ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA–HQ–OAR–2017–0757; FRL–10013–44–OAR]

RIN 2060–AT90

Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes amendments to the oil and natural gas new source performance standards (NSPS) promulgated in 2012 and 2016. These amendments remove sources in the transmission and storage segment from the source category, rescind the NSPS (including both the volatile organic compounds (VOC) and methane requirements) applicable to those sources, and separately rescinds the methane-specific requirements of the NSPS applicable to sources in the production and processing segments. Furthermore, the U.S. Environmental Protection Agency (EPA) adopts an interpretation of Clean Air Act (CAA) section 111 under which the EPA, as a predicate to promulgating NSPS for certain air pollutants, must determine that the pertinent pollutant causes or contributes significantly to dangerous air pollution.

DATES: This final rule is effective on September 14, 2020.

ADDRESSES: The EPA established a docket for this action under Docket ID No. EPA–HQ–OAR–2017–0757. All documents in the docket are listed on the *https://www.regulations.gov/* website. Although listed, some information is not publicly available, *e.g.,* Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *https://www.regulations.gov/.* Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID–19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. For further information and updates on EPA Docket Center services, please visit us online at *https://www.epa.gov/dockets.* The EPA continues to carefully and continuously monitor information from the Center for Disease Control, local area health departments, and our Federal partners so that we can respond rapidly as conditions change regarding COVID–19.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Ms. Amy Hambrick, Sector Policies and Programs Division (E143–05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–0964; fax number: (919) 541–0516; and email address: *hambrick.amy@epa.gov.*

SUPPLEMENTARY INFORMATION: *Preamble acronyms and abbreviations.* We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AEO Annual Energy Outlook
APA Administrative Procedure Act
BSER best system of emission reduction
CAA Clean Air Act
CFR Code of Federal Regulations
CH_4 methane
CO carbon monoxide
CO_2 carbon dioxide
CO_2 Eq. carbon dioxide equivalent
EAV equivalent annualized value
EG Emission Guidelines
EGU Electricity Generating Units
EIA U.S. Energy Information Administration
EPA Environmental Protection Agency
GHG greenhouse gases
GHGI greenhouse gas inventory
GHGRP Greenhouse Gas Reporting Program
HAP hazardous air pollutant(s)
H_2S hydrogen sulfide
ICR Information Collection Request
IR infrared
kt kilotons
MMT million metric tons
NAAQS National Ambient Air Quality Standards
NAICS North American Industry Classification System
NEI National Emissions Inventory
NEMS National Energy Modeling System
NO_X nitrogen oxides
NSPS new source performance standards
NTTAA National Technology Transfer and Advancement Act
OGI optical gas imaging
OMB Office of Management and Budget
PM particulate matter
$PM_{2.5}$ PM with a diameter of 2.5 micrometers or less
PM_{10} PM with a diameter of 10 micrometers or less
PRA Paperwork Reduction Act
PV present value
RFA Regulatory Flexibility Act
RIA Regulatory Impact Analysis
SC-CH_4 social cost of methane
SCF significant contribution finding
scfh standard cubic feet per hour
SIP state implementation plan
SO_2 sulfur dioxide
tpy tons per year
the Court United States Court of Appeals for the District of Columbia Circuit
TSD technical support document
UMRA Unfunded Mandates Reform Act
U.S. United States
VOC volatile organic compounds

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I. Executive Summary

A. Purpose and Summary of the Regulatory Action

The EPA is finalizing amendments to its 2012 and 2016 Rules affecting the oil and natural gas industry, titled, respectively, ''Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule'' (''2012 Rule'') [1] and ''Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule'' (''2016 Rule'').[2] Those rules established NSPS for VOC emissions from the oil and natural gas industry, and the 2016 Rule also established NSPS for greenhouse gases (GHG), in the form of limitations on methane, for that industry.[3] The amendments that the EPA is finalizing are intended to continue existing protections from emission sources within the source category that the EPA originally listed for regulation under CAA section 111—termed the Oil and Natural Gas Production Source Category—while removing regulatory duplication.

In response to President Donald J. Trump's March 2017 Executive Order on Promoting Energy Independence and Economic Growth, the EPA has reviewed the 2012 and 2016 Rules with attention to whether they ''unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law'' and, thus, should be ''suspend[ed], revise[d], or rescind[ed]''.[4] [5] From this review, the EPA has determined that some of the requirements under those rules are inappropriate. For example, some of these requirements affect sources that are not appropriately identified as part of the regulated source category. In addition, some of the requirements under the 2016 Rule are unnecessary insofar as they impose redundant requirements. Accordingly, the EPA is acting to rescind those requirements while maintaining health and environmental protections from appropriately identified emission sources within the regulated source category.[6]

Specifically, the EPA is finalizing what it referred to as the primary proposal in the September 24, 2019, proposed action (''2019 Proposal''). Thus, this final rule contains two main actions. First, the EPA is finalizing a determination that the source category includes only the production and processing segments of the industry and is rescinding the standards applicable to the transmission and storage segment of the industry. This determination is based on the EPA's review of the original source category listing and its 2012 and 2016 Rules' interpretations of, and its 2016 Rule's revision to, the scope of the source category, which, as revised, covered sources in the transmission and storage segment. Having reexamined its prior rulemakings regarding the scope of this source category and the transmission and storage segment, the EPA has determined that the revision in the 2016 Rule of the original source category was not appropriate. Because the EPA is determining that the original source category did not cover the transmission and storage segment, and that this segment constitutes a separate source category from the production and processing segments, the EPA was authorized to list it for regulation under CAA section 111(b) only by making a cause-or-contribute-significantly and endangerment finding as required by the statute, which the EPA never did. Accordingly, in this first action, the EPA is rescinding the standards applicable to sources in the transmission and storage segment of the oil and natural gas industry.

Second, the EPA is separately rescinding the methane requirements of the NSPS applicable to sources in the production and processing segments. The EPA is concluding that those methane requirements are redundant with the existing NSPS for VOC and, thus, establish no additional health protections. The emission source control technologies that apply to the sources achieve reductions in both methane and VOC emissions, and the recordkeeping and other requirements overlap as well. Rescinding the applicability of the 2016 Rule requirements to methane emissions, while leaving the applicability to VOC emissions in place, will not affect the amount of methane emission reductions that those requirements will achieve.

This final rule also concludes that, as a prerequisite for newly regulating any air pollutant that the EPA did not consider when listing or initially regulating the source category, CAA section 111 requires the EPA to make a finding that emissions of that air pollutant from the source category cause or contribute significantly (which we term the significant contribution finding, or SCF) to air pollution which may reasonably be anticipated to endanger public health or welfare (which we sometimes refer to as dangerous air pollution). Further, the final rule determines that the SCF for methane that the EPA made in the alternative in the 2016 Rule was invalid and did not meet this statutory standard, for two reasons: (i) The EPA made that finding on the basis of methane emissions from the production, processing, and transmission and storage segments, instead of just the production and processing segments; and (ii) the EPA failed to support that finding with either established criteria or some type of reasonably explained and intelligible standard or threshold for determining when an air pollutant contributes significantly to dangerous air pollution. The fact that the 2016 Rule's SCF for methane was invalid provides another basis for rescinding the methane requirements for the

[1] 77 FR 49490 (August 16, 2012).

[2] 81 FR 35824 (June 3, 2016).

[3] Docket ID No. EPA–HQ–OAR–2010–0505.

[4] Executive Order 13783, ''Promoting Energy Independence and Economic Growth,'' section 1(c) (March 28, 2017); *see also* section 7(a) (specifically directing the EPA to review the 2016 Rule, ''and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, [to], as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules'').

[5] 82 FR 16331 (April 4, 2017) (review of 2016 Rule pursuant to Executive Order 13783, signed by the EPA Administrator).

[6] We note that the EPA is addressing certain specific reconsideration issues—fugitive emissions requirements at well sites and compressor stations, well site pneumatic pump standards, and the requirements for certification of closed vent systems by a professional engineer (PE)—in a separate final rule. *See* Docket ID Item No. EPA–HQ–OAR–2010–0505–7730 and 82 FR 25730.

production and processing segments. While the EPA took comment in the 2019 Proposal on what criteria should inform its judgment as to whether a pollutant causes or contributes significantly to dangerous air pollution, the EPA is not taking further action on such criteria in this rulemaking.

B. Costs and Benefits

The EPA has projected the compliance cost reductions, emissions changes, and forgone benefits that may result from the final rule for the years of analysis, 2021 to 2030. The projected cost reductions and forgone benefits are presented in detail in the Regulatory Impact Analysis (RIA) accompanying this final rule. The EPA notes that the projected cost reductions and forgone benefits are directly associated with the rescission of the NSPS applicable to sources in the transmission and storage segment of the source category and not the rescission of methane from the production and processing segments.

A summary of the key results of this final rule is presented in Table 1.[7] Table 1 presents the present value (PV) and equivalent annualized value (EAV), estimated using discount rates of 7 and 3 percent, of the changes in benefits, costs, and net benefits, as well as the change in emissions under the final rule. Here, the EPA refers to the cost reductions as the ''benefits'' of this rule and the forgone benefits as the ''costs'' of this rule in Table 1. The net benefits are the benefits (cost reductions) minus the costs (forgone benefits).

TABLE 1—COST REDUCTIONS, FORGONE BENEFITS, AND FORGONE EMISSIONS REDUCTIONS OF THE FINAL RULE, 2021 THROUGH 2030

[Millions 2016$]

	7-Percent discount rate		3-Percent discount rate	
	PV	EAV	PV	EAV
Benefits (Total Cost Reductions)	$31	$4.1	$38	$4.3
Costs (Forgone Benefits)	17	2.2	63	7.2
Net Benefits [1]	14	1.9	−25	−2.9
Emissions	Forgone Reductions			
Methane (short tons)	400,000			
VOC (short tons)	11,000			
Hazardous Air Pollutant(s) (HAP) (short tons)	330			
Methane (million metric tons carbon dioxide equivalent (CO_2 Eq.))	9			

[1] **Note:** Estimates may not sum due to independent rounding.

This final rule is expected to result in benefits (compliance cost reductions) for affected owners and operators. The PV of these benefits (cost reductions), discounted at a 7-percent rate, is estimated to be about $31 million, with an EAV of about $4.1 million (Table 1). Under a 3-percent discount rate, the PV of cost reductions is $38 million, with an EAV of $4.3 million (Table 1).

The estimated costs (forgone benefits) include the monetized climate effects of the projected increase in methane emissions under the final rule. The PV of these climate-related costs (forgone benefits), discounted at a 7-percent rate, is estimated to be about $17 million, with an EAV of about $2.2 million (Table 1). Under a 3-percent discount rate, the PV of the climate-related costs (forgone benefits) is about $63 million, with an EAV of about $7.2 million (Table 1). The EPA also expects that there will be increases in VOC and HAP emissions as a result of this final rule. While the EPA expects that the forgone VOC emission reductions may also degrade air quality and adversely affect health and welfare effects associated with exposure to ozone, particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$), and HAP, we are unable to quantify these effects at this time. This omission should not imply that these forgone benefits do not exist. To the extent that the EPA were to quantify these ozone and particulate matter (PM) impacts, the Agency would estimate the number and value of avoided premature deaths and illnesses using an approach detailed in the Particulate Matter National Ambient Air Quality Standards (NAAQS) and Ozone NAAQS RIA (U.S. EPA, 2012; U.S. EPA, 2015).

The PV of the net benefits of this rule, discounted at a 7-percent rate, is estimated to be about $14 million, with an EAV of about $1.9 million (Table 1). Under a 3-percent discount rate, the PV of net benefits is about $−25 million, with an EAV of about $−2.9 million (Table 1).

II. General Information

A. Does this action apply to me?

Categories and entities potentially affected by this action include:

TABLE 2—INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS ACTION

Category	NAICS code [1]	Examples of regulated entities
Industry	211120	Crude Petroleum Extraction.
	211130	Natural Gas Extraction.
	221210	Natural Gas Distribution.
	486110	Pipeline Distribution of Crude Oil.
	486210	Pipeline Transportation of Natural Gas.
Federal Government		Not affected.

[7] In a separate action, the EPA is finalizing technical reconsideration amendments to 40 CFR part 60, subpart OOOOa (EPA–HQ–OAR–2017–0483; FRL–10013–60–OAR; FR Doc. 2020–18115). These technical amendments where proposed in October 2018. 83 FR 52056. Please reference that final rule for the summary and rationale of those technical changes. Please refer to the RIA for both rules to see the combined impacts.

TABLE 2—INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS ACTION—Continued

Category	NAICS code [1]	Examples of regulated entities
State/local/tribal government		Not affected.

[1] North American Industry Classification System (NAICS).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in the table could also be affected by this action. To determine whether your entity is affected by this action, you should carefully examine the applicability criteria found in the final rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section, your air permitting authority, or your EPA Regional representative listed in 40 CFR 60.4 (General Provisions).

B. How do I obtain a copy of this document, background information, and other related information?

In addition to being available in the docket, an electronic copy of the final action is available on the internet. Following signature by the Administrator, the EPA will post a copy of this final action at *https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry.* Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the final rule and key technical documents at this same website. A redline version of the regulatory language that incorporates the final changes in this action is available in the docket for this action (Docket ID No. EPA–HQ–OAR–2017–0757). Additional background information about this final rule, including industry and emissions information, regulatory history, litigation background, other notable events, related Federal actions, and a comprehensive summary and rationale of the proposed options can be found at 84 FR 50244 (September 24, 2019).

C. Judicial Review

Under section 307(b)(1) of the CAA, judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (''the Court'') by November 13, 2020. Moreover, under section 307(b)(2) of the CAA, the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce these requirements. Section 307(d)(7)(B) of the CAA further provides that ''[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review.'' This section also provides a mechanism for the EPA to convene a proceeding for reconsideration, ''[i]f the person raising an objection can demonstrate to the EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.'' Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, U.S. Environmental Protection Agency, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

III. Background

The EPA reviewed the relevant background in the 2019 Proposal, including discussing the oil and natural gas industry and its emissions, 84 FR 50247 through 50; the statutory background, *Id.* at 50251; the regulatory history and litigation background regarding performance standards for the oil and natural gas industry, *Id.* at 50251 and 52; other notable events, including the March 28, 2017, Executive Order that led the EPA to initiate this rulemaking, *Id.* at 50252 and 53; and related state and Federal regulatory actions, *Id.* at 50253 and 54. The EPA incorporates that information by reference and will not repeat it here.

Since the 2019 Proposal, the EPA has updated information on the oil and natural gas industry emissions inventories based on the recently released Inventory of United States Greenhouse Gas Emissions and Sinks: 1990–2018 (published April 13, 2020) and the 2017 National Emissions Inventory (NEI) (released February 2020). In Tables 3 to 7 below, the EPA provides the updated estimate of emissions of methane, VOC, and sulfur dioxide (SO_2) from oil and natural gas industry sources.

Methane emissions in the U.S. and from the oil and natural gas industry. Official U.S. estimates of national level GHG emissions and sinks are developed by the EPA for the U.S. GHG Inventory (GHGI) to comply with commitments under the United Nations Framework Convention on Climate Change. The U.S. GHGI, which includes recent trends, is organized by industrial sectors. The oil and natural gas production, natural gas processing, and natural gas transmission and storage sectors emit 25 percent of U.S. anthropogenic methane. Table 3 below presents total U.S. anthropogenic methane emissions for the years 1990, 2008, and 2018.

TABLE 3—U.S. METHANE EMISSIONS BY SECTOR

[Million metric ton carbon dioxide equivalent (MMT CO_2 eq.)]

Sector	1990	2008	2018
Oil and Natural Gas Production, and Natural Gas Processing and Transmission and Storage	185	185	163
Oil and Natural Gas Production, and Natural Gas Processing	128	153	129
Oil and Natural Gas Transmission and Storage	57	32	34
Landfills	180	125	111

TABLE 3—U.S. METHANE EMISSIONS BY SECTOR—Continued

[Million metric ton carbon dioxide equivalent (MMT CO_2 eq.)]

Sector	1990	2008	2018
Enteric Fermentation	164	174	178
Coal Mining	97	76	53
Manure Management	37	54	62
Other Oil and Gas Sources	44	18	13
Wastewater Treatment	15	15	14
Other Methane Sources [8]	57	51	57
Total Methane Emissions	779	698	650

Emissions from the Inventory of United States Greenhouse Gas Emissions and Sinks: 1990–2018 (published April 13, 2020), calculated using global warming potential (GWP) of 25. *Note:* Totals may not sum due to rounding.

Table 4 below presents total methane emissions from natural gas production through transmission and storage and petroleum production, for years 1990, 2008, and 2018, in MMT CO_2 Eq. (or million metric tonnes CO_2 Eq.) of methane.

TABLE 4—U.S. METHANE EMISSIONS FROM NATURAL GAS AND PETROLEUM SYSTEMS

[MMT CO_2 eq.]

Sector	1990	2008	2018
Oil and Natural Gas Production and Natural Gas Processing and Transmission (Total)	185	185	163
Natural Gas Production	61	100	82
Natural Gas Processing	21	11	12
Natural Gas Transmission and Storage	57	32	34
Petroleum Production	45	42	35

Emissions from the Inventory of United States Greenhouse Gas Emissions and Sinks: 1990–2018 (published April 13, 2020), calculated using GWP of 25. *Note:* Totals may not sum due to rounding.

VOC and SO_2 emissions in the U.S. and from the oil and natural gas industry. Official U.S. estimates of national level VOC and SO_2 emissions are developed by the EPA for the NEI, for which states are required to submit information under 40 CFR part 51, subpart A. Data in the NEI may be organized by various data points, including sector, NAICS code, and Source Classification Code. The oil and natural gas sources emit 5.8 and 2.4 percent of U.S. VOC and SO_2, respectively. Tables 5 and 6 below present total U.S. VOC and SO_2 emissions by sector, respectively, for the year 2017, in kilotons (kt) (or thousand metric tons).

TABLE 5—U.S. VOC EMISSIONS BY SECTOR

[kt]

Sector	2017
Biogenics—Vegetation and Soil	25,823
Fires—Wildfires	4,578
Oil and Natural Gas Production, and Natural Gas Processing and Transmission	2,504
Fires—Prescribed Fires	2,042
Solvent—Consumer and Commercial Solvent Use	1,610
Mobile—On-Road non-Diesel Light Duty Vehicles	1,507
Mobile—Non-Road Equipment—Gasoline	1,009
Other VOC Sources [9]	4,045
Total VOC Emissions	43,118

Emissions from the 2017 NEI (released April 2020). *Note:* Totals may not sum due to rounding.

TABLE 6—U.S. SO_2 EMISSIONS BY SECTOR

[kt]

Sector	2017
Fuel Combustion—Electric Generation—Coal	1,319

TABLE 6—U.S. SO_2 EMISSIONS BY SECTOR—Continued

[kt]

Sector	2017
Fuel Combustion—Industrial Boilers, Internal Combustion Engines—Coal	212

TABLE 6—U.S. SO_2 EMISSIONS BY SECTOR—Continued

[kt]

Sector	2017
Mobile—Commercial Marine Vessels	183

[8] Other sources include rice cultivation, forest land, stationary combustion, abandoned oil and natural gas wells, abandoned coal mines, mobile combustion, composting, and several sources emitting less than 1 MMT CO_2 Eq. in 2018.

TABLE 6—U.S. SO_2 EMISSIONS BY SECTOR—Continued

[kt]

Sector	2017
Industrial Processes—Not Elsewhere Classified	138
Fires—Wildfires	135
Industrial Processes—Chemical Manufacturing	123
Oil and Natural Gas Production and Natural Gas Processing and Transmission	65
Other SO_2 Sources [10]	551
Total SO_2 Emissions	2,726

Emissions from the 2017 NEI (released April 2020). *Note:* Totals may not sum due to rounding.

Table 7 below presents total VOC and SO_2 emissions from oil and natural gas production through transmission and storage, for the year 2017, in kt (or thousand metric tons).

TABLE 7—U.S. VOC AND SO_2 EMISSIONS FROM NATURAL GAS AND PETROLEUM SYSTEMS

[kt]

Sector	VOC	SO_2
Oil and Natural Gas Production and Natural Gas Processing and Transmission (Total)	2,504	65
Oil and Natural Gas Production	2,478	41
Natural Gas Processing	12	23
Natural Gas Transmission and Storage	14	1

Emissions from the 2017 NEI, (published April 2020), in kt (or thousand metric tons). *Note:* Totals may not sum due to rounding.

IV. 2019 Proposal

On September 24, 2019, the EPA issued a proposed rulemaking (2019 Proposal) to amend the 2012 Rule and 2016 Rule for the oil and natural gas industry that would remove regulatory duplication and save the industry millions of dollars in compliance costs each year, while maintaining health and environmental protections from oil and natural gas sources that the Agency considers appropriate to regulate in this rule.[11] The EPA issued the proposal in response to President Trump's Executive Order on Promoting Energy Independence and Economic Growth. Generally speaking, that order directs agencies to review existing regulations that potentially ''burden the development or use of domestically produced energy resources,'' including oil and natural gas, and to suspend, revise, or rescind such regulatory requirements if appropriate. The proposal included a primary regulatory option and an alternative regulatory option. The primary option proposed to remove all sources in the transmission and storage segment of the oil and natural gas industry from regulation under the NSPS, both for VOC and for GHG. The primary option separately proposed to rescind the methane requirements in the 2016 Rule that apply to sources in the production and processing segments of the industry. The alternative option proposed to rescind the methane requirements that apply to all sources in the oil and natural gas industry, without removing any sources from the source category as defined in the 2016 Rule. The EPA additionally solicited comment on alternative interpretations of the EPA's legal authority to regulate pollutants under CAA section 111.

CAA section 111 requires the EPA to set NSPS for categories of stationary sources that the EPA has listed (''source categories'') because they cause, or significantly contribute to, air pollution that may reasonably be anticipated to endanger public health or welfare. The Agency's original source category listing for the oil and natural gas industry, issued in 1979, included only the crude oil and natural gas production and natural gas processing segments of the industry. However, in the 2012 Rule and 2016 Rule, the EPA interpreted the 1979 listing to have established the scope of the source category as including the industry's transmission and storage segment. In the 2016 Rule, the EPA also, as an alternative, expanded the source category to include the transmission and storage segment. In the 2019 Proposal, the EPA proposed to remove sources in the transmission and storage segment from the Oil and Natural Gas Production source category on the grounds that the Agency had erred in the 2012 and 2016 Rules when it had interpreted or expanded the source category, because the transmission and storage segment of the industry is functionally separate from the production and processing segment. The EPA further stated that a separate SCF would be necessary for that segment to be listed as a source category for regulation. The proposal further stated that the emissions limits that apply to sources in the transmission and storage segment in the 2012 Rule and 2016 Rule would be rescinded because that segment would be removed from the source category. Finally, the EPA proposed to rescind emissions requirements for methane for sources located in the production and processing segments on grounds that those requirements are redundant to the requirements for VOC. The proposal made clear that the emissions limits for VOC would remain for the production and processing segments.

