer alternative startup period, to help determine whether EPA should make changes to the rule in the future. 2015 RTC at II-4 to II-5 (JA____-____).

2. EPA's Determination of Impracticability Applies to Both Startup Definitions.

Rather than offer evidence that emissions can be accurately measured during startup, Petitioners argue that by allowing sources to choose between the startup definitions, EPA has delegated to sources its statutory obligation to make a determination of measurement impracticability. Pet. Br. at 47-49. In their brief, Petitioners present this argument in the context of the statutory language in Section 112(h) requiring EPA to make a determination with respect to a "particular class of sources," suggesting that the existence of the two definitions creates two classes of sources to which the work practice standards apply and that EPA did not make a finding for both "classes."[5]

[5] In their comments, Petitioners objected to EPA's failure to require sources to justify their choice of startup definitions in terms of their own measurement capabilities, but did not suggest that the alternative definition created a separate "class of sources" under Section 112(h). EarthJustice Comments at 12-13 (Mar. 9, 2015), EPA-HQ-OAR-2002-0058-3926 (JA____-____). Rather, Petitioners presented a completely different argument based on that language, arguing that Congress only provided EPA authority to apply work practice standards based on a sources' "class," and not based on different periods of operation of those sources.

The existence of two separate compliance options does not create separate classes of sources, and EPA's determination of measurement impracticability was not limited to a subset of sources. 80 Fed. Reg. at 72,792-93 (JA____-____). The determination applies to operation of all industrial boilers up to the point when the alternative definition of startup ends.

EPA based its determination of measurement impracticability for startup, in part, on an analysis of data to determine the point at which operating conditions are likely to stabilize so that emissions can be accurately measured. In the 2015 rule, EPA adopted a definition of startup that is longer than its 2013 definition because its analysis in the reconsideration proceeding showed that the best performers could not (on average) stabilize their conditions enough to allow accurate measurements at the point when useful thermal energy (or steam) is initially generated. *See, e.g.,* EPA, Assessment of startup period at coal-fired electric generating units – Revised (Nov. 2014), EPA-HQ-OAR-2002-0058-3903 ("Revised Technical Assessment") (JA____-____). EPA's analysis showed that point to be within four hours after that. *Id.* at 21-22 (JA____-____).[6]

Id. at 11-12. Although Petitioners do not appear to raise that issue in their brief, it would not help them. Section 112(h) provides no such limit on EPA's discretion. 80 Fed. Reg. at 72,792-93 (JA____-___); 2015 RTC at II-2 to II-3 (JA____-____).

[6] Because EPA found no significant difference in performance related to startup events between the different boiler types and the air pollution control technologies assessed in this analysis, EPA rejected requests by industry

EPA's decision to retain the 2013 definition of startup in the 2015 Rule does not undermine EPA's measurement impracticability determination. EPA's analysis showed that the best performing boilers reach stable operation within 4 hours after they begin supplying useful thermal energy. EPA kept the 2013 definition as a compliance option that did not require the additional work practice monitoring associated with the alternative definition of startup[7] because it might provide an incentive for sources to perform even better than the current best performing boilers. 2015 RTC at II-4 to II-5 (JA____-____); EPA Br. at 38-39. The fact that some sources can engage controls, and thus stabilize conditions, earlier than the best performing 12 percent of sources did not contradict EPA's determination that measurement is not accurate during this time period.

As explained below, EPA used available information on the ability of coal-fired boilers to engage controls during startup as a means of identifying the point when the best performers could achieve the steady-state operations necessary to make accurate measurements, but EPA did not determine that a particular sources'

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commenters that EPA establish different startup definitions for different types of sources and different types of controls. Revised Technical Assessment at 22 (JA____); *see also* Coalition Comments at 6-7 (requesting longer and more varied time periods based on the fact that there are "many more designs of industrial boilers and process heaters than there are EGU designs") (JA____-____).