In the alternative proposal, the EPA proposed to rescind the methane requirements in the 2016 Rule for all oil and natural gas sources, without removing the transmission and storage sources from the source category. Under this alternative, the rule would retain VOC standards for the production, processing, and transmission and storage segments of the industry. As with the primary proposal, the alternative proposal is based on the view that because the controls to reduce VOC emissions also reduce methane, separate methane requirements for the industry are redundant.

The EPA further stated that the proposed amendments would remove the Agency's obligation to develop emission guidelines (EG) to address methane emissions from existing sources under section 111(d) of the CAA. The EPA stated its belief that not

[9] Other sources include remaining sources emitting less than 1,000 kt VOC in 2017.

[10] Other sources include remaining sources emitting less than 100 kt SO_2 in 2017.

[11] 84 FR 50244.

regulating existing sources would have limited environmental impact, because some existing sources will ''modify'' such that they will become subject to requirements for new sources, and because the number of remaining sources may decline over time as they are shut down or become obsolete.

The EPA also took comment on an alternative interpretation of its legal authority to regulate pollutants under CAA section 111. In the 2016 Rule, the EPA took the position that the law did not require the Agency, as a prerequisite to regulating methane as part of the NSPS, to first make a separate determination that GHG emissions from the oil and natural gas industry cause, or significantly contribute to, dangerous air pollution (a pollutant-specific SCF). However, the Agency also made a finding in the alternative that if the CAA were interpreted to require a pollutant-specific SCF, then GHG emissions from the Oil and Natural Gas source category do cause or contribute significantly to dangerous air pollution. The 2019 Proposal solicited comment on three issues: (1) Whether the Agency should revise the interpretation it took in the 2016 Rule, so that CAA section 111 requires the EPA to make a pollutant-specific SCF for GHG emissions from the oil and natural gas industry as a predicate to regulation; (2) whether, if CAA section 111 does require a pollutant-specific SCF, whether the finding in the alternative in the 2016 Rule satisfied that requirement; and (3) what, if any, specific criteria the EPA should use to make a pollutant-specific SCF.

The EPA solicited comments on all aspects of the proposal during a 60-day public comment period. The EPA held a public hearing in Dallas, Texas, in October 2019; 105 speakers provided oral testimony and 32 observers attended. The EPA received almost 300,000 public comments on the proposed rule. The EPA is not responding to any late comment received.

V. Final Action and Rationale

A. Summary of Final Action

The EPA is finalizing what was referred to as the primary proposal in the 2019 Proposal. First, the final rule removes all sources in the transmission and storage segment of the oil and natural gas industry from regulation under the NSPS and removes all emissions limitations for both VOC and GHG for sources in the transmission and storage segment. Second, the final rule separately rescinds the standards for methane emissions in the 2016 Rule that apply to sources in the production and processing segments of the industry. Third, the final rule articulates the EPA's interpretation that under CAA section 111(b)(1)(A), as a prerequisite for newly regulating any air pollutant, the Agency is required to make a finding that emissions of the air pollutant, from the source category, cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. Further, the final rule concludes that the alternative SCF made by the EPA in the 2016 Rule was invalid and did not meet this statutory standard.

B. Rationale

1. Revision of the Source Category To Remove Transmission and Storage Segment

As noted above, the EPA is finalizing its proposal to remove the transmission and storage segment entirely from the source category and rescind the NSPS requirements applicable to sources within that segment. This final action is based on the EPA's determination that its 2012 and 2016 rulemakings that interpreted or expanded the source category to include sources in that segment were improper. The following discussion provides background on CAA section 111, the history of the Oil and Natural Gas Production source category, and the rationale for this final decision.

Under CAA section 111(b)(1)(A), the EPA must ''publish . . . a list of categories of stationary sources, emissions from which, in the judgment of the Administrator, cause[ ], or contribute[ ] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'' Further, CAA section 111(b)(1)(A) directs that ''from time to time thereafter'' the EPA ''shall revise'' this ''list'' of categories of stationary sources. Following the ''inclusion of a category of stationary sources in a list,'' the EPA then proposes and promulgates ''standards of performance for new sources within such category.'' CAA Section 111(b)(1)(B). Thereafter, the EPA ''shall . . . review and, if appropriate, revise such standards.'' *Id.*

CAA section 111(b)(1)(A) does not include any specific criteria for determining the reasonable scope of a given ''category'' of ''stationary sources'' beyond the requirement that the Administrator make a finding that, in his or her ''judgment,'' emissions from the ''category of sources . . . cause[ ], or contribute[ ]significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'' Accordingly, the EPA is afforded some measure of discretion in determining at the outset the scope of a source category.

In 1978, the EPA published ''Priorities for New Source Performance Standards Under the Clean Air Act Amendments of 1977.'' [12] The purpose of this document was to implement the requirements of CAA section 111(f) to develop and apply a methodology for identifying, establishing, and prioritizing the source categories that should be considered first for in-depth analysis prior to NSPS promulgation under CAA section 111. For purposes of the 1978 analysis, the EPA aggregated emissions from ''oil and gas production fields'' and ''natural gas processing'' as part of the ''Crude Oil and Natural Gas Production Plant'' source category. The EPA identified this aggregated source category as a major source of hydrocarbon (HC) and SO_2 emissions. When the EPA finalized the priority list in 1979, it revised the name of the source category as ''Crude Oil and Natural Gas Production.'' 49 FR 49222 (August 21, 1979).

In 1985, the EPA promulgated two rulemakings establishing NSPS for the Crude Oil and Natural Gas Production source category. These were 40 CFR part 60, subpart KKK—Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (50 FR 26124, June 23, 1985); and subpart LLL—Standards of Performance for SO_2 Emissions from Onshore Natural Gas Processing (50 FR 40160, October 1, 1985). When it first proposed 40 CFR part 60, subpart KKK, the EPA noted that the ''crude oil and natural gas production industry encompasses the operations of exploring for crude oil and natural gas products, removing them from beneath the earth's surface, and processing these products for distribution to petroleum refineries and gas pipelines.'' [13] The EPA repeated that description of the identified source category when it proposed 40 CFR part 60, subpart LLL, explaining that the ''crude oil and natural gas production industry encompasses not only processing of the natural gas (associated or not associated with crude oil) but operations of exploration, drilling, and subsequent removal of the gas from porous geologic formations beneath the earth's surface.'' [14]

In 2012, the EPA reviewed the VOC and SO_2 standards and at the same time

[12] Priorities for New Source Performance Standards Under the Clean Air Act Amendments of 1977. April 1978. EPA–450/3–78–019.

[13] 49 FR 2637 (January 20, 1984).

[14] 49 FR 2658 (January 20, 1984).

established new requirements for additional stationary sources of VOC emissions that had not been regulated in the 1985 rulemaking (*e.g.,* well completions, pneumatic controllers, storage vessels, and compressors)—''Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews—Final Rule'' (77 FR 49490, August 16, 2012). In the preamble of the 2011 proposal for the 2012 Rule, the EPA interpreted the 1979 listing as indicating that ''the currently listed Oil and Natural Gas source category covers all operations in this industry (*i.e.,* production, processing, transmission, storage and distribution).'' ''Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews—Proposed Rule,'' 76 FR 52738, 52745 (August 23, 2011). Further, the EPA stated that ''[t]o the extent there are oil and gas operations not covered by the currently listed Oil and Natural Gas source category. . . ., we hereby modify the category list to include all operations in the oil and natural gas sector.'' *Id.* The stated basis for that proposed decision was that ''[s]ection 111(b) of the CAA gives the EPA the broad authority and discretion to list and establish NSPS for a category that, in the Administrator's judgment, causes or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.'' *Id.* No additional discussion of this listing position was provided in the 2011 proposal.

In the 2012 final rulemaking, the EPA promulgated NSPS for emission sources in the production, processing, and transmission and storage segments, 77 FR 49492, and stated that ''[t]he listed Crude Oil and Natural Gas Production source category covers, at a minimum, those operations for which we are establishing standards in this final rule.'' *Id.* at 49496. In responding to comments, the EPA took the position that it was not actually revising the source category to include emission sources in the transmission and storage segment, but rather, was interpreting the 1979 listing to be ''broad,'' and interpreting the 1985 rulemaking as ''view[ing] this source category listing very broadly,'' *Id.* at 49514, so that, in the EPA's view, the source category was already sufficiently broad to include that segment.[15]

In 2016, the EPA promulgated additional NSPS (40 CFR part 60, subpart OOOOa) for the Crude Oil and Natural Gas Production source category (81 FR 35824, June 3, 2016). As the EPA did in the 2012 Rule, the EPA took the position that the 1979 listing was broad enough to encompass the transmission and storage segment and that the 1985 rulemakings confirmed that broad listing. 81 FR 35832 (''The scope of the 1978 Priority List is further demonstrated by the Agency's pronouncements during the NSPS rulemaking that followed the listing.''). The EPA stated that the inclusion of the transmission and storage segment into the original 1979 source category was warranted because equipment and operations at production, processing, transmission and storage facilities are a sequence of functions that are interrelated and necessary for getting the recovered gas ready for distribution. Nevertheless, the EPA recognized that the scope of the prior listing may have had some ambiguity. Accordingly, ''as an alternative,'' the EPA finalized a revision of the category to broaden it, so that ''[a]s revised, the listed oil and natural gas source category includes oil and natural gas production, processing, transmission, and storage'' and the EPA changed the source category name to be ''Crude Oil and Natural Gas source category.'' (81 FR 35840).

a. Scope of 1979 Listing Action

For this final rule, the EPA has reviewed the original 1979 listing of the Crude Oil and Natural Gas Production source category and the associated background materials and now finds that its 2012 and 2016 interpretation of the 1979 listing (*i.e.,* that the 1979 listing included natural gas transmission and storage) was erroneous. *See F.C.C.* v. *Fox Television Stations, Inc.,* 556 U.S. 502 (2009) (an agency may revise its policy, but must demonstrate that the new policy is permissible under the statute and is supported by good reasons, taking into account the record of the previous rule). The EPA received comments on the 2019 Proposal concerning this issue and the associated rationale. These comments are provided, along with the EPA's responses, in section VIII.A of this preamble and in Chapter 5 of the Response to Comments Document for this action. None of the comments received resulted in a change in the EPA's rationale and conclusions from proposal. The following explains our decision.[16]

While the EPA has listed source categories that are broad,[17] the silence of the 1979 listing as to the transmission and storage segment suggests that the segment was *not* considered for inclusion at the time of the listing. Principles of administrative law require that in order for something (in this case, the transmission and storage segment) to be subject to regulation, the EPA should provide for and explain such regulation clearly. Moreover, where the EPA has remained silent on any explanation for its choice of regulation, the Court has held, ''a rule without a stated reason is necessarily arbitrary and capricious.'' *Small Refiner Lead Phase-Down Task Force* v. *U.S. EPA,* 705 F.2d 506, 551 (1983). Accordingly, if the EPA had intended for the 1979 listing to include the transmission and storage segment, the Agency's failure to explain that decision would have rendered it arbitrary and capricious. It is reasonable to presume that the Agency did not act arbitrarily and capriciously, and, therefore, that its silence regarding the transmission and storage segment indicated that it did not intend to cover that segment in the 1979 listing.

Additionally, to the extent there was ambiguity in the original 1979 listing, the EPA made clear its interpretation in 1984, when the EPA proposed to set the first standards of performance for sources within the Crude Oil and Natural Gas Production source category (*i.e.,* 40 CFR part 60, subpart KKK). The views the Agency expressed concerning the scope of the source category are particularly relevant because this rulemaking was conducted shortly after the listing and because it established the initial NSPS. In this proposal, the EPA described the category as ''encompass[ing] the operations of exploring for crude oil and natural gas products, removing them from beneath the earth's surface and processing these products for distribution to petroleum refineries and gas pipelines,'' but this description made no reference to the subsequent activities of transmission

[15] In the 2012 Rule rulemaking, the EPA referred to the distribution segment of the oil and natural gas industry, which entails transporting natural gas to the end user. 76 FR 52738, 52745 (August 23, 2011) (proposed rule); 77 FR 49514, 77 FR 49493 (Table 2) (August 16, 2012) (final rule). However, in the 2016 Rule, the EPA clarified that the scope of the Oil and Natural Gas Production and Processing source category includes the transmission and storage segment, but not the distribution segment. In addition, the EPA has never treated any sources in the distribution segment as subject to the requirements of NSPS subpart OOOO or OOOOa.

[16] In 1979, the EPA named the source category ''Crude Oil and Natural Gas Production source category.'' In 2016, the EPA changed the source category name to be ''Crude Oil and Natural Gas source category.'' Because this final rule rescinds the 2016 expansion, the EPA is finalizing the source category's name back to how it read in 1979.

[17] The EPA also has listed narrow source categories, as noted in section VIII.A of this preamble.

and storage of crude oil and natural gas products.[18] This description is reasonably read to establish that sources in the transmission and storage segment were not included in the Crude Oil and Natural Gas Production source category as listed in 1979.

Similarly, in the same sentence, the EPA defined the scope of the source category as encompassing oil operations up to the point of distribution to petroleum refineries, which are a separate source category. In this manner, the EPA indicated that the Crude Oil and Natural Gas Production source category includes operations from well sites (exploration, drilling, and removal) and natural gas processing plants (processing). While gathering and boosting compressor stations were not specified, it is reasonable to conclude that they are also included because they are located between two covered sites, the well site and the processing plant. However, to reiterate, subsequent operations, such as transmission and storage, and distribution were not included.

In the 1984 proposal, the EPA added that ''there are several VOC emission points within this industry,'' which the Agency categorized as process, storage, and equipment leaks. 49 FR 2637. In the 2016 NSPS, the EPA used this description of the three sets of emission points as support for the proposition that the Agency previously intended the source category to include transmission and storage. Specifically, the EPA stated that ''these emissions can be found throughout the various segments of the natural gas industry.'' 81 FR 35832. The EPA has closely reexamined the language of the 1984 proposal and found that, importantly, in the descriptions of these three categories of emission points, it is clear that the EPA considered these emission sources only in the production and processing segments. Therefore, while it is true that there are process, storage, and equipment leak emissions throughout the oil and natural gas sector, the discussion in the 1984 proposal entirely focused on these sources in the production and processing segments, and made no reference to the transmission and storage segment. The following discusses each of those three sets of sources in more detail.

With respect to process sources, the 1984 proposal states that they include well systems, field oil and natural gas separators, wash tanks, settling tanks, and other sources. The proposal further states that process sources remove the crude oil and natural gas from beneath the earth and separate gas and water from the crude oil. 49 FR 2637. This description of the process emission point clearly refers to the production and processing segments and is silent concerning the transmission and storage segment.

For the second set of emission points, storage sources, the 1984 proposal states that they include field storage tanks, condensate tanks, and cleaned oil tanks. These tanks emit VOC, the pollutant addressed in the 1984 proposal. These three types of tanks are common in the production segment and/or at natural gas processing plants; as gas is separated from oil, condensate and impurities, these tanks are used to store oil and condensate, which contain VOC. As such, these tanks are storage sources of VOC emissions. In contrast, storage at natural gas transmission and storage facilities refers to storage of gas, mostly in the underground storage reservoirs. Because the gas stored in underground reservoirs is pipeline quality natural gas (95–98 percent methane), these storage facilities in the transmission and storage segment are not emission points of concern for VOC, or any of the other pollutants identified in the 1984 proposal as being emitted from the oil and gas industry. Additionally, the cited discussion in the proposal made no explicit mention of transmission and storage facilities. Furthermore, there are no oil tanks or field tanks in the transmission and storage segment. As for condensate tanks, these tanks are rarely used at the transmission and storage segment because, as mentioned above, the gas that enters this segment is pipeline quality gas and, therefore, contains little to no condensate. Given the reference in the 1984 proposal to two other types of tanks that are also commonly found in the production and processing segments but absent in the transmission and storage segment, it is reasonable to conclude that the proposal's reference to condensate tanks was also intended to be limited to the production and processing segments. For all of these reasons, the better reading of the 1984 proposal discussion on storage tanks is that it was limited only to such tanks located in the production and processing segments, and was not intended to encompass tanks located in the transmission and storage segment.

Similarly, the 1984 proposal describes the equipment leak emission points as referring to the production and processing segments of the Oil and Natural Gas source category and is silent concerning the transmission and storage segment. The proposal explains that equipment leaks of VOC can occur from ''pumps, valves, compressors, open ended lines or valves, and pressure relief devices used in onshore crude oil and natural gas *production* (emphasis added).'' *Id.* Additionally, the preamble acknowledges that there is equipment used in crude oil and natural gas production and distinguishes this from equipment used in natural gas processing. The EPA examined the use of leak detection and repair work practices for equipment leaks of VOC at natural gas processing plants and explained in the preamble that the costs and emission reduction numbers for the application of these techniques at the ''widely dispersed'' crude oil and natural gas production sites were not known at that time. In this manner, the EPA clearly acknowledged the existence of equipment leaks at both the production and processing segments. In contrast, although equipment leaks do occur in the transmission and storage segment, the proposal makes no mention of leaks in that segment. Thus, each of the three sets of emission sources under consideration in the 1984 proposal clearly is in the production and processing segments, and the proposal is silent about the transmission and storage segment.

Another indicator that the 1984 proposal did not consider transmission and storage lies in the fact that this proposal addressed VOC emissions. As discussed below, the composition of the natural gas in the transmission and storage segment is significantly different than in the production and processing segments, as the transmission and storage segment contains considerably less VOC, and as a result, sources in that segment emit low amounts of VOC. In many areas of the country, particularly those that produce liquids and associated gas, the production and processing segments have high VOC-content gases, but the transmission and storage operations have substantially lower VOC-content gases. In light of the fact that the 1979 listing concerned VOC content (termed, at that time, HC), this difference between the segments further supports the view that the EPA would not have included transmission and storage in the 1979 listing. This corroborates that the proposal did not consider emission sources related to the transmission and storage of natural gas. Thus, although process, storage, and equipment leaks are emission sources that are present across the industry, including in natural gas transmission and storage, additional examination of the 1984 proposal makes it clear that it considered process, storage, and equipment leaks in only the production

[18] 49 FR 2637; *see* also 49 FR 2658.

and processing segments of the oil and natural gas industry.

For the reasons noted above, the EPA concludes that its statements in the 2012 and 2016 Rules that the 1979 listing of the Crude Oil and Natural Gas Production source category included the transmission and storage segment, and that the 1984 proposal confirmed that action, were in error. Rather, the record of the 1979 action indicates that the source category did not include that segment, and the Agency confirmed that narrower scope of the source category in its 1984 proposal to promulgate the initial set of NSPS.

b. Operations in the Transmission and Storage Segment Are Distinctly Different

As noted above, the 2016 Rule stated that the ''1979 listing of [the Crude Oil and Natural Gas Production] source category provides sufficient authority for this action'' to promulgate NSPS for sources in the transmission and storage segment, but then added that, ''to the extent that there is ambiguity in the prior listing, the EPA hereby . . ., as an alternative, . . . revis[es] . . . the category listing to broadly include the oil and natural gas industry.'' [19] ''As revised,'' the 2016 Rule continued, ''the listed oil and natural gas category includes oil and natural gas production, processing, transmission, and storage.'' [20] As discussed in the following paragraphs, the EPA is concluding, in line with the 2019 Proposal, that this alternative approach of revising the scope of the source category to include sources within the transmission and storage segment was also in error and should be rejected.

The EPA received comments on this issue, including the associated rationale. These comments are provided, along with the EPA's responses, in section VIII.A of this preamble and in Chapter 5 of the Response to Comments Document for this action. None of the comments received resulted in a change in the EPA's rationale and conclusions from proposal.

While CAA section 111(b)(1)(A) and (B) respectively authorize the EPA to ''revise,'' where warranted, both the ''list of source categories'' and ''standards of performance'' that the EPA has promulgated, nothing in CAA section 111 expressly authorizes or directs the EPA to ''revise'' a particular ''source category'' by altering its scope once the EPA has listed that source category. However, the EPA has inherent authority to reconsider, repeal, or revise past decisions, to the extent permitted by law, so long as the Agency provides a reasoned explanation. *See Sang Seup Shin* v. *INS,* 750 F.2d 122, 130 (D.C. Cir. 1984) (in absence of specific statutory prohibition, an agency has inherent authority to reconsider its decisions). The CAA complements the EPA's inherent authority to reconsider prior rulemakings by providing the Agency with broad authority to prescribe regulations as necessary, under CAA section 301(a). Even so, the authority to revise the scope of a source category must be exercised within reasonable boundaries and cannot be employed in a way that results in an unreasonable expansion of an existing source category. For the reasons discussed below, the EPA is not authorized to expand the scope of a listed source category to cover a new set of sources that are not sufficiently related to the sources in the pre-existing category, so that they constitute a separate source category for which the EPA would be required to make a new SCF and endangerment finding under CAA section 111(b)(1)(A) as a prerequisite to regulating them. Otherwise, expanding the source category by including new sources could be used to circumvent that requirement.

The EPA proposed to determine that the operations in the transmission and storage segment are not sufficiently related to the production and processing segments that were included in the original source category listing. In the 2016 Rule, the EPA held that the source category should be expanded because equipment and operations at production, processing, and transmission and storage facilities are a sequence of functions that are interrelated and necessary for getting the gas ready for distribution. In the 2019 Proposal, the EPA proposed to determine that this 2016 finding was unreasonable and proposed that transmission and storage operations are distinct from production and processing operations because (among other things) the natural gas that enters the transmission and storage segment has different composition and characteristics than the natural gas that enters the production and processing segments. 84 FR 50257.