[7] Boilers that opt to use the alternative startup definition also must comply with additional work practice monitoring requirements and record additional information on clean fuel use. 80 Fed. Reg. at 72,815-16 (to be codified at 40 C.F.R. §§ 63.7550(c)(5)(xviii), 63.7555(d)(11) and (12)) (JA____-___).

engagement of controls necessarily meant that its emissions could be measured accurately. 80 Fed. Reg. at 72,793 (JA____). In fact, even as it retained the shorter 2013 startup definition as an option, EPA continued to question whether sources exercising that option could in fact obtain accurate measurements.[8] 2015 RTC at II-5 (JA____).

EPA's decision to provide sources the option of using the 2013 definition of startup and complying with numerical emission limitations earlier than otherwise required is consistent with EPA's authority under § 112(h). This is well within the discretion that this Court has accorded EPA under this section. *See U.S. Sugar,* 830 F.3d at 595-96, 608.

3. EPA Reasonably Based the Alternative Startup Definition on the Available Information.

The Petitioners also argue that EPA's alternative startup definition is arbitrary, taking issue with EPA's evidence regarding the time it takes for boilers to reach stable operating conditions. Pet. Br. at 49-51. Specifically, Petitioners criticize EPA's reliance on information from a different source category: coal-fired boilers that generate electricity. *Id.* The Petitioners also attack EPA's use of

[8] In fact many commenters in the rulemaking stated that even EPA's longer alternative startup definition does not provide adequate time after controls are engaged to allow conditions to stabilize. *See, e.g.,* 2015 UARG Comments at 15-16 (JA____-____); Coalition Comments at 6-7 (JA_____-__); Council of Industrial Boiler Owners, et al., Comments at 5-14 (Mar. 9, 2015), EPA-HQ-OAR-2002-0058-3920 ("CIBO Comments") (JA____).

control device engagement as a metric to identify the point when conditions stabilize. *Id.* But Petitioners do not dispute the limited nature of the information EPA had. Nor did they offer during the rulemaking any other sources of data, or any other metric.

EPA supported its use of power plant data. EPA explained that power plants and industrial boilers use similar types of controls and use similar startup processes to generate their respective products (i.e., electricity and useful thermal energy). 80 Fed. Reg. at 72,795 (JA____); 2015 RTC at II-5 to II-6, II-10 (JA____-_____, JA____). Further, EPA found that its conclusion was supported by the information it did have on industrial boilers. *Id*; EPA, Assessment of startup period for industrial boilers (Nov. 2015), EPA-HQ-OAR-2002-0058-3939 (JA____-____). The Petitioners may wish EPA had obtained more data. But EPA was not required to do so. *Nat'l Ass'n of Clean Water Agencies*, 734 F.3d at 1145 (noting the "particular deference" this Court owes to EPA "when its rulemakings rest upon matters of scientific and statistical judgment within the agency's sphere of special competence and statutory jurisdiction," provided that EPA "articulate[s] a rational connection between the facts found and the choice made") (internal quotation marks and citations omitted); *see also Cement Kiln Recycling Coal.*, 255 F.3d at 867 ("We generally defer to an agency's decision to proceed on the basis of imperfect scientific information . . . .").

EPA also drew reasonable conclusions from the available information. Petitioners criticize EPA's conclusion that data from the electric generating units it analyzed reflected those sources' best efforts to engage their controls as early as possible. The Petitioners suggest that EPA's conclusion is wrong because those sources are under no obligation or have no incentive to do so. Pet. Br. at 49. That is patently false. Those electric generating sources are subject to caps on emissions under the Acid Rain Program and the Cross-State Air Pollution Rule that impose direct, tangible costs on each pound of sulfur dioxide and nitrogen oxide emitted. *See, e.g.,* 40 C.F.R. pts. 72-78, and pt. 97. They also are subject to numerous other state and Federal emission limitations on criteria pollutants that they comply with, in part, by using the installed pollution controls EPA examined in its analysis. EPA was completely justified in assuming those sources are doing all they can to engage applicable controls as quickly as possible.