While CAA section 111 does not define the term ''source category'' or use the phrase ''sufficiently related,'' this concept is inherent in the everyday definition of ''category.'' Merriam-Webster defines ''category'' as ''any of several fundamental and distinct classes to which entities or concepts belong,'' [21] and it defines a ''class[ ]'' as ''a group, set, or kind sharing *common* attributes'' (emphasis added).[22] Commenters point out what they view as commonalities among both the production and processing and transmission and storage segments. These comments implicitly acknowledge that, to be a ''category,'' the associated sources must have something in common, that is, they must be sufficiently related to merit being associated as part of the same category. The EPA may not have articulated the ''sufficiently related'' test in those terms in prior actions, but, again, that test is implicit in the everyday meaning of ''category.'' That is, for items to be part of a ''category'' they must have key things in common, and if they have substantial differences, they should not be included in the same category. Without this test, it would be difficult to develop a basis for ascertaining the scope of a category. For this reason, the EPA has in effect regularly applied this test. For example, fugitive VOC emissions from leaking equipment occurs across several industries, including the synthetic organic chemical manufacturing industry and the petroleum refinery industry, but there are substantial enough differences between those industries to warrant putting them in separate source categories, notwithstanding the fact that some of their equipment is similar. For another example, when proposing to expand the original Asphalt Roofing Plants source category listing to include other locations where the preparation of asphalt for roofing may take place, such as oil refineries, the EPA stated that, ''the emissions, processes, and applicable controls for blowing stills and asphalt storage tanks at oil refineries and asphalt processing plants are the same as those at asphalt roofing plants. It is therefore reasonable to treat the asphalt processing and roofing manufacture industry as a single category of sources for the purposes of establishing standards of performance.'' 45 FR 76428. By finding commonality in emissions, processes, and applicable controls for these otherwise different sources, the EPA determined that they should be part of the same source category.

[19] 81 FR 35833.

[20] *Id.* (footnote omitted).

[21] ''Category.'' *Merriam-Webster.com Dictionary,* Merriam-Webster, *https://www.merriam-webster.com/dictionary/category.* Accessed 21 May, 2020.

[22] ''Class.'' *Merriam-Webster.com Dictionary,* Merriam-Webster, *https://www.merriam-webster.com/dictionary/class.* Accessed 19 May, 2020.

In contrast, based on a reexamination of the processes and operations found in the transmission and storage segment, the EPA is finalizing its determination that transmission and storage sources are, in fact, sufficiently distinct from production and processing sources so that the Agency erred when, in the 2016 Rule, it revised the source category to include sources in the transmission and storage segment. Specifically, the EPA now concludes that the processes and operations found in the transmission and storage segment are distinct from those found in the production and processing segments because the purposes of the operations are different and because the natural gas that enters the transmission and storage segment has different composition and characteristics than the natural gas that enters the production and processing segments.

The primary operations of the production and processing segments are exploring crude oil and natural gas products beneath the earth's surface, drilling wells to extract these products, and processing the crude oil and field gas for distribution to petroleum refineries and natural gas pipelines. As stated previously in this section, the EPA described this source category's operations similarly when proposing 40 CFR part 60, subpart KKK, in 1984. 49 FR 2637. The primary purpose of these segments is to obtain the product and then, in the case of natural gas, to remove impurities from the extracted product. At a well site (production segment), crude oil and natural gas are extracted from the ground. Some processing can take place at the well site, such as the physical separation of gas, production fluids, and condensate. Of these products, crude oil and natural gas undergo successive, separate processing. Crude oil is separated from water and other impurities and transported to a refinery via truck, railcar, or pipeline. The EPA treats oil refineries as a separate source category, accordingly, for present purposes, the oil component of the production segment ends at the point of custody transfer at the refinery.[23] The separated gas (''field gas'') is then sent through gathering pipelines to the natural gas processing plant (processing segment).[24] At the processing plant, the field gas is converted to sales gas or pipeline quality gas. This involves several steps, including the extraction of natural gas liquids (*e.g.,* a mixture of propane, butane, pentane) from the field gas, the fractionation of these natural gas liquids into individual products (*e.g.,* liquid propane), or both extraction and fractionation. The final natural gas that exits in the processing plant is sales gas, which is predominantly methane. In these segments, the field gas has physically changed such that it is a usable product.

The operations of the production and processing segments differ from the transmission and storage segment operations because in the latter, the natural gas does not undergo changes in composition, except for some limited removal of liquids that condensed during the temperature and pressure changes as the natural gas moves through the pipeline. Therefore, the natural gas that enters the transmission and storage segment has approximately the same composition and characteristics as the natural gas that leaves the segment for distribution. The segment includes natural gas transmission compressor stations, whose primary operation is to move the natural gas through transmission pipelines by increasing the pressure. Dehydration, which can also occur at compressor stations, is a secondary operation used when the natural gas has collected water during transmission. As discussed in the 2019 Proposal, this differs from the significant natural gas processing in the production and processing segments, which involves a series of processing steps dependent on factors such as the type of natural gas (*e.g.,* wet or dry gas), market conditions, and company contract specifications. 84 FR 50258. At storage facilities, natural gas is injected into underground storage for use during peak seasons.[25] When demand increases, the natural gas is extracted from the underground storage, dehydrated to remove water that has entered during storage, compressed, and moved through distribution pipelines.

Analysis of the composition of natural gas on a nationwide basis in the various industry segments confirms the different character of the segments. In 2011 and subsequently in 2018, the EPA conducted an analysis of the composition, expressed in percent volume, of natural gas based on the methane, VOC, and HAP content across the various industry segments.[26] [27] For example, in 2011, the nationwide composition for the production segment, which included wells and unprocessed natural gas, consisted of approximately 83-percent methane, 4-percent VOC, and less than 1-percent HAP. In contrast, the transmission segment, which included pipeline and sales gas (*i.e.,* post processing), consisted of approximately 93-percent methane, 1-percent VOC, and less than 0.01-percent HAP. In 2018, the EPA reviewed new studies available and found similar results for the production segment. The nationwide composition for the production segment consisted of approximately 88-percent methane and 4-percent VOC. At proposal in 2019, we concluded that these differences in the gas composition demonstrated that the emissions profile is different following gas processing. After proposal in 2019, the EPA conducted a comprehensive analysis of data reported directly to the Greenhouse Gas Reporting Program (GHGRP) for reporting years 2015 through 2018 to determine whether the composition of natural gas, in terms of methane content, is statistically different between industry segments.[28] In order to determine whether the methane content is statistically different between industry segments, the analysis evaluated the average methane concentration for each segment based on the 2015–2018 GHGRP reporting data.[29]

[23] *See* 40 CFR part 60, subparts J and Ja, and 40 CFR part 63, subparts CC and UUU.

[24] Natural gas with high methane content is referred to as ''dry gas,'' while natural gas with significant amounts of ethane, propane, or butane is referred to as ''wet gas.'' The degree and location of processing is dependent on various factors, one being the type of natural gas (*e.g.,* wet or dry gas). In some ''dry gas'' areas, the field gas, with naturally higher methane content, may go from the well site directly into the transmission and storage segment without processing in a gas processing plant. The fact that some produced natural gas does not require processing and can be transported directly into the transmission and storage segment does not diminish the differences between the production and processing segments, on the one hand, and the transmission and storage segment, on the other. Rather, it just means that some gas does not need to go through the processing segment.

[25] Storage can also take place in above ground storage vessels; however, it is the EPA's understanding that these are more commonly used after the local distribution company custody transfer (LDC) or commonly ''city gate,'' which has not been included in the source category at any point. The term ''local distribution company custody transfer,'' defined in 40 CFR part 60, subpart OOOOa, means a metering station where the LDC receives a natural gas supply from an upstream supplier, which may be an interstate transmission pipeline or a local natural gas producer, for delivery to customers through the LDC's intrastate transmission or distribution lines. This final rule adds the definition of LDC to 40 CFR part 60, subpart OOOO.

[26] Memorandum to Bruce Moore, U.S. EPA from Heather Brown, EC/R. ''Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking.'' July 2011. Docket ID Item No. EPA–HQ–OAR–2010–0505–0084.

[27] Memorandum to U.S. EPA from Eastern Research Group. ''Natural Gas Composition.'' November 13, 2018. Docket ID No. EPA–HQ–OAR–2017–0757.

[28] Memorandum. Analysis of Average Methane Concentrations in the Oil and Gas Industry Using Data Reported Under 40 CFR part 98 Subpart W. April 9, 2020. Included in Docket ID No. EPA–HQ–OAR–2017–0757.

[29] See Table 17 of Memorandum. Analysis of Average Methane Concentrations in the Oil and Gas

For oil and natural gas production, the analysis estimated an average methane content of 69 and 83 percent, respectively. For gathering and boosting,[30] the analysis estimated an average methane content of 81 percent, and for gas processing, an average methane content of 78 percent. The analysis estimated an average methane content of 94 percent for transmission and 95 percent for storage. The analysis performed additional calculations and statistical assessments to generate the final statistical analysis and subsequent conclusions.

This analysis found that there is a substantial difference in methane concentrations between (1) gas production, gathering and boosting, and gas processing and (2) transmission and storage. This agrees with earlier data and analyses and the conclusion that there is a difference in the emissions profile between the production and processing segments and the transmission and storage segment.

It should be noted that in regulating HAP from the oil and natural gas industry, the EPA created separate source categories for the production and processing segments, regulated under subpart HH of 40 CFR part 63; and the transmission and storage segment, regulated under subpart HHH of 40 CFR part 63. *See* 64 FR 32610, June 17, 1999. In addition, the EPA has made a similar distinction between other source categories with segments that handle the production and processing of a material and subsequent transport of the product. As the EPA noted in the 2019 Proposal, 84 FR 50258, one example is the petroleum industry, in which production facilities,[31] refineries,[32] and bulk gasoline terminals [33] all have operational differences, and the EPA placed them in three different source categories. Those operational differences are similar to the operational differences between the production and processing segments and the transmission and storage segment at issue in this final rule.

It should be noted that in the 2016 Rule, the EPA justified including the transmission and storage segment in the Crude Oil and Natural Gas source category partly because some similar equipment (*e.g.,* storage vessels, pneumatic pumps, compressors) is used across the industry. While that is true, the differences in the operations of, and the differences in emission profiles of, the different segments support excluding the transmission and storage segment from the source category. A review of 2016 Rule compliance reports from sources in the EPA Regions (3, 6, 8, 9, and 10) with the greatest oil and natural gas activity indicates that there were no storage vessels emitting more than 6 tons per year (tpy) VOC reported in the transmission and storage segment.[34] Therefore, even though there are storage vessels in the transmission and storage segment, the liquids (condensate) stored and the throughputs are such that the VOC emissions are significantly different. This supports our understanding that VOC emissions are lower in the transmission and storage segment and that any gas processing that occurs in the transmission and storage segment generally is limited to removing liquids that condensed during the temperature and pressure changes as the gas moves through the pipeline. In addition, there are types of equipment present in the production segment (*e.g.,* oil tanks, three-phase separators) and processes at natural gas processing plants (*e.g.,* natural gas liquid extraction, natural gas liquids fractionation, sulfur and CO_2 removal) that are either not present or uncommon at natural gas transmission and storage facilities.

In summary, there are distinct differences in the operations between oil and natural gas production and natural gas processing, on the one hand, and natural gas transmission and storage, on the other. The primary operations of the production and processing segments are exploring crude oil and natural gas products beneath the earth's surface, drilling wells that are used to extract these products, and processing the crude oil and field gas for distribution to petroleum refineries and natural gas pipelines. The operations of the production and processing segments differ from the transmission and storage segment operations because in the latter, the natural gas does not undergo changes in composition, except for some limited removal of liquids that condensed during the temperature and pressure changes as the natural gas moves through the pipeline. Second, there are statistically significant differences in the emissions profiles between the production and processing segments and the transmission and storage segment. Third, there are equipment types and processes present in the oil and natural gas production and processing segments that are not present, or not common, at natural gas transmission and storage facilities. The EPA is, therefore, finalizing a revised source category which excludes transmission and storage sources from the Crude Oil and Natural Gas Production source category.

As the EPA stated in the 2019 Proposal, the 2016 Rule's expansion of the source category to include sources in the transmission and storage segment did, in fact, exceed the reasonable boundaries of the EPA's authority to revise source categories. 81 FR 35833. The 2016 Rule also erred in purporting to list, under CAA section 111(b)(1)(A), the source category, as expanded to include transmission and storage sources, for regulation on grounds that it causes or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. *Id.* Rather, in order to include the transmission and storage segment on the CAA section 111(b)(1)(A) list for regulation, the EPA is required to treat it as a separate source category and determine that in and of itself it causes or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. The EPA did not make that determination in the course of promulgating the 2016 Rule. 81 FR 35833.

2. Rescission of the NSPS for Sources in Transmission and Storage Segment

A prerequisite for the EPA to promulgate an NSPS applicable to new sources is that the new sources must be in a source category that the EPA has listed under CAA section 111(b)(1). As stated in section V.B.1 of this preamble, the EPA is removing the transmission and storage segment from the source category. Accordingly, the promulgation of NSPS for transmission and storage sources was contrary to law, and as a result, the EPA is also rescinding the standards for both VOC and GHG emissions in the 2012 Rule and the 2016 Rule for emission sources located in the transmission and storage segment. Specifically, we are rescinding the requirements for compressor affected facilities, pneumatic controller affected facilities, storage vessel affected facilities, and the affected facility that is the collection of fugitive emissions components located at a compressor

Industry Using Data Reported Under 40 CFR part 98 Subpart W. April 9, 2020. Included in Docket ID No. EPA–HQ–OAR–2017–0757.

[30] Gathering and boosting is located between well sites and natural gas processing plants in the Oil and Natural Gas Production source category.

[31] U.S. EPA. ''Revised Prioritized List of Source Categories for NSPS Promulgation.'' March 1979. EPA–450/3–79–023.

[32] 38 FR 15406 (May 4, 1973); 39 FR 9315 (March 8, 1974).

[33] 45 FR 83126 (December 12, 1980); 48 FR 37578 (August 18, 1983).

[34] These reports have since been made available for public viewing at *https://www.foiaonline.gov/foiaonline/action/public/submissionDetails?trackingNumber=EPA-HQ-2018-001886&type=request.*

station, where these affected facilities are located downstream of the natural gas processing plant or, if no gas processing plant is present, after the point of custody transfer. To further clarify that the requirements do not apply to these units, we are adding a definition of ''natural gas transmission and storage segment'' which describes the boundaries of the segment. The definitions of ''natural gas processing plant'' and ''custody transfer'' are unchanged.

3. Status of Sources in Transmission and Storage Segment

The result of this final rule, as it relates to the transmission and storage segment, is that these sources are not part of a listed source category under CAA section 111(b)(1)(A) and, thus, are not subject to regulation under CAA section 111(b) (for new sources) or CAA section 111(d) (for existing sources that emit certain air pollutants). This is consistent with the treatment of emissions sources in other industries that the EPA has not listed as a source category under CAA section 111(b)(1)(A). In the future, the EPA may evaluate these emissions more closely and determine whether the transmission and storage segment should be listed as a source category under CAA section 111(b)(1)(A).[35]

4. Rescission of the Limitations on Methane for Sources in the Production and Processing Segments

As the second of the two main actions of this final rule, the EPA is also rescinding the limits on methane emissions for the NSPS applicable to sources in the production and processing segments. The EPA finds that, in the specific circumstances presented here, the EPA erred in establishing the methane NSPS because those requirements are redundant with the NSPS for VOC, establish no additional health protections, and are, thus, unnecessary. Even if the 2016 Rule's establishment of limits on methane emissions is not considered to be, the EPA would exercise its discretion to rescind them on those same grounds. Rescinding the applicability of the 2016 Rule requirements to methane emissions, while maintaining the applicability of those requirements to VOC emissions, will not affect the amount of methane reductions that those requirements will achieve, because the controls that reduce VOC emissions simultaneously reduce methane emissions.

Comments were received on both sides of this proposed decision and the rescission of the requirements for methane and the associated rationale. We respond to some of the major comments in the discussion immediately below and in section VIII.B of this preamble, and to the rest in Chapter 6 of the Response to Comments Document. None of the comments received have led the EPA to materially change its views from the proposal, and as a result, the EPA is rescinding the methane NSPS. The following is the rationale for this decision.

In the 2016 Rule, the EPA justified regulating methane for the following reasons: At the outset, the EPA noted that methane is a GHG, that the EPA has determined that GHG pollution endangers public health and welfare, and that the Crude Oil and Natural Gas Production source category is one of the nation's largest industrial emitters of methane. 81 FR 35825. The EPA also noted that ''[r]educing methane emissions . . . will contribute to efforts to reduce global background ozone concentrations that contribute to the incidence of ozone-related health effects.'' *Id.* at 35837. The EPA went on to determine that the amounts of emissions of methane from the source category were sufficiently large that it was rational to regulate them under CAA section 111, and that, in the alternative, assuming that it was necessary to determine that those emissions cause or contribute significantly to dangerous GHG air pollution, the EPA made that determination as well. *Id.* at 35841–43.

The EPA recognized that the controls that facilities use to meet the VOC NSPS ''also reduce methane emissions incidentally.'' *Id.* at 35841. However, the Agency added that ''in light of the current and projected future GHG emissions from the oil and natural gas industry, reducing GHG emissions from this source category should not be treated simply as an incidental benefit to VOC reduction; rather, it is something that should be directly addressed through GHG standards in the form of limits on methane emissions under CAA section 111(b) based on direct evaluation of the extent and impact of GHG emissions from this source category and the emission reductions that can be achieved through the best system for their reduction.'' *Id.* The Agency added, ''The standards detailed in this final action will achieve meaningful GHG reductions and will be an important step towards mitigating the impact of GHG emissions on climate change.'' *Id.*

The EPA further justified methane requirements by noting that ''there are cost-effective controls that can simultaneously reduce both methane and VOC emissions from these equipment across the industry, and in many instances, they are cost effective even if all the costs are attributed to methane reduction.'' *Id.* In addition, the EPA noted that ''establishing both GHG and VOC standards for equipment across the industry will also promote consistency by providing the same regulatory regime for this equipment throughout the oil and natural gas source category for both VOC and GHG, thereby facilitating implementation and enforcement.'' *Id.* The Agency added that, ''[w]hile this final rule will result in additional reductions [of GHG] . . ., the EPA often revises standards even where the revision will not lead to any additional reductions of a pollutant because another standard regulates a different pollutant using the same control equipment. For example, in 2014, the EPA revised the Kraft Pulp Mill NSPS in 40 CFR part 60 subpart BB published at 70 FR 18952 (April 4, 2014) to align the NSPS standards with the National Emission Standards for Hazardous Air Pollutants (NESHAP) standards for those sources in 40 CFR part 63, subpart S. Although no previously unregulated sources were added to the Kraft Pulp Mill NSPS, several emission limits were adjusted downward. The revised NSPS did not achieve additional reductions beyond those achieved by the NESHAP, but aligning the NSPS with the NESHAP eased the compliance burden for the sources.'' *Id.* n.60.

In *F.C.C.* v. *Fox Television Stations, Inc.,* 556 U.S. 502 (2009), the U.S. Supreme Court described the type of reasoning an agency must provide to justify changing a rule it has previously adopted:

> We find no basis in the Administrative Procedure Act or in our opinions for a requirement that all agency change be subjected to more searching review. The Act mentions no such heightened standard. And our opinion in *Motor Vehicle Mfrs. Assn. of United States, Inc.* v. *State Farm Mut. Automobile Ins. Co.,* 463 U.S. 29 (1983)

[35] Methane emissions from the transmission and storage segment are 34 MMT CO_2 Eq. (1,355 kt methane) per the Inventory of United States Greenhouse Gas Emissions and Sinks: 1990–2018 (published April 13, 2020), which amounts to 5 percent of United States methane emissions and 0.6 percent of total U.S. GHG emissions on a CO_2 equivalent basis (using a GWP of 25 for methane). With respect to VOC emissions, the transmission and storage segment emitted 14 kt in 2017, which amounts to just 5.8 percent of national VOC emissions from that year. With respect to SO_2 emissions, there were 1 kt emitted from the transmission and storage segment in 2017, or just 1.8 percent of national SO_2 emissions. For HAP emissions, the transmission and storage segment emitted 1,143 tons in 2014, or just 0.01 percent of national HAP emissions for that year.

neither held nor implied that every agency action representing a policy change must be justified by reasons more substantial than those required to adopt a policy in the first instance. . . . The statute makes no distinction, however, between initial agency action and subsequent agency action undoing or revising that action.

To be sure, the requirement that an agency provide reasoned explanation for its action would ordinarily demand that it display awareness that it *is* changing position. . . . And of course the agency must show that there are good reasons for the new policy. But it need not demonstrate to a court's satisfaction that the reasons for the new policy are *better* than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better, which the conscious change of course adequately indicates. This means that the agency need not always provide a more detailed justification than what would suffice for a new policy created on a blank slate. Sometimes it must—when, for example, its new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account. *Smiley* v. *Citibank (South Dakota), N. A.,* 517 U.S. 735, 742, 116 S.Ct. 1730, 135 L.Ed.2d 25 (1996). It would be arbitrary or capricious to ignore such matters. In such cases it is not that further justification is demanded by the mere fact of policy change; but that a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy.

Id. at 514–16.

In the 2019 Proposal, the EPA acknowledged that in the 2016 Rule, it decided to add methane requirements even though it was aware that the VOC requirements would, by themselves, achieve the same reductions in methane. 84 FR 50259–60 and n.64 (citing 81 FR 35841). However, in that proposal, the EPA nevertheless stated that upon further review, it was proposing that it erred in 2016 by including methane requirements and explained that those requirements were redundant to the VOC requirements. *Id.* The EPA is finalizing this position for several reasons, which meet the requirements of *Fox Television* for reversing the 2016 Rule and rescinding the methane requirements.

In the 2016 Rule, the EPA justified regulating methane on grounds that methane emissions from this source category are great enough to provide a rational basis for regulation in light of the dangers of GHG air pollution and, in fact, if it were necessary, the Agency would determine that those emissions contribute significantly to GHG air pollution. However, in the present action, the EPA is determining that its rational basis finding and alternative SCF in the 2016 Rule were invalid because they included emissions from the transmission and storage segment, as discussed in section VI of this preamble. Accordingly, this basis [36] in the 2016 Rule for regulating methane is invalid.

Considering only the production and processing segments, the 2016 rational basis determination was incorrect because the methane NSPS was redundant on the grounds that it does not achieve any additional methane reductions beyond what sources achieve by implementing the VOC NSPS.[37] The EPA explained its basis for this view at length in the 2019 Proposal, noting that ''for each emission source in the source category subject to the NSPS, the requirements overlap completely.'' 84 FR 50259. The EPA explained that each emission source in the source category emits methane and VOC as co-pollutants through the same emission points and processes. The requirements of the NSPS, including the emission limits, required controls or changes in operations, monitoring, recordkeeping, reporting, and all other requirements, apply to each emission source's emission points and processes and, therefore, to each emission source's methane and VOC emissions, in precisely the same way. The capture and control devices used to meet the NSPS requirements are the same for these co-pollutants and are not selective with respect to either VOC or methane emissions. *Id.* In the proposal, the EPA gave several examples of how the VOC and methane requirements are duplicative of each other. Some examples include the requirements for well affected facilities, pneumatic controllers, pneumatic pumps, and compressors. For each of these emission points, the applicability requirements in NSPS subpart OOOOa are entirely ''pollutant-blind.'' That is, the requirement to control is based on applicability criteria that are not specific to VOC. For example, a pneumatic controller affected facility is a controller operating at a natural gas bleed rate of greater than 6 standard cubic feet per hour (scfh). The ''natural gas'' bleed rate is based on total gas and does not consider the amount of VOC in the gas. In fact, the VOC content could be zero. Similarly, pneumatic pumps are affected facilities if they are ''natural gas driven.'' All reciprocating and wet-sealed compressors, except those at well sites, are affected facilities. Rescission of the methane standards will have no impact on the number of affected facilities that will be subject to the control requirements in NSPS subpart OOOOa. Further, for well completions, pneumatic controllers, reciprocating compressors, and pneumatic pumps at natural gas processing plants, the control requirements are either equipment standards or work practices that do not distinguish between VOC and methane. For pneumatic pumps, the requirement is a 95-percent reduction in ''natural gas emissions.'' Finally, for wet-sealed centrifugal compressors, the requirement is the only one that specifically mentions VOC or methane, as it requires a 95-percent reduction in VOC and methane. However, removal of ''methane'' will not result in any change in methane reduction as the test method required to demonstrate this level of reduction (EPA Method 25A) measures the reduction of total organic carbon, which includes methane.

Thus, after the rescission of the methane standards, there will be no change in the number of affected facilities subject to the rule. There will also be no impact in the methane emission reductions achieved from those sources. While commenters recognized this fact, some raised concerns that in the future, advances in leak measurement technology may result in situations where VOC and methane controls are not redundant. The EPA points out that any future request for an alternative means of emissions limitation must include a demonstration that the alternative identifies emissions for repair that are at least equivalent to the visible emissions observed (and repaired) using optical gas imaging (OGI) with the current levels of sensitivity to methane, especially where the technology speciates emissions. Section VIII.B of this preamble, as well as Chapter 6 of the Response to Comments Document, includes comments and responses on this topic. Because methane reductions occur anyway as a result of the same controls required under the VOC requirements, the benefits of the methane reductions in protecting public health or welfare do not justify regulation of methane under CAA section 111. By the same token, the fact that the controls are cost effective—even, in many cases, when all of the costs are assigned to the methane requirements—does not justify those requirements. Again, the controls, imposed to reduce VOC, would result in the same amount of methane reductions, even without the methane requirements.

Nor can the methane requirements be justified on grounds that their overlap with VOC requirements is a means to

[36] 81 FR 35833.

[37] The same is true for methane reductions that reduce global ozone levels.

promote consistency by providing the same regulatory regime for this equipment throughout the Oil and Natural Gas source category for both VOC and methane, thereby facilitating implementation and enforcement. Although, as noted above, the EPA regulates the same sources/same pollutants at kraft mills under two differing rules, the requirements were established under two different CAA regulatory programs (*i.e.,* under CAA sections 111 and 112) (two different regulatory regimes). The pollutants regulated under CAA section 111(b) for new, modified, or reconstructed emission units at kraft pulp mills are filterable PM and total reduced sulfur compounds. Opacity is regulated to ensure proper operation and maintenance of the electrostatic precipitator used to control PM emissions. Particulate matter emissions and opacity are also regulated under a separate Federal standard, the subpart MM NESHAP for chemical recovery combustion sources at kraft, soda, sulfite, and stand-alone semichemical pulp mills (40 CFR part 63).

It is rational for the EPA to determine that requirements that are redundant to other requirements are not necessary because they do not result in emission reductions beyond what would otherwise occur. As the EPA noted in the 2019 Proposal, the rulemaking to promulgate NSPS for lime manufacturing plants provides another example of the Agency determining not to promulgate a NSPS for an air pollutant, SO_2, on grounds that the emissions were adequately controlled by emissions controls required under a NSPS for another air pollutant, PM. Standards of Performance for New Stationary Sources Lime Manufacturing Plants, 42 FR 22506 (May 3, 1977). Although in that rulemaking, the EPA did not explicitly state that SO_2 controls would have been redundant and, thus, were unnecessary, the Agency's reasoning was fully consistent with that characterization. Specifically, the EPA noted that the controls it was requiring for PM (a baghouse or an electrostatic precipitator) would achieve 85- to 90-percent reductions in SO_2, and that although the EPA could impose further controls to achieve another 7 percent reduction in SO_2, based on the use of a scrubber, the cost would be too high and the environmental benefits too little for that approach to be appropriate. *Id.* at 22507. Accordingly, the EPA prescribed standards for PM but not for SO_2. *Id.* at 22509 (40 CFR 60.342). That is, it appears that the EPA could have promulgated standards for SO_2 that required the same 85- to 90-percent level of control achieved through compliance with the PM standards (and not the additional 7 percent that would have necessitated installation of a scrubber), but the Agency declined to do so. Even though the EPA did not explicitly describe the potential SO_2 NSPS as redundant and, therefore, unnecessary, the fact that it did not promulgate any standards for SO_2 coupled with its explanation that PM controls reduced SO_2 by 85 to 90 percent make clear that the rulemaking serves as a precedent for the present rulemaking and the Agency's present position that the methane NSPS is redundant to the VOC NSPS. By the same token, in the Lime Manufacturing Plants rule, the EPA declined to promulgate NSPS for (1) nitrogen oxides (NO_X) because they are emitted in low concentrations or (2) CO because, among other things, regulation would produce little environmental benefit. *Id.* at 22507. These rationales for not adopting controls for those air pollutants are similar to the redundancy rationale—the essential point in all cases is that any controls would not result in meaningful emission reductions.

In a more recent rulemaking, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the EPA also declined to promulgate requirements that it considered to be redundant, and the Court upheld that action. Under 42 U.S.C. 9608(b)(1), the EPA is required to ''promulgate requirements . . . that classes of facilities establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances.'' In 2018, the EPA took an action in which it declined to issue financial responsibility regulations for the hardrock mining industry. Financial Responsibility Requirements Under CERCLA Section 108(b) for Classes of Facilities in the Hardrock Mining Industry (Final Action), 83 FR 7556, 7556 (February 21, 2018). As summarized by the Court, the EPA stated that ''existing federal and state programs as well as modern mining practices reduced the risk that the EPA would be required to use the Superfund to finance response actions at currently active mines.'' *Idaho Conservation League* v. *Wheeler,* 930 F.3d 494, 501 (D.C. Cir. 2019) (citing 83 FR 7556). The Court upheld that determination, stating that 42 U.S.C. 9608(b)(1) ''does not place any obligation on the EPA to issue redundant financial responsibility requirements.'' *Id.* at 504–5.[38] [39]

One commenter cites two Court cases that it asserts support the view that the EPA must regulate a source's emissions of a particular pollutant under CAA section 111 even where the source already controls those emissions because of other legal obligations. In *New York* v. *Reilly,* 969 F.2d 1147, 1153 (D.C. Cir. 1992), the Court rejected the EPA's argument that it need not ban the burning of lead-acid vehicle batteries under the NSPS for municipal waste combustors because the Resource Conservation and Recovery Act precludes the burning of lead-acid batteries. The Court responded that ''the mere existence of other statutory authority which might undergird EPA's final stance is insufficient to justify the omission of the battery ban.'' In *Portland Cement Ass'n* v. *EPA,* 665 F.3d 177, 191 (D.C. Cir. 2011), the Court rejected legal challenges to an NSPS limit for PM that tracked a concurrently issued PM standard adopted under CAA section 112. The Court explained that, ''[a]lthough both the NSPS and NESHAP rulemaking resulted in a PM emissions limit of 0.01 pounds per ton, EPA arrived at that limit using two different mechanisms,'' and added that ''the final rule . . . noted that kilns would have to install fabric filter technology to comply

[38] In addition, as the EPA noted in the 2019 Proposal, it ''ha[s] 'historically declined to propose standards for a pollutant [that] is emit[ted] in low amounts . . . .' '' 80 FR 56599 (quoting 75 FR 54970, 54997 (September 9, 2010). This situation is similar to the present situation in which a pollutant (methane) is fully controlled by requirements applicable to a second pollutant (VOC).

[39] The EPA notes that removing the applicability of the NSPS to methane emissions does not alter the basis for the applicability of the NSPS to VOC emissions for affected sources in the source category, which for some affected sources have been regulated since the 2012 Rule. To determine the best system of emission reduction (BSER), the EPA assesses a set of factors, which include the amount of emissions reduction, costs, energy requirements, non-air quality impacts, and the advancement of particular types of technology or other means of reducing emissions, and retains discretion to weight the factors differently in any case. In the 2016 NSPS subpart OOOOa, the EPA gave primary weight to the amount of emission reductions and cost. The EPA describes this analysis in depth in the 2015 NSPS subpart OOOOa proposal at 80 FR 56618 through 56620 and 80 FR 56625 through 56627. For the source types in the production and processing segments, the NSPS requirements, considered on a VOC-only basis, are cost effective (relatively low cost and relatively high emissions reductions). *See* memorandum titled ''Control Cost and Emission Changes under the Amendments to 40 CFR part 60, subpart OOOOa Under Executive Order 13783,'' in the public docket for this action. The EPA provides this information for the benefit of the public and is not reopening the above-described determination in the 2016 NSPS subpart OOOOa that the VOC-only requirements for sources in the production and processing segments meet the requirements of CAA section 111.

with NESHAP, . . . and the parallel NSPS rule would therefore have no additional cost.'' The commenter states that, similarly, while the EPA set the same BSER for methane and VOC in the 2016 Rule, the considerations underlying the BSER analysis differs significantly for these pollutants, which cause distinct harms. However, these cases are distinguishable because they stand for the proposition that when two separate statutory requirements apply, each must be given effect, and compliance with one does not obviate the other. In the present rulemaking, only one statutory requirement is applicable—the CAA section 111(b)(1)(B) requirement to promulgate standards of performance—and the EPA has determined that promulgating a standard of performance for VOC emissions obviates the need for a standard of performance for methane emissions from the same sources. Further, as the EPA noted in the 2019 Proposal, the EPA has historically declined to propose standards for a pollutant that is emitted in small amounts. 84 FR 50260. In the case of the Oil and Natural Gas Production source category, there are no methane emissions from the sources subject to the NSPS beyond those emissions already subject to control by the provisions to control VOC in the NSPS. Accordingly, there is no need to add NSPS requirements applicable to methane.

The EPA recognizes that in rescinding one set of standards in part for its redundancy with another set, the EPA is choosing to rescind the applicability of those standards to methane emissions and not VOC emissions, rather than vice-versa. Rescinding the methane-specific standards is reasonable because the requirements for VOC and correspondingly, sources' compliance with those requirements, are longer established than those for methane. As described earlier, the EPA regulated VOC first, beginning in 1985 and continuing in 2012, and then added regulation of methane for some sources in 2016.

Additionally, redundancy is not uniform across affected facilities in the production and processing segments. All sources in the segments are subject to VOC requirements and many are subject to methane requirements as well. However, some sources, such as storage vessels, are subject only to VOC requirements and not methane requirements. For those sources, it cannot be said that regulation of VOC is redundant to regulation of methane because the EPA has not regulated methane from them. In addition, there are no sources that are subject to only methane requirements. For these reasons, in choosing between the two requirements, the EPA considers it appropriate and less disruptive to rescind the methane standards.

Commenters asserted that the methane NSPS are not redundant to the VOC NSPS because the former trigger the requirements in CAA section 111(d) to regulate methane from existing sources, but the VOC NSPS do not trigger CAA section 111(d) requirements to regulate VOC from existing sources. The commenters noted that the EPA must consider emissions from existing sources when determining whether to list the source category, which is the predicate to regulating a given pollutant under CAA section 111.

The commenters are correct that methane NSPS, but not VOC NSPS, would trigger the CAA section 111(d) requirements for existing sources,[40] but the fact that the methane NSPS carries with it a trigger for CAA section 111(d) regulation of existing sources is simply a legal consequence of the requirements of CAA section 111, and does not undermine the EPA's conclusion that methane NSPS are redundant. Nor does the fact that the EPA considers emissions from existing sources in listing the source category. These conclusions are supported by the structure of CAA section 111. This provision establishes a multi-step process for regulation. Section 111(b)(1)(A) of the CAA directs the EPA to list source categories for regulation, CAA section 111(b)(1)(B) directs the EPA then to promulgate standards of performance for pollutants emitted from new sources, and CAA section 111(d)(1) directs the EPA then to promulgate guidelines for states to adopt standards of performance for certain of those pollutants emitted by existing sources. As explained above and in responses to comments, the basis for rescinding the applicability of the standards of performance for methane emissions is that those NSPS are redundant with the VOC NSPS. The legal consequence of that rescission is that the EPA is not authorized to promulgate CAA section 111(d) guidelines for existing sources. That consequence does not negate the fact that the methane NSPS is redundant with the VOC NSPS.

As discussed in section VII.B of this preamble, the EPA believes that the impact of not regulating existing oil and natural gas sources under CAA section 111(d) will be limited due to existing factors that encourage or require control of emissions from oil and natural gas existing sources. For comments on that view, and the EPA's response to those comments, see section X.B of this preamble.

Additional comments and responses by the EPA on the rescission of the applicability to methane are provided in section VIII.B of this preamble and in Chapter 6 of the Response to Comments Document.

In the next section, the EPA concludes that the 2016 Rule's determination that methane emissions from the source category contribute significantly to dangerous air pollution was erroneous and must be rescinded. Rescinding that determination also requires rescinding the methane NSPS. The redundancy of the methane requirements and the inadequacy of the 2016 Rule's SCF for methane are separate and independent reasons for rescinding the methane NSPS, and, thus, are severable from each other.

VI. Significant Contribution

The EPA is finalizing the position that the Administrator is required to determine that methane emissions from the Crude Oil and Natural Gas Production source category cause or contribute significantly to GHG air pollution as a predicate for promulgating standards of performance for methane. The EPA solicited comment on this position in the 2019 Proposal, based on an interpretation of section 111 of the CAA, and the EPA bases this final action on a refinement of that interpretation. Specifically, the EPA interprets the requirement of CAA section 111(b)(1)(B) that the Administrator propose to ''establish[ ] . . . standards of performance'' and then finalize ''such standards''—together with the CAA section 111(a)(1) definition of ''standard of performance'' as a ''standard for emissions of air pollutants''—to limit the standards of performance to only those air pollutants that the Administrator determined cause or contribute significantly to dangerous air pollution when listing the source category under CAA section 111(b)(1)(A). If the Administrator did not, when listing the source category, determine that a particular air pollutant causes or contributes significantly to dangerous air pollution, then the Administrator must do so as a predicate to promulgating standards of performance for that air pollutant.

Section VI.A of this preamble, immediately below, discusses that interpretation of CAA section 111. In section VI.B of this preamble, we explain how this interpretation applies

[40] In section VII below, we finalize our proposal that VOC NSPS do not trigger CAA section 111(d) requirements.

to the regulation of methane from the Crude Oil and Natural Gas Production source category. In section VI.C of this preamble, we briefly discuss criteria for making a SCF under CAA section 111.

A. Legal Interpretation Concerning the Air Pollutants That Are Subject to CAA Section 111

1. 2019 Proposal

As noted above, CAA section 111 establishes a process for the EPA to regulate air pollutants from industrial source categories. Section 111(b)(1)(A) of the CAA requires the first step: the Administrator must list a particular category of stationary sources that ''causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare,'' and then, under CAA section 111(b)(1)(B), the Administrator must proceed to promulgate standards of performance for that source category. For convenience, we refer to ''air pollution which may reasonably be anticipated to endanger public health or welfare'' as dangerous air pollution, and we refer to the reference to ''causes or contributes significantly'' as the SCF. In the 2019 Proposal, we solicited comment on whether CAA section 111(b)(1)(A) must be read, or reasonably could be read, to require the Administrator to make not only a SCF to list the source category, but also a SCF for a particular air pollutant as a predicate to promulgating a standard of performance for that pollutant under CAA section 111(b)(1)(B).

The EPA supported this interpretation with a detailed discussion of the relevant statutory provisions, their context, and purpose, as well as past administrative practice. At the outset, the EPA acknowledged that CAA section 111(b)(1)(A) by its terms requires that the Administrator make a SCF for the source category, and is silent on individual air pollutants.[41] However, the EPA noted that CAA section 111(b)(1)(A) should be read in conjunction with CAA sections 111(b)(1)(B) and 111(a)(1), which require the Administrator to promulgate ''standards of performance,'' defined as ''standard[s] for emissions of air pollutants.'' The EPA posited that those provisions, read together, by virtue of their focus on emissions of air pollutants, could be interpreted to require or authorize the EPA to require a pollutant-specific SCF as a predicate for promulgating a standard of performance. 84 FR 50263. The EPA acknowledged that in the past it has not promulgated a pollutant-specific SCF, and instead has taken the position that it may promulgate a standard of performance for a pollutant not previously regulated under CAA section 111 as long as it simply has a rational basis for doing so. In the 2019 Proposal, the EPA explained that this approach is flawed because it is vague and not guided by any statutory criteria, and that as a result, it could result in the Agency promulgating standards for air pollutants that are emitted in relatively minor amounts. 84 FR 50263. The Agency stated that interpreting CAA section 111 to require a pollutant-specific SCF as a predicate to regulating the pollutant would guard against this possibility.[42]

2. Comments

The EPA received comment on all aspects of its solicitation of comment. Some commenters supported the EPA's arguments and urged the Agency to finalize an interpretation that requires the Administrator to make a pollutant-specific SCF as a predicate to promulgating standards of performance for that pollutant from a source category. Other commenters opposed this interpretation and sought to counter the support for it that the EPA offered. They argued that under CAA section 111(b)(1)(A), the SCF applies only to source categories. They further argued that the references in CAA sections 111(b)(1)(B) and 111(a)(1) to air pollutants are unremarkable because standards of performance necessarily apply to particular air pollutants, and should not be read to elucidate the meaning of CAA section 111(b)(1)(A) in the manner the EPA suggested.[43] These comments are discussed in more detail in section IX of this preamble and in Chapter 8 of the Response to Comments Document located in the docket for this rulemaking.

3. Final Action

The EPA is finalizing the position that CAA section 111 requires, or at least authorizes the Administrator to require a pollutant-specific SCF as a predicate for promulgating a standard of performance for that air pollutant. The EPA bases this position primarily on a refinement of the interpretation of CAA section 111, described above, on which it solicited comment. Specifically, the EPA interprets the CAA section 111(b)(1)(B) requirement that the Administrator propose to ''establish[ ] . . . standards of performance'' and then finalize ''such standards with such modifications as he deems appropriate,'' in light of both the CAA section 111(a)(1) definition of ''standard of performance'' as a ''standard for emissions of air pollutants,'' and CAA section 111(b)(1)(A), which requires the Administrator to list a source category only ''if in his judgment it causes, or contributes significantly to [dangerous] air pollution.'' Read in this context, CAA section 111(b)(1)(B) is best understood *not* to require the Administrator to promulgate standards for emissions of *all* air pollutants but only to require him or her to promulgate standards for the emissions of air pollutants that the Administrator has determined ''cause or contribute significantly'' to the ''air pollution'' that the Administrator determined to be dangerous when listing the source category. Under this interpretation, if the Administrator did not, in listing the source category, determine that a particular air pollutant causes or contributes significantly to the dangerous air pollution, section 111 requires the Administrator to make—or, at least, authorizes the Administrator to require—a pollutant-specific SCF as a predicate to regulating that air pollutant.[44]

[41] It should be noted that even though CAA section 111(b)(1)(A) is clear in requiring a SCF for the source category, its silence as to individual air pollutants, which of course are what causes or contributes significantly to dangerous air pollution and are the subject of regulation, leaves to the EPA the task of addressing individual air pollutants.

[42] The EPA went on to review other provisions in the CAA that explicitly require a pollutant-specific SCF; the legislative history accompanying these provisions; the references in another CAA section 111 provision, CAA section 111(f)(2)(A) and (B), to the impacts of particular pollutants on dangerous air pollution; and previous interpretations that the EPA had made of the CAA section 111 requirements concerning individual air pollutants. 84 FR 50263–67.

[43] The commenters objected to the EPA's interpretation of other CAA provisions, of legislative history, and of other provisions of CAA section 111, as well as the EPA's interpretations of CAA section 111 in earlier administrative actions. We discuss these comments in the Response to Comments Document located in the public docket of this final rulemaking.

[44] Although this interpretation is a refinement of the interpretation for which the EPA solicited comment in the 2019 Proposal, it is rooted in the Proposal. As noted in the summary above, in supporting the interpretation that CAA section 111(b)(1)(A) requires or authorizes the EPA to require a pollutant-specific SCF, the EPA made numerous references to CAA sections 111(a)(1) and 111(b)(1)(B), and made clear that those three provisions must be read together. The EPA made other references as well to the need to make a pollutant-specific SCF in order to promulgate standards of performance, which is the thrust of the interpretation described in this final action. *See Id.* at 50262–63. The rational basis approach was an interpretation of CAA section 111(b)(1)(B). That is, under this approach, the EPA interpreted that provision to authorize standards of performance for those air pollutants for which the EPA had a rational basis, but not necessarily standards for all air pollutants. *See* 81 FR 35842 (2016 Rule), *cited*

4. Legal Interpretation of CAA Sections 111(a)(1), (b)(1)(B), and (b)(1)(A) and the Pollutants Subject to Regulation

The EPA interprets CAA sections 111(b)(1)(B), in light of CAA sections (b)(1)(A) and (a)(1), to require, or at least to authorize the Administrator to require, a pollutant-specific SCF as a predicate for promulgating a standard of performance for that air pollutant. The EPA bases this interpretation on a close reading of these provisions in the context of CAA section 111. CAA section 111 directs the EPA to regulate, through a multi-step process, air pollutants from categories of stationary sources. CAA section 111(b)(1)(A) requires the initial action, which is that the Administrator must ''publish . . . a list of categories of stationary sources. He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'' This provision does not by its terms require the Administrator, in listing a source category, to identify particular air pollutants of concern that are emitted from the source category, but it does make clear that the Administrator must identify air pollution that is of concern and must make a finding that this air pollution, in our shorthand, is dangerous.