Again, the Petitioners' arguments largely boil down to disagreements with EPA's reasonable scientific and technical determinations, to which this Court should defer. *Nat'l Ass'n of Clean Water Agencies*, 734 F.3d at 1145; *Cement Kiln Recycling Coal.*, 255 F.3d at 867.

B. The Work Practice Standards Applicable to the Alternative Startup Definition and to Shutdown Are Consistent with Section 112(d).

EPA appropriately promulgated work practice standards for the alternative definition of startup and for shutdown. Petitioners criticize the work practice standard associated with the alternative definition of startup for requiring that, once a non-clean primary fuel is combusted, applicable controls (other than particulate matter controls)[9] be engaged when that is "possible." Pet. Br. at 41-44. Petitioners argue that because EPA has not specified when it is "possible" for each control to be engaged during a particular sources' startup, the standard is not "consistent with the provisions" of Section 112(d) requiring a determination of maximum achievable reductions. *Id.*

EPA met the requirements of Section 112(d) in establishing the work practice standard for the alternative startup definition. EPA evaluated the time it took for the "best performing" coal-fired boilers for which it had data (i.e., electric generating units) to engage controls (other than particulate matter controls) and determined that was (on average) four hours after generating useful thermal energy. 80 Fed. Reg. at 72,795 (JA____); 2015 RTC at II-18 to II-19 (JA____-_____); *see also* Revised Technical Assessment (JA____-____). EPA then

[9] Particulate matter controls must be engaged within one hour of firing a non-clean fuel. 80 Fed. Reg. at 72,824 (to be codified at 40 C.F.R. pt. 63, subpt. DDDDD, Tbl. 3) (JA____). Petitioners do not object to that aspect of the work practice standard.

promulgated a definition of startup that ends at that point and required facilities to comply with the numerical emissions limitation from that point forward.[10]

Recognizing that some sources might be able to do better than average, EPA required sources to do better if it is "possible." *See* EPA Br. at 29-30, 31, 35. As with any other work practice standard, EPA and delegated states can review records and any other available information to determine whether a source is complying with that requirement.

EPA's determination that it could not specify a particular deadline for engaging non-particulate matter controls prior to the end of startup is supported by an ample technical record regarding the limitations of applicable controls and the significant variability between affected sources. EPA Br. at 28-29, 34; 2015 RTC at II-6 (JA____); 78 Fed. Reg. at 7147 (noting temperature requirements for control devices) (JA____); Coalition Comments at 6 (noting the many different designs of industrial boilers) (JA____); CIBO Comments at 5-6 (discussing variability based on differences in boilers) (JA____-____); *id.* at Attachments A and F (showing varying time ranges for different kinds of boilers) (JA____, JA____). Petitioners' suggestion that EPA should have evaluated other startup control strategies, like limiting combustion to clean fuels, ignores obvious

[10] Because that analysis did not include particulate matter controls, EPA performed a separate analysis to support the one-hour requirement. 80 Fed. Reg. at 72,795 (JA____).

technical limitations including the fact that a boiler cannot complete the startup process without converting to its primary fuel. *See, e.g.,* EPA Br. at 28.

Petitioners also criticize the work practice standard for shutdown, asserting that the standard does not require use of clean fuels and "exempt[s] these boilers from doing anything at all to control" emissions of hazardous air pollutants. Pet. Br. at 45, 46. The first problem with this argument is that the Petitioners failed to raise it in their comments. The Act requires commenters to raise their objections "with reasonable specificity" during the comment period. 42 U.S.C. § 7607(d)(7)(B). This Court "'strictly' enforce[s] this requirement." *Mossville Envtl. Action Now v. EPA*, 370 F.3d 1232, 1238 (D.C. Cir. 2004).