CAA section 111(b)(1)(B) then directs the EPA to propose regulations ''establishing Federal standards of performance'' for new sources within the source category, then to allow public comment, and then to ''promulgate . . . such standards with such modifications as he deems appropriate.'' CAA section 111(a)(1) defines the term ''standard of performance'' as ''a standard for emissions of air pollutants which [the Administrator is required to determine through a specified methodology].'' This definition makes clear that the standards of performance that CAA section 111(b)(1)(A) directs the Administrator to promulgate must concern air pollutants emitted from the sources in the source category. However, industrial sources of the type subject to CAA section 111(b)(1)(A) invariably emit more than one air pollutant and neither CAA section 111(b)(1)(B) nor 111(a)(1) by its terms specifies for which of those air pollutants the EPA must promulgate standards of performance.

But the statute does provide guidance as to the class of air pollutants for which the EPA must promulgate standards of performance. Section 111(b)(1)(A) of the CAA demonstrates that the statutory scheme of CAA section 111 is aimed at controlling ''air pollution which may reasonably be anticipated to endanger public health or welfare.'' It follows that the air pollutants for which the Administrator must establish standards must, or at least may reasonably, be limited to those air pollutants which contribute to this dangerous air pollution.

The Administrator's discretion to limit the class of air pollutants for which he promulgates standards is supported by his statutory discretion under CAA section 111(b)(1)(B) to finalize standards ''with such modifications as he deems appropriate.'' In an exercise of this discretion, the Administrator deems it appropriate to limit the standards of performance to those air pollutants that contribute to dangerous air pollution.

Several other provisions in CAA section 111 also refer to air pollutants, including CAA section 111(b)(3), which requires the Administrator to, ''from time to time, issue information on pollution control techniques for categories of new sources and air pollutants subject to the provisions of this section.'' This reference to ''air pollutants *subject to the provisions of this section*'' (emphasis added) implies that some air pollutants may not be subject to CAA section 111; otherwise, the emphasized phrase would be superfluous.[45]

As noted in the 2019 Proposal, in the past, the EPA has interpreted CAA section 111(b)(1)(B) to authorize it to promulgate standards of performance for any air pollutant that the EPA identified in listing the source category and any additional air pollutant for which the EPA has identified a rational basis for regulation. 81 FR 35843 (2016 Oil & Gas Methane Rule); ''Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units—Final Rule,'' 80 FR 64510 (October 23, 2015) (EGU CO_2 NSPS Rule). Inherent in this approach is the recognition that CAA section 111(b)(1)(A) does not, by its terms, necessarily require the EPA to promulgate standards of performance for all air pollutants emitting from the source category. Citizen group stakeholders and some states have endorsed the rational basis approach. Some industry stakeholders and other states, however, have advocated a narrower approach with respect to, at least, the GHG for which the EPA promulgated standards of performance for the Fossil Fuel-Fired Electric Utility Generating Units source category and the Crude Oil and Natural Gas Production source category. The stakeholders argued that under this narrower approach, the EPA is not authorized to promulgate NSPS for at least GHG unless it first makes a SCF with respect to that pollutant.

The EPA interprets the phrase at issue in CAA section 111(b)(1)(B), ''standards of performance,'' and the associated phrase in CAA section 111(a)(1), ''emissions of air pollutants,'' by analogy to the similar phrase, ''any air pollutant,'' found in the CAA permitting provisions that the U.S. Supreme Court considered in *Utility Air Regulatory Group* v. *EPA,* 573 U.S. 302 (2014) (*UARG*). In *UARG,* the Court interpreted CAA section 169(1), which provides construction and modification permitting requirements under the Prevention of Significant Deterioration (PSD) program, and CAA sections 501(2)(B) and 302(j), which provide the operating permit requirements of the title V program. The Court concluded that when read in the context of the permitting provisions, the phrase ''any air pollutant'' did not encompass GHG, even though they are air pollutants. The EPA considers that the analytical approach that the Court adopted in *UARG* also applies to CAA section 111(b)(1)(B). Under this approach, the provisions in that section that direct the Administrator to establish ''standards of performance'' for new sources in the source category, require, or at least reasonably allow, the Administrator to promulgate standards for only those air pollutants for which the EPA has made a SCF.

The EPA considers the same analytical approach to support interpreting ''emissions of air pollutants'' in CAA section 111(a)(1) to encompass only those air pollutants for which the EPA has made a SCF. Under the PSD requirements, no ''major emitting facility'' may be constructed or

in 84 FR 50262 (2019 Proposal). This approach is similar to the pollutant-specific SCF approach. By the same token, the EPA's discussions in the 2019 Proposal of the legislative history, CAA section 111(f), and previous statements the EPA made in support documents all contain references to a pollutant-specific SCF as a predicate for promulgating standards of performance. 84 FR 50263 through 67.

[45] Similarly, CAA section 111(d)(1)(A) makes clear by its terms that ''a standard of performance under this section'' need not govern *all* pollutants emitted from a regulated source to give effect to Congress's purpose. The requirements of CAA section 111(d)(1)(A) apply to only a subset of air pollutants, that is, ''any air pollutant . . . for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but . . . to which a standard of performance under this section would apply if such existing source were a new source.''

modified in certain areas of the U.S. unless it has received a permit that includes certain conditions and emission limits. CAA section 165(a)(1). In the PSD definitional provisions, CAA section 169(1) defines the term ''major emitting facility'' as any stationary source of air pollutants that emits, or has the potential to emit, at least 100 or 250 tpy (depending on the source) of ''any air pollutant.'' *See* CAA sections 169(2)(C), 111(a)(4) (defining ''construction'' to include ''modification,'' which in turn is defined to mean, in relevant part, a certain type of change that increases the amount of ''any air pollutant'' emitted by the source). Title V makes it unlawful to operate a ''major source'' without an operating permit that includes all applicable CAA requirements. Title V defines a ''major source'' by incorporating the CAA-wide definition of ''major stationary source:'' A stationary source that emits or has the potential to emit at least 100 tons per year of ''any air pollutant.'' CAA section 501(2)(B), 302(j).

In a 2010 rule, ''Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule,'' 75 FR 31514 (June 3, 2010) (Tailoring Rule), the EPA took the position that the phrase ''any air pollutant'' in these provisions necessarily included GHG, based on the 2007 decision by the U.S. Supreme Court that the CAA-wide definition of ''air pollutant,'' CAA section 302(g), encompasses GHG. *Massachusetts* v. *EPA,* 549 U.S. 497 (2007). The EPA's interpretation, however, created practical problems, which the Agency recognized in the Tailoring Rule: It would cause numerous commercial and small industrial sources to become subject to the permitting requirements, which were burdensome and which Congress designed to apply only to large industrial sources that were equipped to carry those burdens. *UARG,* 573 U.S. at 310–11 (citing 73 FR 44355, 44498 and 99).

UARG held that the EPA's interpretation of the PSD and title V provisions was unreasonable, and that the phrase ''any air pollutant'' in these provisions did not include GHG. The Court adopted a two-step analysis. First, the Court found that the fact that the CAA-wide definition of ''air pollutant'' included GHG did not mean that all the references to ''air pollutant'' in the CAA's operative provisions necessarily include GHG; rather, whether the term included GHG was dependent on the context of the particular operative provision. 573 U.S. at 316. The Court found support for this position in the fact that ''where the term 'air pollutant' appears in the Act's operative provisions, EPA has routinely given it a narrower, context-appropriate meaning.'' *Id.* The Court explained that the EPA had already interpreted ''any air pollutant'' in the permitting provisions to be limited to ''regulated'' air pollutants, which the Court described as ''a reasonable, context-appropriate meaning.'' *Id.* at 316–17. The Court identified several other provisions ''where EPA has inferred from statutory context that a generic reference to air pollutants does not encompass every substance falling within the Act-wide definition.'' For example, and of particular significance here, the Court noted that CAA section 111(a)(4), read together with CAA sections 111(a)(2) and (b)(1)(B), applies NSPS requirements to a source that undergoes a physical or operational change that increases its emission of ''any air pollutant,'' but the EPA interprets this provision as limited to air pollutants for which the EPA has promulgated standards of performance. 573 U.S. at 317. Similarly, the Court noted that CAA sections 169A(b)(2)(A) and (g)(7) require a certain type of source that interferes with visibility to retrofit if it has the potential to emit 250 tpy of ''any pollutant,'' but that the EPA interprets this provision as limited to visibility-impairing air pollutants. 573 U.S. at 318. The Court emphasized that *Massachusetts* did not call these interpretations into question; rather, according to the Court, ''*Massachusetts* does not foreclose the Agency's use of statutory context to infer that certain of the Act's provisions use 'air pollutant' to denote not every conceivable airborne substance, but only those that may sensibly be encompassed within the particular regulatory program.'' 573 U.S. at 319. Therefore, in this first step, the Court concluded that the CAA did not compel the EPA to interpret the phrase ''any air pollutant'' in the permitting provisions to include GHG.

Second, the Court found that the EPA did not have the discretion to interpret this phrase to include GHG, because it was unreasonable to do so in light of the permitting provisions. The Court explained that including GHG would expand the permitting programs to large numbers of small sources, but that ''a brief review of the relevant statutory provisions leaves no doubt that the PSD program and Title V are designed to apply to, and cannot rationally be extended beyond, a relative handful of large sources capable of shouldering heavy substantive and procedural burdens.'' *Id.* at 322. The Court went on to describe the various PSD and title V statutory requirements that are resource-intensive and time-consuming, and, therefore, incompatible with application to large numbers of small sources. *Id.* at 322–23.

The EPA is adopting *UARG*'s two-step analytical approach to conclude that, in light of its context, CAA section 111(b)(1)(B) does not mandate, and cannot reasonably be read to authorize, the EPA to promulgate standards of performance for an air pollutant for which the EPA has not made a SCF. At a minimum, even if these provisions are not read to preclude the EPA from promulgating standards of performance without first making a pollutant-specific SCF, it is reasonable to interpret these provisions as authorizing the EPA to decline to promulgate standards without first making such a SCF. *UARG* was explicit that provisions of CAA section 111 are subject to its analytical approach. As noted above, the Court endorsed the EPA's interpretation that, notwithstanding the reference to ''any air pollutant'' in CAA section 111(a)(4), the requirements concerning a ''modification'' in CAA section 111(b)(1)(B), which is at issue here, and CAA sections 111(a)(2) and (4) do not require the EPA to promulgate standards for every pollutant that a modified source emits, because those provisions must be understood in context to embrace a limited set of air pollutants. 573 U.S. at 317.

As is clear from the EPA's summary above of the CAA section 111 rulemaking process, the first action that the EPA must take, specified in CAA section 111(b)(1)(A), is to list a source category for regulation on the basis of a determination that the category contributes significantly to dangerous air pollution, and it is this provision that establishes the context that is relevant for present purposes. This provision makes clear that although Congress designed CAA section 111 to apply broadly to source categories of all types wherever located, Congress also imposed a constraint: The EPA is authorized to regulate only sources that it finds cause or contribute significantly to air pollution that the EPA finds to be dangerous.

Congress' direction to EPA to promulgate standards of performance for the sources in the category, under CAA section 111(b)(1)(B), must be viewed in this context. Congress did not specify which air pollutants the standards of performance must address, stating only, as noted above, in the definitional provisions of CAA section 111 that the term ''standard of performance'' means a standard for

''emissions of air pollutants.'' This phrase is substantially similar to the phrase ''any air pollutant'' in the PSD and Title V provisions addressed in *UARG.* In fact, ''emissions of air pollutants'' appears to be less encompassing than ''any air pollutant.'' As the U.S. Supreme Court has noted, ''Read naturally, the word 'any' has an expansive meaning, that is, 'one or some indiscriminately of whatever kind.' Webster's Third New International Dictionary 97 (1976).'' *United States* v. *Gonzales,* 520 U.S. 1, 4, 1997), *quoted in Department of Housing and Urban Development* v. *Rucker,* 535 U.S. 125, 131 (2002), *cited in Massachusetts,* 549 U.S. at 529 n.25.

Under the analytical approach of *UARG,* because the regulatory scope of the CAA's ''operative provisions,'' such as CAA sections 111(b)(1)(B) and 111(a)(1), must be understood in context, their reference to ''standards of performance'' and ''emissions of air pollutants'' cannot be read to mandate promulgation of standards of performance for each and every air pollutant emitted from the source category. In addition, because Congress limited the EPA to regulating only stationary sources in a category that the Administrator must first determine to cause or contribute significantly to dangerous air pollution, it is not reasonable to read ''air pollutants'' to refer to any of the source category's air pollutants for which the EPA has not made a SCF. At the very least, it is reasonable to interpret that phrase more narrowly. As noted in the 2019 Proposal, interpreting the CAA section 111 provisions to authorize the EPA to regulate any air pollutant, even ones that the EPA did not consider in listing the source category, creates the risk that the EPA may regulate air pollutants emitted in small quantities or otherwise having little adverse effect.[46]

It is true that, recently, the EPA has adopted the approach of regulating additional air pollutants that it did not address in the listing determination only after determining that it has a rational basis for doing so, and in making that determination, has considered the same factors as it would in making a SCF. 81 FR 35843 (2016 Rule). However, this approach is a creature of Agency practice and, therefore, is not as firmly established as statutory requirements. As noted in the 2019 Proposal, interpreting CAA section 111 to require only a pollutant-specific rational basis standard, and not a SCF, could lead to potentially anomalous results when the Agency, after listing a source category on grounds that its emissions taken together contribute significantly to dangerous air pollution, proceeds to promulgate NSPS for individual air pollutants. EPA stated that, as an example, under the rational basis interpretation, the EPA could list a source category on grounds that it emits numerous air pollutants that, taken together, significantly contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, and proceed to regulate each of those pollutants, without ever finding that each (or any) of those air pollutants by itself causes or contributes significantly to—or, in terms of the text of other provisions, causes or contributes to—air pollution that may reasonably be anticipated to endanger public health or welfare. 84 FR 50263. As further noted in the 2019 Proposal, CAA section 111(b)(1)(A) does not provide or suggest any criteria to define the rational basis approach, the EPA has not articulated any criteria in its previous applications in the EGU CO_2 NSPS and the 2016 subpart OOOOa rules, and in instances before those rules in which the EPA has relied on the ''rational basis'' approach, the EPA has done so to justify not setting a standard for a given pollutant, rather than to justify setting such a standard. *Id.* Thus, the rational basis test allows the EPA virtually unfettered discretion in determining which air pollutants to regulate. As a result, the rational basis standard creates the possibility that the EPA could seek to promulgate NSPS for pollutants that may be emitted in relatively minor amounts, as the EPA noted in the 2019 Proposal. 84 FR 50263. As noted in section IX below, numerous commenters reiterated these concerns.

In contrast, CAA section 111(b)(1)(A) is clear that the EPA may list a source category for regulation only if the EPA determines that the source category ''causes or contributes *significantly*'' (emphasis added) to dangerous air pollution. In light of the stringency of this statutory requirement for listing a source category, it would be unreasonable to interpret CAA section 111(b)(1)(B) to allow the Agency to regulate air pollutants from the source category merely by making an administrative determination under the open-ended and undefined rational basis test. Rather, it is logical to interpret CAA section 111(b)(1)(B) to require that the Agency apply the same degree of rigor in determining which air pollutants to regulate as it does in determining which source categories to list for regulation.

For these reasons, the EPA concludes that in the context of CAA section 111, the requirement that the EPA promulgate ''standards of performance,'' (CAA section 111(b)(1)(B)), defined as ''standard[s] for emissions of air pollutants'' (CAA section 111(a)(1)), must be interpreted to require a pollutant-specific SCF (CAA section 111(b)(1)(A)) as a predicate for promulgating standards of performance. At a minimum, the Agency considers this interpretation to be reasonable and, accordingly, adopts it. Requiring a pollutant-specific SCF establishes a clearer framework for assessing which air pollutants merit regulatory attention that will require sources to bear control costs. This promotes regulatory certainty for stakeholders and consistency in the EPA's identification of which air pollutants to regulate and reduces the risk that air pollutants that do not merit regulation will nevertheless become subject to regulation due to an unduly vague standard.

In the 2019 Proposal, the EPA solicited comment on whether to interpret CAA section 111(b)(1)(A) to require a determination that the pollutant causes or contributes significantly to dangerous air pollution (the SCF) or instead, to interpret it to require a determination that the pollutant simply causes or contributes to dangerous air pollution. 84 FR 50261. The same issue arises with respect to CAA sections 111(b)(1)(B) and (a)(1), but the EPA has concluded that interpreting these provisions to require a SCF as the pollutant-specific finding is consistent with the source-category SCF in CAA section 111(b)(1)(A). That is, in light of Congress' clearly expressed intent in CAA section 111(b)(1)(A) that the EPA base its listing of a source category on a finding that the emissions from the source category contribute significantly to dangerous air pollution, the EPA concludes that CAA sections 111(b)(1)(B) and (a)(1) require the EPA to base its regulation of a pollutant on a similarly rigorous finding that the pollutant contributes significantly to dangerous air pollution. If, in the alternative, the statute is ambiguous in this regard, the EPA exercises its

[46] As should be clear from this discussion immediately above, this interpretation of CAA sections 111(b)(1)(B) and (a)(1) differ from the interpretation of CAA section 111(b)(1)(A) that the EPA described in the 2019 Proposal. *See* 84 FR 50263 (stating that interpreting CAA section 111(b)(1)(B), the EPA was mindful that an Agency ''[may] avoid a literal interpretation at Chevron step one . . . [by] show[ing] either that, as a matter of historical fact, Congress did not mean what it appears to have said, or that, as a matter of logic and statutory structure, it almost surely could not have meant it'' (citation omitted)).

discretion to interpret it to require a pollutant-specific SCF.

In the 2019 Proposal, the EPA noted that interpreting CAA section 111 to require a pollutant-specific SCF as a predicate to regulation ''need not result in duplicative SCFs (or duplicative associated endangerment findings). That is, the EPA would not need to make separate SCFs (and associated endangerment findings) for both the source category and each pollutant emitted by the source category that the EPA seeks to regulate.'' 84 FR 50266. The EPA continues to hold this view. In identifying any new source categories under CAA section 111(b)(1)(A), the EPA could identify each air pollutant of concern and make a SCF, as appropriate, for emissions of each of those pollutants from the source category, and, in that same action, make the SCF for the source category itself. In addition, in the 2019 Proposal, the EPA solicited comment on what implications interpreting CAA section 111 to require a pollutant-specific SCF would give rise to for already promulgated standards of performance. *Id.* The EPA believes that standards of performance will generally not be affected by this requirement because generally, the EPA identified and analyzed the air pollutants of concern when the EPA listed a source category, or initiated promulgation of standards of performance at the same time or shortly after listing the source category, and, therefore, in association with the significance determination the Agency made in that listing. For example, as noted elsewhere, the EPA followed that process when it listed the Crude Oil and Natural Gas Production source category, that is, it identified and analyzed the air pollutants of concern at that time in the supporting documents. Importantly, the EPA relied on its analyses of those air pollutants as the basis for determining that the source categories' emissions contribute significantly to dangerous air pollution.[47]

B. Flaws in the 2016 Rule's Significant Contribution Finding

When the Administrator listed the oil and natural gas industry as a source category in 1979, he did not determine that methane emissions from the source category cause or contribute significantly to dangerous air pollution. In this rulemaking, the EPA is taking the position that the EPA must make that determination as a predicate to promulgating standards of performance for methane from this source category. The Administrator did determine in the 2016 Rule that methane from the source category contributes significantly to dangerous air pollution, but that determination was flawed and must be rescinded for two reasons: (1) The Administrator made that determination on the basis of methane emissions from the production, processing, and transmission and storage segments, instead of just the production and processing segments; and (2) the Administrator failed to support that determination with either established criteria or some type of reasonably explained and intelligible standard or threshold for determining when an air pollutant contributes significantly to dangerous air pollution.

1. Improper Scope of Source Category

In the 2016 Rule, the Administrator made the significant contribution finding on the basis of assessing methane emissions from the source category as defined to include the production, processing, and transmission and storage segments. In the present action, we are removing the transmission and storage segment, leaving only the production and processing segments. Because the 2016 Rule did not assess whether methane emissions from the production and processing segments alone cause or contribute significantly to dangerous air pollution, we find that the Rule's determination is not adequate and, therefore, we are rescinding it. Until the EPA makes an appropriate determination that methane emissions from the Oil and Natural Gas source category, properly calculated, contribute significantly to dangerous air pollution, it does not have authority to promulgate standards of performance for methane from these sources under CAA section 111(b)(1)(b).

2. Lack of Criteria or Standard for Determining Significant Contribution

In the 2019 Proposal, the EPA ''solicit[ed] comment on the question of whether the SCF in the 2016 . . . [R]ule can be considered appropriate given that nowhere in the course of developing and promulgating that rule did the EPA set forth the standard by which the 'significance' of the contribution of the methane emissions from the source category (as revised) was to be assessed.'' 84 FR 50267. The EPA elaborated that it was asking for comment on whether, as a matter of law, under CAA section 111, the EPA is obligated to identify the standard by which it determines whether a source category's emissions ''contribute significantly,'' and whether, if not so obligated, the EPA nevertheless fails to engage in reasoned decision-making by not identifying that standard. *Id.* The EPA cited *Motor Vehicle Mfrs. Assn. of United States, Inc.* v. *State Farm Mut. Automobile Ins. Co.,* 463 U.S. 29, 43 (1983), which states, ''Normally, an agency rule would be arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem.''. *Id. See Department of Homeland Security* v. *Regents of Univ. of Cal.,* No. 18–587, slip op. at 18 (U.S. June 18, 2020) (executive action to rescind the Deferred Action for Childhood Arrivals program failed to provide a reasoned explanation when it failed to consider certain ''conspicuous issues''). For the reasons that follow, the EPA concludes that the failure to identify any such standard or any established set of criteria for the 2016 Rule's SCF for methane emissions from the source category is unreasonable and requires rescinding the 2016 Rule's SCF.

As the EPA noted in the 2019 Proposal, the ''contributes significantly'' provision in CAA section 111(b)(1)(A) is ambiguous. *See* 84 FR 50267–68 (citing *EPA* v. *EME Homer City Generation, L.P.,* 572 U.S. 489 (2014) (holding that a similar provision in CAA section 110(a)(2)(D)(i), often termed the ''good neighbor'' provision, is ambiguous)). Accordingly, the EPA has authority to interpret that provision. *Id.* at 50268. As noted above, the EPA reads CAA section 111(b)(1)(B) in light of CAA sections 111(b)(1)(A) and (a)(1) to incorporate the ''contributes significantly'' standard in connection with promulgating NSPS for particular air pollutants. The EPA has concluded that to allow the EPA to distinguish between a *contribution* and a *significant contribution* to dangerous pollution, some type of (reasonably explained and intelligible) standard and/or established set of criteria that can be consistently applied is necessary. Without at least one or the other, it is impossible to evaluate whether the SCF is well reasoned. Therefore, the lack of a standard or established set of criteria for the 2016 Rule's SCF renders the finding arbitrary and capricious. A supporting basis for this conclusion can be found in the EPA's analysis of the ''contribute significantly'' provisions of CAA section 189(e), concerning major stationary sources of PM with a diameter of 10 micrometers or less (PM_{10}). This provision requires that the

[47] The EPA also took the approach in the 2016 Rule that it is revising here, when it attempted to expand the Crude Oil and Natural Gas Production source category. It discussed the pollutant emissions, including GHG, VOC, and SO_2, made a SCF for those emissions, and, on the basis of that SCF, listed the expanded source category. 81 FR 35837 through 40.

control requirements applicable to major stationary sources of PM_{10} also apply to major stationary sources of PM_{10} precursors ''except where the Administrator determines that such sources [of precursors] do not contribute significantly to PM_{10} levels which exceed the standard in the area.'' As the EPA noted in the 2019 Proposal, in CAA section 189(e), Congress intended that, in order to be subject to regulation, the emissions must have a greater impact than a simple contribution not characterized as a significant contribution. However, Congress did not quantify how much greater. Therefore, the EPA developed criteria for identifying whether the impact of a particular precursor would ''contribute significantly'' to a NAAQS exceedance. 84 FR 50268. These criteria included numerical thresholds. *Id.*

The EPA has concluded similarly that, under CAA section 111(b), a standard or an established set of a criteria, or perhaps both, are necessary to identify what is significant and what is not. Moreover, without either, any determination of significance is arbitrary and capricious because it does not identify a reasoned basis for that determination.[48] This is evident in the flawed significance finding in the 2016 Rule. There, the EPA determined that ''the collective GHG emissions from the oil and natural gas source category are significant'' and based that determination on several facts concerning the amount of methane emissions from the Oil and Gas source category, in comparison to other domestic and global emissions. Specifically, the EPA stated that oil and gas GHG emissions are significant, whether the comparison is (i) ''domestic'' (noting that this sector is ''the largest source of methane emissions, accounting for 32 percent of United States methane and 3.4 percent of total United States emissions of all GHG''), (ii) ''global'' (noting that this sector, ''while accounting for 0.5 percent of all global GHG emissions, emits more than the total national emissions of over 150 countries, and combined emissions of over 50 countries''), or (iii) ''when both the domestic and global GHG emissions comparisons are viewed in combination.'' 81 FR 35840. The EPA did add a qualitative assessment of those facts. It noted that ''no single GHG source category dominates on the global scale,'' noted further that the oil and natural gas source category, ''like many (if not all) individual GHG source categories, could appear small in comparison to total emissions,'' and asserted that nevertheless, ''in fact, it is a very important contributor in terms of both absolute emissions, and in comparison to other source categories globally or within the United States.'' *Id.* However, the EPA did not identify any set of criteria by which to evaluate those facts and to ensure that those facts constituted the comprehensive set of data for determining significance. In contrast, when the EPA determines whether an area should be designated nonattainment on grounds that it ''contributes'' to ambient air quality problems in a nearby area, the EPA applies an established set of criteria that identify the relevant sets of data to analyze and explain how to analyze them. *See Catawba Cty.* v. *EPA,* 571 F.3d 20, 39–40 (DC Cir. 2009) (*Catawba*) (holding that in determining whether an area ''contributes'' to downwind ozone air quality problems, the EPA, ''[t]o be reasonable . . . must . . . define and explain the criteria the agency is applying''; explaining that the EPA adopted a set of nine criteria that it defined and explained ''in spades''). These criteria help ensure that the EPA's decision-making is well-reasoned and consistent. The EPA considers it particularly important to develop a set of criteria and/or a standard in order to determine when a *significant* contribution occurs, in order, as noted above, to distinguish it from a simple contribution. A contribution can be greater or lesser and remain a contribution, but a significant contribution determination necessarily involves a judgment about the degree of the contribution that rises to the level of significance. For such a judgment to be meaningful (and to be understood by regulated parties and by the public), the Agency must identify the criteria it will use to determine significance. In the 2016 Rule's significance finding, the EPA did not identify such criteria.

Nor did the EPA identify any threshold against which to compare the cited facts concerning methane emissions, and thereby assess their importance, much less explain why a contribution above such a threshold should be deemed significant while a contribution below it should not. Thus, for example, although the EPA justified the significance determination, in part, on grounds that the source category's emissions constitute 3.4 percent of total U.S. GHG emissions and 0.5 percent of all global GHG emissions, the EPA did not explain why either of those facts supports the significance determination. Because the EPA did not identify a threshold or criteria for evaluating the oil and gas industry's percentage of domestic or global GHG emissions, the EPA could not justify the 2016 Rule's SCF. As a result, that determination cannot be considered the result of reasoned and appropriate decision-making.[49] The EPA intends to begin

[48] As noted in the 2019 Proposal, in a 1994 rule concerning CAA section 213(a), which requires the EPA to make a finding that air pollutant emissions from new and existing nonroad engines and vehicles are ''significant contributors'' to dangerous air pollution, the EPA determined that it is not necessary to establish a ''specific numerical standard'' for determining significance. 84 FR 50268 (citing 59 FR 31306 and 31308 (June 17, 1994)). However, more recently, as further noted in the 2019 Proposal, the EPA promulgated criteria to interpret and apply ''contribute significantly'' in the ''good neighbor'' provision, CAA section 110(a)(2)(D)(i). 84 FR 50267 and 68 (discussing the criteria and the EPA's use of them in the Cross State Air Pollution Rule, which the U.S. Supreme Court upheld in *EPA* v. *EME Homer City Generation, LP.,* 572 U.S. 489 (2014)). In *Coalition for Responsible Regulation* v. *EPA (CRR),* the Court considered a challenge to the EPA's 2009 determination under CAA section 202(a) that GHG air pollution may reasonably be anticipated to endanger public health and welfare (the GHG Endangerment Finding) on grounds that the EPA had failed to quantify a threshold amount of GHG air pollution that would be safe and that, as a result, the EPA had no basis for concluding that the current amount may endanger. 684 F.3d 102, 122–23 (DC Cir. 2012), *aff'd in part and rev'd in part on other grounds sub nom. Utility Air Regulatory Group* v. *EPA,* 573 U.S. 302 (2014). The Court upheld the GHG Endangerment Finding, concluding that the EPA based it on an overall assessment of risk—accounting for ''the precautionary thrust of the CAA and the multivariate and sometimes uncertain nature of climate science''—for which no quantitative threshold is necessary. *Id.* at 123. That case is distinguishable because it focused on the endangerment finding for GHG air pollution, not on the amount of contribution that GHG emissions make to that air pollution. In any event, the contribution requirement of section 202(a)(1) requires only a simple contribution determination, not a significant contribution.

[49] In the EGU CO_2 NSPS Rule, the EPA determined, in the alternative, that CO_2 emissions from fossil fuel-fired EGUs contribute significantly to dangerous air pollution. The EPA explained that fossil fuel-fired EGUs ''emit almost one-third of all U.S. GHG emissions, and are responsible for almost three times as much as the emissions from the next ten stationary source categories combined.'' The EPA added that ''[t]he CO_2 emissions from even a single new coal-fired power plant may amount to millions of tons each year,'' and that ''the CO_2 emissions from even a single NGCC unit may amount to one million or more tons per year.'' The EPA also asserted that in that rulemaking, ''[i]t is not necessary'' for the EPA ''to decide whether it must identify a specific threshold for the amount of emissions from a source category that constitutes a significant contribution.'' The EPA explained that ''under any reasonable threshold or definition, the emissions from combustion turbines and steam generators are a significant contribution.'' 80 FR 64531. In 2018, the EPA proposed to revise the EGU CO_2 NSPS Rule, and solicited comment on whether a SCF for GHG emissions from fossil fuel-fired EGUs was a necessary predicate for promulgating a NSPS for those emissions. ''Review of Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units—Proposed Rule, 83 FR 65424, 65432 n.25 (December 20, 2018). While the EPA has not taken final action

Continued

rulemaking shortly to identify thresholds and/or criteria and to apply them in future significance determinations.

Commenters objected that the 2016 Rule's SCF should not be considered invalid due to the lack of a standard by which to assess significant contribution, citing *Mississippi Commission on Envtl. Quality* v. *EPA,* 790 F.3d 138 (D.C. Cir. 2015) (*Mississippi*), the most recent decision in the line of cases that includes *Catawba,* noted above. In that line of cases, the Court upheld the EPA's approach to determining whether, under CAA section 107(d)(1)(A)(i), an upwind area should be treated as nonattainment because it ''contributes'' to downwind air quality problems. *See Mississippi,* 790 F.3d at 150 (citing *Catawba,* 571 F.3d at 39–40). The Court held that the EPA was not required to establish a threshold level of impact for determining whether an upwind area ''contributes'' to a downwind area. The *Mississippi* Court cited *Catawba,* 571 F.3d at 39–40), which commenters, in turn, cite to argue that such a threshold is not necessary for determining a significant contribution under CAA section 111(b). However, as noted above, the EPA had ''define[d] and explain[ed]'' a set of criteria for determining whether an upwind area ''contributes,'' and in the cited case law, the Court found that these criteria facilitated the reasonableness of the EPA's decision-making. *Catawba,* 571 F.3d at 39–40. In any event, this case law is distinguishable because it concerns the EPA's determination under CAA section 107(d)(1)(A)(i) of a simple contribution, whereas CAA section 111(b) requires the EPA to determine a *significant* contribution. As noted above, the EPA considers it particularly important to develop a set of criteria and/or a standard in order to determine when a significant contribution occurs, in order to distinguish it from a simple contribution.

C. Criteria for Making a Significant Contribution Finding Under CAA Section 111

In the 2019 Proposal, the EPA solicited comment regarding criteria for the Agency to consider in making a SCF. 84 FR 50267. The solicitation for comment was not on the factors the Agency should consider in determining whether air pollution may reasonably be anticipated to endanger public health or welfare, but rather the factors that should be considered when determining under CAA section 111 whether a pollutant from a source category significantly contributes to that air pollution. Several commenters recommend that the EPA defer any action on SCF criteria and suggest the EPA undertake these questions in a separate future rulemaking. Some commenters suggest specific criteria the EPA could consider.

The EPA made clear in the 2019 Proposal that it would not finalize criteria in this rulemaking, but rather would conduct a separate rulemaking to do so. 84 FR 50267. There is no need for the EPA to promulgate criteria at this time because this rule rescinds NSPS. The EPA expects that in the future, it will promulgate criteria before promulgating additional NSPS.

It should be noted that several commenters contend that oil and gas methane emissions are too small to be considered ''significant.'' For example, some commenters cite as support that the contribution of oil and gas methane to total U.S. GHG emissions is only about 3 percent, that U.S. methane emissions are only about 7 percent of global methane emissions, and that U.S. methane emissions are only about 1 percent of global GHG emissions. The EPA appreciates the commenters' views concerning the amounts and impacts of methane emissions from the transmission and storage segment, as well as the production and processing segments. The EPA acknowledges that depending on the criteria that it adopts to support a SCF in the future, such a relatively small contribution to the national and global pool of methane emissions may not be deemed significant. But until the EPA itself reviews and assesses those amounts of emissions according to the criteria that it eventually adopts, the EPA cannot make a determination as to whether methane emissions from the production and processing segments contribute significantly to dangerous air pollution.

VII. Implications for Regulation of Existing Sources

As discussed in section VII of the proposal preamble, the EPA recognizes that by rescinding the applicability of the NSPS, issued under CAA section 111(b), to methane emissions for the sources in the Crude Oil and Natural Gas Production source category that are currently covered by the NSPS, existing sources of the same type in the source category will not be subject to regulation under CAA section 111(d). This is a legal consequence that results from the application of the CAA section 111 requirements. Comments were received that both agreed and disagreed with the proposed decision and reflected varying opinions on the implications for regulation of existing sources. These comments are provided, along with the EPA's responses, in section X of this preamble and in Chapter 9 of the Response to Comments Document. None of the comments received resulted in a material change in the EPA's rationale and conclusions from proposal. The following provides a summary of the EPA's legal interpretation of CAA section 111(d)(1) and rationale for why the lack of regulation of existing sources under CAA section 111(d) will have a limited environmental impact.

A. Existing Source Regulation Under CAA Section 111(d)

As the EPA stated at proposal (see section VII of the 2019 Proposal preamble), CAA section 111(d) authorizes the regulation of existing sources in a source category for particular air pollutants to which a standard of performance would apply if those existing sources were new sources. By legal operation of the terms of CAA section 111(d), certain existing sources in the Crude Oil and Natural Gas Production source category will no longer be subject to regulation under CAA section 111(d) as a result of this final rule. Under CAA section 111(d)(1)(A), CAA section 111(d) applies only to air pollutants (1) for which air quality criteria have not been issued, and which are not on the EPA's list of air pollutants issued under CAA section 108(a) (commonly referred to as the ''CAA 108(a) exclusion''), and (2) which are not HAP emitted from a source category regulated under CAA section 112 (commonly referred to as the ''CAA 112 exclusion''). *See* 42 U.S.C. 7411(d)(1)(A) (CAA section 111(d) applies to ''any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title'').

For reasons set out in the proposal preamble, the EPA has concluded that VOC fall within the CAA 108(a) exclusion and, thus, are not the type of air pollutant that, if subjected to a standard of performance for new sources, would trigger the application of CAA section 111(d). VOC are not expressly listed as CAA section 108(a) pollutants, but they are precursors to photochemical oxidants (*e.g.,* ozone) and PM, both of which are listed CAA section 108(a) pollutants. As provided in CAA section 302(g), the term ''air pollutant'' is defined to include

for that rule, the unique CO_2 emissions profile of fossil fuel-fired EGUs should be noted: The volume of emissions from EGUs dwarfs the amount of GHG emissions from every other source category.

precursors ''to the extent that the Administrator has identified such precursor or precursors for the particular purpose for which the term 'air pollutant' is used.'' For the following reasons, it is appropriate to consider VOC within the scope of photochemical oxidants and PM, which are listed CAA section 108(a) pollutants, for the particular purpose of applying the CAA section 108 exclusion in CAA section 111(d).

First, VOC are regulated through the CAA's NAAQS implementation program established under CAA section 110, as a result of the inclusion of ozone and PM on the CAA section 108(a) list, because VOC are precursors to those two listed pollutants. See, *e.g.,* CAA section 182(b)(2) (establishing ''reasonably available control technology'' requirements for VOC sources in moderate ozone attainment areas); CAA section 182(c)(2)(b) (requiring serious ozone areas to submit a reasonable further progress demonstration that will account for a set amount of VOC emissions reductions); CAA section 182(d)(2) (requiring specific VOC reductions to satisfy the offset requirement for severe areas); CAA section 182(e)(1) (requiring specific VOC reductions to satisfy the offset requirement for extreme areas). Indeed, the regulation of ozone precursors is the means of addressing ozone in the ambient air, because ozone levels in the ambient air are the result of photochemical reactions of precursors (VOC and NO_X), as opposed to being directly emitted from sources.

Second, as explained in the proposal preamble, excluding VOC from regulation under CAA section 111(d) makes sense within the CAA's three-part structure for addressing emissions from stationary sources. As the EPA has discussed in past rulemakings, the CAA sets out a comprehensive scheme for air pollution control, addressing three general categories of pollutants emitted from stationary sources: (1) Criteria pollutants (which are addressed in CAA sections 108 through 110); (2) hazardous pollutants (which are addressed under CAA section 112); and (3) ''pollutants that are (or may be) harmful to public health or welfare but are not or cannot be controlled under [CAA] sections 108–110 or 112.'' ''Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units: Final Rule,'' 80 FR 64661, 64711 (October 23, 2015) (quoting 40 FR 53340 (November 17, 1975)). Within this three-part structure, CAA section 111(d) is properly understood as a ''gap-filling'' measure to address pollutants that are not addressed under either the criteria pollutant and NAAQS implementation provisions in CAA sections 108 through 110 or the HAP provisions in CAA section 112. Because VOC are regulated as precursors to ozone and $PM_{2.5}$ under CAA sections 108 through 110, they are properly excluded from regulation under CAA section 111(d) because the ''gap-filling'' function of CAA section 111(d) is not needed.

Third, reading the phrase ''included on a list published under [CAA section 108(a)]'' as including precursors is reasonable in light of the provision in CAA section 112(b)(2) that restricts what pollutants may be listed as CAA section 112 HAP.

Finally, as discussed in detail in the proposal preamble, the fact that precursors are not always treated as CAA section 108(a) listed pollutants under all contexts across the CAA does not undermine the conclusion that they should be excluded under the CAA section 108 exclusion in CAA section 111(d).

B. Impact of Lack of Regulation of Existing Oil and Natural Gas Sources Under CAA Section 111(d)

The EPA maintains its position from the proposed rule that the lack of regulation of existing sources under CAA section 111(d) through an Emission Guideline (EG) will have limited impact. This is because there are several factors that will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources even in the absence of an EG.

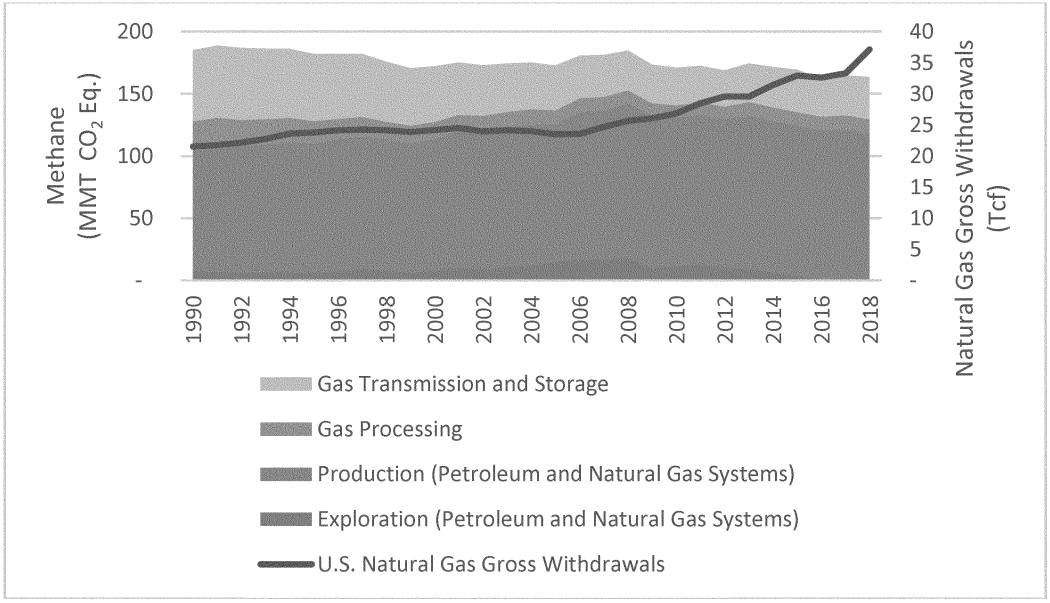
First, as the EPA stated in the 2019 Proposal preamble, the 2016 Rule includes a definition and approach to determining new source applicability that are very broad, and in the specific context of the oil and natural gas production industry, can be anticipated to result in wide applicability of the NSPS to existing sources due to the frequency with which such sources can be reasonably expected to engage in ''modification'' activity. Specifically, it would take at least 7 years from date of promulgation of an EG for requirements to be fully implemented.[50] During this time, the EPA expects that a percentage of existing sources will shut down or undertake modification which will result in them becoming subject to regulation under CAA section 111(b). However, based on limited information that commenters submitted, the EPA acknowledges there may be some existing sources that have never been modified and accepts that these are examples of existing sources that have continued to operate for long periods of time without being reconstructed or modified. The EPA did not prepare and include a quantitative analysis that estimates the levels at which source modification/equipment turnover may occur. However, the EPA maintains that this is one factor (among other factors) that in the absence of an EG will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources.

Secondly, there are market incentives for the oil and natural gas industry to capture as much natural gas (and, by extension, methane) as is cost effective. Depending on the future trajectories of natural gas prices and the costs of natural gas capture and emission reductions, market incentives may continue to drive emission reductions, even in the absence of specific regulatory requirements applicable to methane emissions from existing sources. Assessing the relationship of methane emissions and natural gas production, overall natural gas gross withdrawals have increased about 50 percent from 1990 to 2018, while aggregate methane emissions from the NSPS subpart OOOOa-relevant industry segments have stayed relatively flat (Figure 1). This trend indicates decreasing aggregate methane emissions intensity for these segments over this period (Figure 1). These trends are likely driven by a combination of economic and technical advances.

[50] This estimation considers the development of states' plans and the Federal plan. Unlike NSPS, EG are not directly enforceable; thus, these mechanisms are critical for implementation.

[51] Methane emissions from Table 3–37 (Petroleum Systems) and Table 3–57 (Natural Gas Systems) in U.S. EPA. 2020. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018. EPA 430–R–20–002. Available at: *https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018.* Accessed July 1, 2020. U.S. Energy Information Administration (EIA) data on natural gas gross withdrawals available at: *https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm.* Accessed July 1, 2020.