When EPA proposed revisions to the list of clean fuels for startup in 2015, it also included a clean fuel provision in the text of the shutdown work practice standard. 80 Fed. Reg. at 3120 (JA____). In their comments on the 2015 proposed rule, the Petitioners disagreed with EPA's decision to expand the list of clean fuels and argued that the entire list of clean fuels was not consistent with Section 112(d) because EPA did not show how these fuels would meet EPA's emission standards. EarthJustice Comments at 14-15 (JA____-____). But the Petitioners did not say that the rule did not actually require use of clean fuels during shutdown, which is their primary argument here. *See* Pet. Br. at 19-20, 22-23, 45-47. As such, this argument was not preserved and cannot be raised here. *See, e.g., Nat. Res. Def.*

Council v. EPA, 571 F.3d 1245, 1259 (D.C. Cir. 2009) (per curiam) ("[A]lthough we allow commenters some leeway in developing their argument before this court, the comment must have provided adequate notification of the general substance of the complaint[.]" (internal quotation marks and citation omitted)); *Mossville Envtl. Action Now*, 370 F.3d at 1238 (holding that "general reference[s]" do "not rise to the 'reasonable specificity' required by the statute").

The Petitioners are also wrong on the merits. When combusting primary fuel, the shutdown work practice standard requires sources to operate controls EPA has determined can feasibly be used during shutdown. To the extent a non-primary fuel is used as part of the shutdown process, e.g., for flame stabilization, EPA required sources to choose a clean fuel. 80 Fed. Reg. at 72,824 (to be codified at 40 C.F.R. pt. 63, subpt. DDDDD, Tbl. 3 at No. 6) (JA____).

The requirements of the shutdown work practice are consistent with Section 112(d). Requiring sources to add clean fuel when it is not needed would simply prolong the shutdown process, contrary to the purpose of the work practice standard. *U.S. Sugar*, 830 F.3d at 666-67 (upholding work practice standard in part because requiring minimization of shutdown time would reduce emissions during shutdown). And, the exceptions to operation of applicable control devices when still combusting primary fuel are necessary because some controls cannot be operated when temperatures, pressures, or flow fall below a specific level. *See,*

e.g., 78 Fed. Reg. at 7147 (JA____). Requiring boilers to continue to operate such controls would make it a violation to shut down.

For both the alternative startup and shutdown work practice standards, EPA adopted reasonable requirements that are consistent with the Act. As this Court held in *U.S. Sugar*, Section 112-compliant work practices standards are not determined solely by "the maximum possible reduction of emissions, without taking into account any other considerations." *U.S. Sugar*, 830 F.3d at 663. Instead, Section 112 requires EPA to also consider the cost to achieve the emission reductions and non-air quality impacts. *Id.* The Act also "explicitly defers" to EPA's judgment on whether a standard is achievable and consistent with Section 112(d)(2). *Id.* The Petitioners have not shown how EPA erred in its judgment that the work practice standard associated with the alternative startup definition and for shutdown meet those criteria. Using EPA's reasoning and record for this rule, this Court can "'reasonably [] discern[]' the Agency's path," which is all that is required. *Id.* at 666.

CONCLUSION

For the foregoing reasons, the Court should deny the Petitioners' petition for review.

Dated: November 16, 2016

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to Rule 32(a)(7)(C) of the Federal Rules of Appellate Procedure and Circuit Rules 32(e)(1) and 32(e)(2)(C), I hereby certify that the foregoing Brief of Industry Intervenor-Respondents contains 7,272 words, as counted by a word processing system that includes headings, footnotes, quotations, and citations in the count, and therefore is within the word limit set by the Court.

Dated: November 16, 2016

/s/ William L. Wehrum
William L. Wehrum

CERTIFICATE OF SERVICE

Pursuant to Rule 25 of the Federal Rules of Appellate Procedure and Circuit Rule 25, I hereby certify that on this 16th day of November 2016, a copy of the foregoing Brief of Industry Intervenor-Respondents was served electronically through the Court's CM/ECF system on all ECF-registered counsel.

/s/ William L. Wehrum
William L. Wehrum

STATUTORY AND REGULATORY ADDENDUM

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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, SO_2, 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/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.

■ 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).

* * * * *

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 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 . . .
*	* *	*	* *	*
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 CO_2 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 CO_2 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.