FIGURE 1. NET EMISSIONS OF METHANE EMISSIONS (FROM 2020 GHGI) and U.S. NATURAL GAS GROSS WITHDRAWALS IN TRILLION CUBIC FEET (TCF) (FROM U.S. ENERGY INFORMATION ADMISTRATION NATURAL GAS DATA), 1990 TO 2018.[51]



While environmental performance is a challenging concept to quantify in monetary terms, improving such performance is increasingly important for firms that seek to maintain a ''social license to operate.'' Generally speaking, the social license to operate means that the firm's employees, investors, customers, and the general public find that the firm's business activities and operations are acceptable to continue to freely participate in the marketplace. Maintaining the social license by improving environmental performance, such as reducing emissions, can help firms respond to the complex environment within which they operate in ways that are favorable to their longer-term business interests.

Third, the EPA maintains, and has received a substantial amount of comments confirming its position that participation in the various voluntary methane emissions mitigation programs is one factor (among other factors) that in the absence of an EG that will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources. Owners and operators of facilities in the oil and natural gas industry participate in voluntary programs that reduce their methane emissions. Specifically, many owners and operators of facilities participate in two EPA partnership programs: The Natural Gas STAR Program[52] and the Methane Challenge Program.[53] Owners and operators also participate in voluntary programs that are not administered by the EPA, such as the Environmental Partnership[54] and the Climate and Clean Air Coalition (CCAC) Oil & Gas Methane Partnership.[55] Firms might participate in voluntary environmental programs for a variety of reasons, including attracting customers, employees, and investors who value more environmentally responsible goods and services; finding approaches to improve efficiency and reduce costs; and reducing pressures for potential new regulations or helping shape future regulations.[56] [57] The EPA does acknowledge that the industry as a whole is not uniformly meeting voluntary measures at the same level of control and that some companies may not be participating in cited voluntary methane emissions programs at all. This makes it difficult to verify the impacts on emissions as a result of voluntary program participation. Additional time will be needed to allow these programs to further develop and to be fully implemented to better quantify the impacts the varied programs have on

[52] The Natural Gas STAR Program started in 1993 and seeks to achieve methane emission reductions through cost-effective best practices and technologies. Partner companies document their voluntary emission reduction activities and report their accomplishments to the EPA annually. Natural Gas STAR includes over 100 partners across the natural gas value chain and has eliminated nearly 1.39 trillion cubic feet of methane emissions since 1993.

[53] The Methane Challenge Program, started in 2016 and designed for companies that want to adopt more ambitious actions for methane reductions, expands the Natural Gas STAR Program through specific, ambitious commitments; transparent reporting; and company-level recognition of commitments and progress. This program includes more than 50 companies from production, gathering and boosting, transmission and storage, and distribution.

[54] The Environmental Partnership is composed of various companies of different sizes and includes commitments to replace all high-bleed pneumatic controllers with low-bleed controllers (*i.e.,* controllers with a bleed rate less than 6 scfh) within 5 years, require operators to be on-site or nearby when conducting liquids unloading, and require initial monitoring for fugitive emissions at all sites within 5 years, with repairs completed within 60 days of fugitive emissions detection. *https://theenvironmentalpartnership.org/.*

[55] The CCAC Oil and Gas Methane Partnership is a technical partnership between oil and natural gas companies, the Environmental Defense Fund, the EPA Natural Gas STAR Program, and the Global Methane Initiative that provides technical documents on a wide variety of opportunities for reducing methane emissions and requires annual progress reports from its participants. Yearly data on the progress being made by participants is available on the CCAC website. *http://ccacoalition.org/en/content/oil-and-gas-methane-partnership-reporting.*

[56] Borck, J.C. and C. Coglianese (2009). ''Voluntary Environmental Programs: Assessing Their Effectiveness.'' Annual Review of Environment and Resources. 34(1): 305–324.

[57] Brouhle, K., C. Griffiths, and A. Wolverton (2009). ''Evaluating the role of EPA policy levers: An examination of a voluntary program and regulatory threat in the metal-finishing industry.'' Journal of Environmental Economics and Management. 57(2): 166–181.

reducing emissions from oil and natural gas industry sources.

Fourth, several major oil and natural gas producing states have established regulations on oil and natural gas sector emissions. The EPA recognizes that state requirements vary in stringency and that only a subset of states include requirements for sources that the EPA could potentially define as existing sources. However, states that have standards applicable to existing sources include California, Colorado, Utah, Wyoming (in the Upper Green River Basin ozone non-attainment area), and Texas, and account for a substantial portion of oil [58] and natural gas production [59] in the United States. Furthermore, current state regulations (and permits) controlling VOC emissions will concurrently reduce methane emissions from the oil and natural gas industry. For example, areas that are designated Moderate nonattainment and above for certain ozone NAAQS, and states within the Ozone Transport Region, are required to adopt and implement VOC controls for oil and gas sources covered by the EPA's 2016 Control Techniques Guidelines.[60] These controls, which the EPA will address through the state implementation plan (SIP) approval process, will concurrently reduce methane emissions.

As with other factors cited by the EPA, existing source state requirements are one factor (among others) that in absence of an EG will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources. Further detail regarding comments received on the potential for limiting emissions from existing sources can be found in section X of this preamble.

VIII. Summary of Major Comments and Responses

In this section, we respond to many of the major comments made on the 2019 Proposal. In the Response to Comments Document in the docket, we provide additional discussion for some of these comments, and respond to additional comments.

A. Revision of the Source Category To Remove Transmission and Storage Segment

1. History of Scope of Oil and Natural Gas Source Category

Comment: Commenters assert that language in CAA section 111 demonstrates that Congress contemplated that source categories would be broad and encompass a variety of different types of emission sources. The commenters disagree that the 1979 listing did not include the natural gas transmission and storage segment, and add that, in 1980, the Agency explained: ''Source categories are intended to be broad enough in scope to include all processes associated with the particular industry.'' Commenters state that, in practice, the EPA has long listed broad source categories, covering an entire industry or a source that may be found in numerous industries, and sometimes establishing different subcategories within source categories, including electric utilities, non-metallic mineral processing, and compressor engines. The commenters contend that the EPA's treatment of other source categories soon after the priority listing process consistently recognized the interrelatedness of facilities or of emissions controls for those facilities and that this helps determine what sources to include in each source category. Although petroleum refineries are a separate source category under CAA section 111, the commenters note that the EPA previously explained that the source category for the asphalt roofing industry ''encompasses not only asphalt roofing plants but certain production units at oil refineries and asphalt processing plants which were not included on the Priority List promulgated on August 21, 1979.'' 45 FR 76405.

Response: The EPA has generally exercised discretion in identifying the scope of any particular industry, including which industrial processes it includes, for purposes of treating it as a source category under CAA section 111.[61] The EPA acknowledges that some of the listed source categories were broad in scope. However, the EPA has also listed source categories that are relatively narrow in scope—they have distinct facility boundaries that encompass a particular process that, in turn, follows a linear path and results in a specific product. Examples of narrowly defined source categories include the following.

- *Primary Copper Smelting, Subpart P:* A primary copper smelter is any installation or any intermediate process engaged in the production of copper from copper sulfide ore concentrates through the use of pyrometallurgical techniques. The affected facilities in primary copper smelters are dryers, roasters, smelting furnaces, and copper converters.
- *Nitric Acid Plants, Subpart G and Ga:* A nitric acid plant is a nitric acid production unit, which, in turn, is any facility producing weak nitric acid by either the pressure or atmospheric pressure process.
- *Kraft Pulp Mills, Subparts BB and BBa:* A kraft pulp mill is any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill. The affected sources are digester systems, brown stock washer systems, evaporator systems, condensate stripper systems, recovery furnaces, smelt dissolving tanks, and lime kilns at kraft pulp mills.
- *Sulfuric Acid Plants, Subpart H:* The affected sources are sulfuric acid production units. These are defined as any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfide and mercaptans, or acid sludge, but do not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

If the EPA does not originally include in a listing certain processes, and subsequently seeks to include those processes, the EPA must make the requisite statutory findings in order to do so. The action that the commenters cite supports this point. In the original 1979 Priority List, the EPA listed the Asphalt Roofing Plants source category. Subsequently, based on studies on the asphalt roofing industries, the EPA determined that the initial processing of asphalt for roofing manufacture may take place at sources other than asphalt roofing plants. Accordingly, the EPA, through rulemaking, amended the 1979 source category listing to include additional locations such as asphalt processing plants and asphalt storage tanks at oil refineries. *See* 45 FR 76427 and 28. In doing so, the EPA provided a specific rationale for broadening the source category. The present situation

[58] Approximately 52 percent of crude oil production in 2019 according to *https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm.*

[59] Approximately 35 percent of natural gas production in 2019 according to *https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_VGM_mmcf_a.htm.*

[60] On October 27, 2016, the EPA provided notice of the availability of a final control techniques guideline document titled *Control Techniques Guidelines for the Oil and Natural Gas Industry* (EPA 453/B–16–001). 81 FR 74798 (October 27, 2016).

[61] The EPA has not relied on particular formulations, such as standard industrial classification, to identify an industry for purposes of classifying it.

requires a similar analytical framework: (1) The original source category listing for Crude Oil and Natural Gas Production was not broadly defined to include transmission and storage, and (2) the requisite statutory findings have not been made to expand the category to include it.

Comment: Several commenters assert that nothing in the 1979 listing decision supports the EPA's claim that the Agency at the time viewed facilities used in natural gas transmission and storage (*e.g.,* stationary pipeline compressor engines) as a separate source category.

Another commenter asserts that the omission in the 1979 listing of a source in the transmission and storage segment that had been included in the 1978 technical document suggests that this source was incorporated into the Crude Oil and Natural Gas Production source category. The commenter states that, while the EPA studied Stationary Pipeline Compressor Engines, which are found in the transmission and storage segment, as a potential independent source category in the 1978 technical document,[62] this source was not listed as a major or minor source in the 1979 Listing.[63] The commenter states that, while the Agency argues that the source was included in the Stationary Internal Combustion Engines listing, the EPA supports this proposition only by citing to a 2008 rule, which does not expressly include stationary pipeline compressor engines within the Stationary Internal Combustion Engines source category.[64] The commenter notes that the EPA cites to a page stating that ''[c]ategories and entities potentially regulated by this action'' include ''[a]ny manufacturer that produces or any industry using a stationary internal combustion engine as defined in the final rule.'' 73 FR 3568 and 69. The preamble contains a list of ''[e]xamples of regulated entities'' that includes ''[n]atural gas transmission.'' 73 FR 3569. However, according to the commenter, the applicability criteria of the final rule contains no explicit reference to stationary pipeline compressor engines.

Response: As a general matter, the Agency has the authority to revisit its prior categorization determinations. Nonetheless, the EPA, upon a close read of its prior rules believes that this and certain other comments on prior Agency determinations are mistaken, as described further in this section. The EPA notes that while it believes the 1979 listing did not include the transmission and storage segment for the reasons described in this final rule, any interpretation otherwise (*i.e.,* that the listing did include this segment) did not have any practical effect until the 2012 Rule, when the EPA promulgated standards for this segment for the first time. Therefore, to the extent the 1979 listing can be considered to have included the transmission and storage segment, the EPA is alternatively determining that such inclusion was incorrect for the same reasons why the 2012 and 2016 Rules incorrectly included the segment as part of the source category.

The EPA disagrees with the commenter's suggestion that the 1979 listing incorporated stationary pipeline compressor engines into the Crude Oil and Natural Gas Production source category. This is clearly evidenced by examining the pollutants which are identified for the category. For the 1979 listing, the pollutants identified for the Crude Oil and Natural Gas Production source category were VOC and SO_2. In the 1978 background documentation, the pollutants identified for stationary pipeline compressor engines were NO_X, SO_2, and carbon monoxide (CO). If the EPA had included stationary pipeline compressor engines in the Crude Oil and Natural Gas Production source category in 1979, the Agency likely would have added NO_X and CO to the list of pollutants for the category.

That the Stationary Internal Combustion Engine rule (40 CFR part 60, subpart IIII) covers engines in the natural gas transmission and storage segment is further evidenced by the statement from the February 26, 2008, **Federal Register** document that specifically identifies engines in natural gas transmission as example entities subject to the rule. The commenter is incorrect in asserting that the applicability criteria of the regulations are silent on engines in natural gas transmission. Those applicability criteria are *characteristics* of the engine (*e.g.,* maximum engine power), which are unrelated to the *location* of the engine (*e.g.,* in the transmission segment). *See* § 60.4230 of 40 CFR part 60, subpart JJJJ. Therefore, the lack of explicit mention of the transmission segment does not mean that engines in that segment are not included in the category.

Comment: Several commenters stated that the description of the Crude Oil and Natural Gas Production source category in the 1984 proposed NSPS for VOC and SO_2 emissions made clear that the category did not include transmission and storage operations. The commenters pointed to the statement in the preamble that the source category excluded emission sources related to the ''distribution'' of products ''to petroleum refineries and gas pipelines'' (citing, *e.g.,* 49 FR 2636.

Other commenters disagree. One commenter asserts that the EPA defined the source category as ''encompass[ing] the operations of exploring for oil and natural gas products, drilling for these products, removing them from beneath the earth's surface, and processing these products from oil and gas fields for distribution to petroleum refineries and gas pipelines.'' The commenter states that it is clear that compressor stations within the transmission and storage segment ''process these products . . . for distribution'' by compressing the gas and forcing it through the pipelines.

Response: The EPA does not agree with the commenter's interpretation of the quotation from the 1984 proposal. Specifically, the EPA does not agree that the compression of the natural gas along transmission pipelines constitutes processing of the natural gas. Natural gas processing has historically been defined by the Agency to include the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. (40 CFR part 60, subpart KKK; 40 CFR part 63, subpart HH). The EPA maintains that the language in the 1984 proposal, *i.e.,* that the category includes ''the operations of exploring for oil and natural gas products, drilling for these products, removing them from beneath the earth's surface, and processing these products from oil and gas fields for distribution to petroleum refineries and gas pipelines,'' is not ambiguous. Following the well-defined ''processing'' operations, the natural gas enters transmission gas pipelines. These are the gas pipelines referred to in the 1984 preamble, meaning that the gas leaves the processing segment of the oil and natural gas production source category and travels to the next segment, the natural gas transmission pipelines.

Comment: One commenter asserts that, within the 1984 definition of the production segment, the EPA drew a definitional boundary whereby production consisted of extraction ''and processing [of oil and natural gas] for distribution to petroleum refineries and gas pipelines.'' The commenter states that this implies that the boundary at which the Agency has always historically defined the category as being where production meets local distribution to pipelines or refineries. The commenter states that this interpretation of the CAA meant that the

[62] U.S. EPA. Priorities for New Source Performance Standards Under the Clean Air Act Amendments of 1977. April 1978. EPA–450/3–78–019. p. 33.

[63] 44 FR 49222 through 49226.

[64] 73 FR 3568, 3569 (January 18, 2008).

production segment abuts the distribution end of the industry—not an arbitrarily created ''Transmission and Storage'' segment.

Response: The EPA's use of the term ''distribution'' in the 1984 preamble was misinterpreted by the commenter. The commenter appears to interpret ''distribution'' as the distribution segment of the natural gas industry, and that the source category includes everything up to that segment. In the context of the 1984 preamble, the EPA's use of the term ''distribute'' means the transfer to the next segment of the industry.

Comment: A commenter asserts that the 1984 proposal serves to demonstrate that the EPA did not view its listing as constrained to its literal terms—''Crude Oil and Natural Gas Production''—because the 1985 NSPS regulated the processing, not the production, segment of the natural gas industry. Specifically, the EPA stated that, with regard to the discussion of equipment leaks, ''equipment used in crude oil and natural gas production (not to be confused with natural gas processing) for equipment leaks of VOC is not appropriate for widely dispersed equipment.'' 49 FR 2637. The commenter states that, taken to a literal extreme, the proposal's argument would mean that the 1985 NSPS exceeded the scope of the source category and was, thus, unlawful.

Response: The EPA agrees that the language that the commenter quotes indicates the Agency's view in the 1985 NSPS that the source category covered both production and processing. However, this does not in turn mean that the Agency thought that the source category included the transmission and storage segment as well. As described above, the 1984 proposal acknowledged equipment leaks in the production segment but declined to set standards for them based on a technical analysis. This discussion makes clear that the Agency considered production to be part of the source category. In contrast, as discussed above, the preamble is silent on equipment leaks in the transmission and storage segment.

Comment: Further, the commenter states that the EPA's proposal appears to concede that the Agency has never been limited to regulating only those specific sources within the listed category that it regulated in the first NSPS. The commenter states that, prior to 2012, the EPA had issued standards for emissions at gas processing plants only as part of the ''Crude Oil and Natural Gas Production.'' The commenter notes that in 2012 the EPA regulated VOC from previously unregulated upstream sources, including well completions, centrifugal compressors, reciprocating compressors, pneumatic controllers and storage vessels (citing 77 FR 49490 (Final Rule promulgating 40 CFR part 60, subpart OOOO)). The commenter states that these sources were not part of the EPA's analysis in 1979 or 1984 NSPS, yet the proposal does not suggest that they were improperly regulated in the 2012 Rule. Specifically, in 2012 the EPA stated: ''[i]n addition to the operations covered by the existing standards, the newly established standards will regulate volatile organic compounds from gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers and storage vessels'' (citing 77 FR 49490).

The commenter also indicates that the EPA's citation to the 1984 NSPS ignores other statements made during other rulemakings for the source category, including the same 1984 rulemaking, that suggest that the source category was intended to cover broadly the oil and natural gas sector, or at least was not limited to production and processing (citing 84 FR 50256). The commenter states that, in that NSPS, the EPA felt the need to exclude specifically certain sources found in the transmission and storage segment from the standards it set, something that would not have been necessary if the Agency had intended to exclude these segments themselves from the definition of the source category. The sources excluded in that NSPS are compressor stations, dehydration units, sweetening units, underground storage facilities, and field gas gathering systems, unless the facility is located at an onshore natural gas processing plant.

Response: The commenter's representation of the 1984 rulemaking is not entirely accurate. It is true that the 1984 proposal limits the sources covered to those at natural gas processing facilities. However, the EPA does not agree that this rulemaking was an expansion of the original ''Crude Oil and Natural Gas Production'' source category. The commenter is implying that natural gas processing operations were not included in the original source category listing in 1979 but does not provide any evidence from the 1978/1979 actions to support that assertion. An alternative interpretation of this text could also be that the Agency wished to make it sufficiently clear that while sources in part of the production and processing segment are included in the source category, the same sources that are part of the transmission and storage segment are not included in the source category. However, in the absence of an explanation for this exclusion, the most that can be taken away from this text is that these sources are not subject to the 1984 NSPS; this text alone is not dispositive on whether these sources are included in the broader Oil and Natural Gas source category. Therefore, the commenter extrapolates a conclusion without a basis to do so. The fact that SO_2 was a pollutant identified for the Crude Oil and Natural Gas Production source category clearly shows that processing was included, as the sweetening units covered by the 1984 proposed rules are the primary source of SO_2 emissions in the oil and natural gas industry.

In addition, there are numerous statements made by the EPA throughout the 1984 proposal that clearly demonstrate consideration of sources across the entire Crude Oil and Natural Gas Production source category. The commenter cites the statement in the1984 proposal that emission points can be divided into three categories and uses this statement to argue that the source category included transmission and storage. However, the comment fails to include the remainder of the paragraph that includes that statement:

> These emission points can be divided into three main categories: Process, storage, and equipment leaks. Process emission sources include well systems, field oil and gas separators, wash tanks, steeling tanks, and other sources. *These process sources remove the crude oil and natural gas from beneath the earth and separate gas and water from the crude oil. Best demonstrated control technology has not been identified for these process emission points; therefore, these sources have not been considered in developing the proposed standards.* 49 FR 2637 (emphasis added).

This part of the paragraph clarifies two points. First, the EPA clearly considered the upstream sources (well systems, field oil and natural gas separators, etc.) as part of the source category but indicated that since best demonstrated control technology had not been identified for those sources, no standards were being proposed at that time. These sources were then addressed in the 2012 rulemaking, when the best demonstrated technology/BSER had been determined for them. Second, this discussion did not mention operations in the transmission segment.

One commenter also refers to the parenthetical in the 1984 proposal related to oil and natural gas production and argues that it is proof that natural gas processing was not included in the Crude Oil and Natural Gas Production source category. The following provides more of the discussion to provide the full context.

> Equipment leaks of VOC can occur from pumps, valves, compressors, opened ended

lines or valves, and pressure relief devices used in onshore crude oil and natural gas production. These leaks usually occur due to design or failure of the equipment. Equipment used in crude oil and natural gas production (not to be confused with natural gas processing) are widely dispersed over large areas. The analysis presented in the BID for the principal control technique (leak detection and repair work practices) for equipment leaks of VOC is not appropriate for widely dispersed equipment. The costs and emission reduction numbers for such an analysis are unknown at this time. Thus, the proposed standards do not apply to equipment associated with crude oil and natural gas production. The proposed standards apply only to equipment located at onshore natural gas processing plants. 49 FR 2637.

Taking the 1984 preamble excerpt in context illustrates that the distinction made between production and processing was specifically related to the application of leak detection and repair work practices for equipment leaks and not to define the source category. In fact, the discussion makes it clear that the EPA's definition of the source category includes production and processing. Again, there is no mention here of the application of leak detection and repair programs to the transmission and storage segment.

Finally, the commenter cites a paragraph from the proposed regulation, which clarifies that sources not located at a natural gas processing plant are not affected facilities, as evidence that the category includes the transmission and storage segment, since ''compressor stations'' are included. This is also not a compelling argument. It is not uncommon for equipment, other than that used to extract natural gas liquids from field gas or to fractionate mixed natural gas liquids to natural gas products, to be located at a natural gas processing plant. This paragraph—40 CFR 60.630(e)—simply clarifies that if other operations (*i.e.,* compressor stations, dehydration units, sweetening units, underground storage facilities, field gas gathering units, and liquefied natural gas units) are located at a natural gas processing plant, the associated components are subject to the leak detection and repair requirements in NSPS subpart KKK. This list cannot be extrapolated to the conclusion that the EPA considered all these operations to be in the source category. As evidence of this note that ''liquefied natural gas units'' are included in the list. These units, while part of the overall oil and natural gas industry, have never been contemplated as being part of the Crude Oil and Natural Gas source category.

2. ''Sufficiently Related'' Test and Whether Transmission and Storage Operations Are Distinct From Production and Processing

Comment: Commenters contend that the proposal to amend the source category definition is fundamentally at cross-purposes with the proposal to remove standards of performance for methane. The EPA proposed to justify the latter by finding that regulation of methane and VOC is redundant because the controls that sources are required to implement to reduce their VOC emissions will also reduce their methane emissions, and this is true regardless of the relative amounts of VOC and methane in their overall emissions. The commenters state that if methane regulation is redundant on those grounds, then differences in gas composition cannot be the basis for determining that two distinct source categories are necessary.

Response: The commenters conflate the proposal to remove the transmission and storage segment from the source category with the proposal to rescind the methane requirements for the remaining production and processing segment, without acknowledging that while the substance of each may have technical similarities, each proposal addresses discrete, stepwise legal aspects of CAA section 111(b). Under CAA section 111(b), a source category must first be listed before the EPA can promulgate an NSPS for sources within the category. The EPA proposed the first action of removing the transmission and storage segment from the source category, in part based on the conclusion that the segment was not previously properly added to the source category because there are distinct differences in operations and differences in the emissions profiles between the production and processing segments and the transmission and storage segment. As described further in this section, based on the sufficiently related test, these distinct differences in operations and differences in emissions profile means that the transmission and storage segment requires a separate SCF in order to be properly regulated under CAA section 111(b).

However, once a source category is properly listed and defined, as are the production and processing segments, the inquiry then is what are the appropriate standards of performance for sources within that category. This inquiry is separate from and subsequent to the initial inquiry of whether a source category is properly identified for regulation under CAA section 111(b). For example, the EPA has previously identified sources as appropriately subject to regulation under CAA section 111(b), but then subsequently declined to promulgate standards of performance based on inadequate data. In proposing VOC standards for equipment leaks in oil and gas processing, the EPA declined to apply such standards to equipment in the production segment, which is clearly part of the source category, because it did not have data on costs and emission reduction numbers at that time. 49 FR 2637.

Similarly, here, while the production and processing segments have been properly identified as subject to regulation under CAA section 111(b) through the 1979 listing of the source category, the EPA must then contend with *how* to regulate these segments. Accordingly, the EPA proposed the second action to rescind the methane requirements for the production and processing segments based on the fact that VOC and methane controls are redundant. While the rationales for both actions are premised partly on differences in gas composition, the legal and technical inquiry for each action is different, as these are discrete steps to regulation under CAA section 111(b). Though the findings under each inquiry are similarly premised on differences in gas composition, that does not mean that the response to both inquiries must be the same, as each inquiry is distinctly different from one another (*i.e.,* one is whether the transmission and storage segment is properly part of the source category, the other is whether and how to regulate methane from the production and processing segments). The rationale for this second action was also discussed at length in section IV.D of the 2019 Proposal (84 FR 50259 and 50260). The comments received and the EPA responses on this second action are provided in section VIII.B below.

Comment: Commenters do not agree that the transmission and storage segment cannot be included in the Crude Oil and Natural Gas source category because the gas composition and operations in that segment are too different from those in the production and processing segments. These commenters assert that the EPA's own data do not support the EPA's rationale. The commenters suggest that, while the EPA compares the average composition of the production segment to the average composition of the transmission segment, the Agency fails to consider the extensive overlap in the range of compositions in both segments. The commenters state that the EPA's 2011 Natural Gas Composition memorandum data show the wide range of compositions of gas in the production

and transmission segments.[65] The commenters contend that the range of methane compositions in the production segment fully encompasses the range in the transmission segment, demonstrating the similarity of the gas composition in the two segments; similarly, there is extensive overlap between the segments' VOC compositions.

Commenters also discussed the EPA's more recent 2018 composition data,[66] asserting that it shows even more variation in gas composition. A commenter asserts that while the EPA recognizes that variations in the gas composition can occur from basin-to-basin within each segment, the EPA does not acknowledge that these basin-to-basin variations can swamp the purported variations on which the EPA relies to justify a distinction between production and transmission segments.

One commenter states that its experience with the oil and natural gas industry operating in Pennsylvania shows that unprocessed field gas[67] can range from, by volume, 75-percent to 98-percent methane and 0.1-percent to 10-percent VOC. The commenter states that in a number of Pennsylvania counties, the county average field gas composition meets the EPA's pipeline quality gas composition (*i.e.,* is equal to or greater than 93-percent methane and less than or equal to 1-percent VOC; HAP data is unavailable). The commenter states that there are several natural gas well pads that dehydrate the produced gas onsite and transfer custody directly to an interstate pipeline. The commenter notes that this reality further blurs the distinction between the production and the transmission and storage segments. The commenter contends that, if a well site is required to meet the requirements of the 2016 Rule, it stands to reason that a transmission compressor station accepting the same gas should be required to meet the same requirements.

One of the commenters also notes that the 2018 Natural Gas Composition memorandum did not include any updated data for the transmission and storage segment. The commenter states that, given the significant difference in the production segment data from 2011 and 2018, the EPA must collect more current data for the transmission and storage segment if it seeks to justify any claims about the segment being sufficiently distinct from production and processing to warrant revision of the source category.

Response: The EPA recognizes that the composition of natural gas in the production segment can vary considerably, and that in some basins/areas it is possible that the composition can mirror that in the transmission segment. However, while the commenters stress this overlap in the gas composition in limited geographical regions in the U.S., such as in some parts of Pennsylvania, they seem to discount the substantial differences in most areas. For example, for Texas, the EPA's 2011 gas composition analysis showed that the methane content in the production segment was, on average, 80.1 percent, but ranged from 55.0 percent to 97.8 percent.[68] Because the NSPS subpart OOOOa is a nationwide regulation which applies equally across the country, it is most appropriate to consider the average composition for the segments. Further, on a nationwide basis, the data clearly reveal a distinction in the gas composition between the production and processing segments and the transmission and storage segment.

The commenter is correct that the 2018 Natural Gas Composition memorandum did not include data for the transmission and storage segment. The EPA conducted a new analysis which analyzed average methane concentrations using 2015 through 2018 data reported under 40 CFR part 98, subpart W (Petroleum and Natural Gas Systems), of the EPA's GHGRP.[69] This analysis did include recent data for the transmission and storage segment. The EPA found that there is a statistically significant difference between the average methane concentration in natural gas at either the gas production, gathering and boosting, or gas processing[70] industry segments and the average methane concentration in natural gas at either the transmission compression or underground storage segment. This difference further supports the EPA's justification to remove the transmission and storage segment from this source category.

Comment: Several commenters disagree with the EPA's statements in the 2019 Proposal that equipment and operations in the production and processing segments were not interrelated with the transmission and storage facilities. The commenters contend that while the transmission and storage segment serves a different role than the production, processing, and distribution segments, it is still part of the overall oil and natural gas industry and is a necessary element of the source category because it prepares the recovered gas for distribution. They add that, as the 2019 Proposal notes, the processes used to remove impurities (for example, dehydrators) in the production and processing segments are also used in the transmission and storage segment (citing 84 FR 50258). Commenters noted that the 2016 Rule stated that the equipment and operations at production, processing, transmission, and storage facilities are a sequence of functions that are interrelated and necessary for getting the product ready for distribution (citing 81 FR 35838). Commenters also noted that the 2016 Rule also cited the increase in natural gas production from hydraulic fracturing and horizontal drilling as an example of the interrelated nature of the industry—*i.e.,* increased production resulting in an increase in the amount of natural gas needing to be processed and moved to market or stored, which in turn results in increases in emissions across the entire natural gas industry.

Response: The EPA agrees with the commenters that production, processing, transmission and storage are all segments of the oil and natural gas industry and that the transmission and storage segment is a part of the industry because it prepares the recovered gas for distribution.

However, this does not necessitate that all of the segments belong in the same source category for regulatory purposes under CAA section 111. As explained in the 2019 Proposal, the primary purposes of each segment differs. The purposes of the production and processing segments are to explore, drill, extract, and process crude oil and natural gas found beneath the earth's surface. Extracting crude oil and field gas through drilling wells and processing these products for distribution to petroleum refineries and gas pipelines is an industrial process that is distinct from the transmission and storage segment, whose primary purpose is to move to market pipeline quality natural gas through transmission

[65] Memorandum to Bruce Moore, U.S. EPA from Heather Brown, EC/R. ''Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking.'' July 2011. Docket ID Item No. EPA–HQ–OAR–2010–0505–0084.

[66] Memorandum to U.S. EPA from Eastern Research Group. ''Natural Gas Composition.'' November 13, 2018. Docket ID No. EPA–HQ–OAR–2017–0757.

[67] Field gas is described earlier in section V.B of this preamble.

[68] Memorandum to Bruce Moore, U.S. EPA from Heather Brown, EC/R. ''Composition of Natural Gas for use in the Oil and Natural Gas Sector Rulemaking.'' July 2011. Docket ID Item No. EPA–HQ–OAR–2010–0505–0084.

[69] Analysis of Average Methane Concentrations in the Petroleum and Natural Gas Industry Using Data Reported Under 40 CFR part 98 Subpart W. April 6, 2020. Included in Docket ID No. EPA–HQ–OAR–2017–0757.

[70] Methane concentrations at gas processing facilities evaluated in this study are based on the inlet gas composition (as received) by the gas processing facilities.

pipelines by increasing the pressure and to store the gas underground along the pipeline.

The EPA understands that dehydrators are used to remove impurities from the natural gas in both the production and processing segments and in the transmission and storage segment. In the latter segment, dehydrators are occasionally present along transmission pipelines and at natural gas storage facilities to remove water and other impurities that condense as a result of temperature and pressure changes as the gas moves through the pipeline or is stored underground. However, the different uses of dehydrators illustrate the separate functions that the segments have in the industry. In the transmission and storage segment, dehydrators simply remove these impurities as they accumulate in pipelines. In the production and processing segment, dehydrators are a part of the process to change the overall composition of the gas. It is also noteworthy that the EPA included and regulated air toxics emissions from dehydrators in two separate source categories and in two different NESHAP. Dehydrators in the production and processing segments are covered by 40 CFR part 63, subpart HH, and dehydrators in the natural gas transmission and storage segment are covered by 40 CFR part 63, subpart HHH.

The EPA continues to assert that the comparison with the petroleum industry is directly relevant. The commenters insist that the necessary link between the extraction and processing of the natural gas in the production and processing segments and the transmission of the natural gas predetermines that the two segments must be treated as a single source category. However, this same link exists between the extraction and processing of oil, condensate (and other liquids from oil and natural gas wells) in the production segment and the petroleum refineries and pipelines that refine/process and distribute these liquids. However, the commenters do not suggest the interrelatedness of the production and processing sources originally included in the Crude Oil and Natural Gas Production source category with those in the petroleum liquid source categories necessitates that Crude Oil and Natural Gas Production and Petroleum Refineries be combined into one category and regulated together. The EPA applies the same logic to conclude that the fact that the transmission and storage segment is related to the production and processing sources in the Crude Oil and Natural Gas Production source category does not necessarily result in the requirement that they be regulated together. In addition, other instances in which similar source types emitting the same air pollutants and subject to the same types of controls are included in different source categories. For example, leaking pumps, valves, connectors, and other components at a wide variety of types of facilities that emit VOC and GHG are included in different source categories.

3. The Authority To Expand Source Categories and the EPA's Alternative Approach

Comment: One commenter asserts that, while the 2012 Rule and 2016 Rule expanded the source category, this expansion was appropriate considering the statutory mandate that the Administrator should from time to time review the source categories. The commenter states that the purpose of this review was to assure that the EPA periodically consider new scientific developments to ensure that the Agency was continually acting in a way that protected the public health. The commenter adds that the statute provides no guidance regarding the proper scope of a source category, and that Congress left that determination to Agency expertise, so long as the Agency considers the impacts of the source's emissions on public health. According to the commenter, the EPA's expansion of the source category in the 2016 Rule properly considered the source category's impact on the public health. However, the commenter adds, but the EPA's current effort to rescind that expansion is based on alleged procedural errors and fails to consider the public health impacts of the transmission and storage segment. The commenter states that the transmission and storage segment does significantly contribute to the deterioration of public health. The commenter asserts that the natural gas held at storage facilities contains all of the same toxic air pollutants and hazardous chemicals as natural gas does at other stages of the production process, and that the methane and VOC emissions from compressor stations have the same adverse impact on public health regardless of what segment of the source category the methane and VOC emissions are coming from. The commenter suggests that the EPA take this opportunity to do its own analysis to determine whether methane, VOC, and HAP (air toxic) emissions from the transmission and storage segment of the source category adversely impact public health.

Response: The EPA agrees that the CAA authorizes the EPA to review and revise source categories, and that its purpose was to ensure that the Agency was continually acting in a way that protected the public health. However, the EPA disagrees with the commenters' position on the EPA's past consideration of public health in the expansion of the Crude Oil and Natural Gas source category. The EPA's 2015 evaluation of the impacts of GHG, VOC, and SO_2 on public health and welfare (80 FR 56601) was conducted for crude oil and natural gas production and processing, along with natural gas transmission and storage. While it is true, as the commenter points out, that methane and VOC are emitted from the natural gas transmission and storage segment, the EPA's 2015 analysis did not separate the impacts of the pollutants emitted by natural gas transmission and storage to demonstrate that the emissions from this segment contribute significantly to the overall impacts. In the 2019 Proposal, the EPA proposed that it was required to make a finding that the transmission and storage segment, in and of itself, contributes significantly to air pollution which may reasonably be anticipated to endanger public health and welfare. Nothing in the comments provided cause the EPA to change this conclusion.

4. Significant Contribution Finding for Natural Gas Transmission and Storage

Comment: Several commenters state that the SCF that the EPA made in the 2016 Rule, which was for the production, processing, transportation, and storage segments collectively, was not appropriate to authorize the EPA to promulgate NSPS for sources in the transmission and storage segment. The commenters assert that to regulate sources in that segment, the EPA was required to make a SCF determination for emissions from that segment itself. Commenters explain that, to consider otherwise, once the EPA makes a SCF determination for a source category consisting of certain types of sources, the Agency would then be able to add into that source category all manner of ancillary equipment and operations, even if those ancillary equipment and operations do not in and of themselves significantly contribute to the previously-identified endangerment. The commenter states that this would allow the EPA to evade the express listing criteria by lumping loose associations of nominally related segments of an industry into a sector.

Other commenters disagreed, stating that in the 2016 Rule, the EPA determined that the rulemaking record

supported a revision of the source category listing to include broadly the entire oil and natural gas industry (*i.e.,* production, processing, transmission and storage) that, in the Administrator's judgment, contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. Commenters add that CAA section 111(b)(1)(A) grants the Administrator authority to ''from time to time . . . revise'' the listed categories, and that nothing in the statutory text or relevant case law suggests that the EPA must, before revising a source category in a way that expands its scope, make a SCF determination for the newly added part of the category, considered alone. The commenter adds that nothing in the statute indicates that Congress intended for it to be more difficult for the EPA to add sources to a category than to include those sources in the category in the first instance. The commenter states that the EPA's obligation when revising a source category is only to conclude that the entire category, as revised, can still be deemed to contribute significantly to pollution that endangers public health or welfare.

Response: In this action, the EPA is determining that the transmission and storage segment of the oil and natural gas industry should not be included with the production and processing segments as a single source category. For that reason, if, in the future, the EPA seeks to promulgate standards of performance for any air pollutants from the transmission and storage segment, it must first list the segment as a source category and then determine that their emissions cause or contribute significantly to air pollution reasonably anticipated to endanger public health or welfare (SCF). Commenters take different positions on the question of whether the EPA must make a SCF for the transmission and storage segment as a predicate to adding them into a source category that already includes the production and processing segments. However, because the EPA is determining that the transmission and storage segment was not properly added to the source category, it is not necessary to resolve that question, and the EPA does not do so in this action.

Comment: Several commenters assert that, in order to remove transmission and storage segment sources from the Oil and Natural Gas source category, the EPA must affirmatively show that emissions from the sources do not significantly impact public health.

Response: The EPA disagrees with this comment. In this action, the EPA is determining that its previous determinations that the Crude Oil and Natural Gas source category included the transmission and storage segment beginning in 1979, or, in the alternative, that the EPA was justified in expanding the category to include that segment, were improper. Rather, the EPA is determining that the source category did not include that segment beginning in 1979 and that the EPA's action in 2012 and 2016 to add this segment into the source category was improper. These reasons justify the EPA in determining that the proper scope of the source category is the production and processing segments alone. There is no requirement under CAA section 111 that the improperly added segment must remain in the source category until the EPA determines that they do not cause or contribute significantly to dangerous air pollution.

5. Whether EPA Must Move To Add/Expand the Source Category and Regulate Transmission and Storage Emission Sources

Comment: Several commenters suggest that if the EPA finalizes the proposal to remove natural gas transmission and storage and rescind the applicable requirements for this segment, that the EPA should also move to properly and legally expand the source category and regulate natural gas transmission and storage emission sources. The commenters state that, beyond asserting that it might do so in the future, the proposal fails to explain why it does not take the logical next step and assess whether the emissions from the transmission and storage segment contribute significantly to dangerous pollution. The commenters contend that the current record, as well as the EPA's past findings, demonstrates that the emissions from the transmission and storage segment by itself does contribute significantly to dangerous air pollution.

Response: The EPA determined that the Agency's past interpretations and actions related to the inclusion of the transmission and storage segment in the Crude Oil and Natural Gas Production source category were in error. This action focuses on the correction of these past errors and interpretations. The EPA posits that retaining this focus, in the absence of established SCF criteria for GHG emissions/methane needed to add/expand the scope of this rulemaking, is necessary and appropriate, and that doing so provides greater clarity and certainty for the regulated community.

The EPA agrees with commenters that if an appropriate assessment of the emissions from the transmission and storage segment concludes that emissions from this segment contribute significantly to the endangerment to public health or welfare, we would need to propose a separate rulemaking for the regulation of emissions from sources in this segment. However, the EPA is not, at this time, assessing whether the emissions from the transmission and storage segment contribute significantly to the endangerment to public health or welfare.

Further, the proposal preamble solicited comment regarding appropriate criteria for the EPA to consider in making a SCF. This request was made both as a broad matter and with particular reference to GHG emissions generally, and to methane emissions from the Oil and Natural Gas source category most particularly. The EPA is evaluating the responses received to its solicitation and has not yet established criteria that it would follow to make such a SCF for the transmission and storage segment as it relates to GHG emissions/methane. Discussion on comments received on the EPA's solicitation related to SCF criteria can be found in section VI.C of this preamble.

B. Rescission of the Applicability to Methane of the NSPS for Production and Processing Segments

The following summarizes some of the major comments on the EPA's proposal to rescind the methane NSPS for the production and processing segments and provides the EPA's responses. Additional discussion and comments and responses on this topic are provided above, in section V.B, and in Chapter 6 of the Response to Comments Document.

Comment: Several commenters do not agree with the proposal that section 111 of the CAA authorizes the EPA to rescind one pollutant's standards because another pollutant's standards may capture them. The EPA claims that it lacked a rational basis for its 2016 action because the requirements added in 2016 are entirely redundant with the existing NSPS for VOC. However, commenters indicate that there is not a specific provision within the CAA that expressly exempts pollutants from regulation due to overlapping control technology.

Response: Although it is true that no CAA provision explicitly authorizes rescinding requirements on the ground that they are redundant, the EPA's basis for this action is that it erred in the 2016 Rule when it concluded that it had a rational basis to regulate methane. It is not rational to impose redundant requirements, because they are not necessary and do not achieve additional

health or environmental protections. This basis for the EPA's action does not depend on explicit statutory authorization.

Comment: Multiple commenters support removing methane requirements for the production and processing segments on the ground that they are redundant with the existing NSPS for VOC, for the reasons the EPA stated in the 2019 subparts OOOO and OOOOa Proposal. Another commenter states that: (1) Methane can be detected more economically than VOC and detecting VOC typically is 2 to 4 times the cost of detecting methane, (2) methane is a reliable indicator of VOC, and (3) detecting methane is safer than detecting VOC. Other commenters disagreed. One commenter states that, while the release of VOC may always be accompanied by methane, it does not follow that the release of methane will always be accompanied by the release of VOC. Some commenters make the case that the NSPS does not simply duplicate requirements for emission controls; rather, it allows, but does not require, operators to comply with both VOC and methane controls using the same practices. Another commenter states that selective technologies do exist and could be applied to reduce VOC but not methane emissions if the methane rescission is finalized. One commenter asserts that it would be arbitrary to regulate methane and VOC as the same just because the currently chosen control technologies are the same. Another commenter adds that, while the sources of VOC and methane leaks may overlap, the two have distinct pollutant effects. The commenter further adds that the urgency and stringency of desired reductions may differ considerably for the two pollutant categories and may change over time, if, for example, the need for climate change mitigation becomes more acute. The commenter suggests that the most sensible approach to regulation of emissions from oil and natural gas operations is, thus, to keep performance standards for both VOC and methane on the books, and to update those standards periodically as the science and technology evolve.

Response: The EPA acknowledges the comments but emphasizes that all of the requirements in the rule apply independently of emissions of either methane or VOC. We discussed this redundancy in detail in section IV.D of the 2019 Proposal (84 FR 50259) and in section V.B of this preamble. The EPA continues to take the position that standards of performance for methane emissions from the production and processing segments are redundant with the existing NSPS for VOC and establish no additional health protections. As explained, every affected source in the production and processing segments will continue to be subject to the same NSPS requirements for VOC as before, and those requirements will have the same impact in reducing the source's methane emissions as before the removal of methane requirements. The EPA maintains that removing the methane NSPS, while retaining the VOC NSPS, will not affect the amount of methane reductions that those requirements will achieve.

One commenter claims that methane can be detected more economically and more safely than VOC. First, it is important to note that BSER for leaking equipment is based on the use of OGI equipment, which does not require the direct measurement of VOC. It is also worthy to note that this commenter was primarily referring to economic and safety advantages of methane leak detection technologies deployed via aircraft, which is not an option currently allowed under the rule.

Comment: One commenter asserts that removing methane standards would almost certainly lead to the adoption of less protective requirements. The commenter notes that in the 2016 Response to Comment Document (p. 2–61), the EPA stated, ''that direct regulation of GHG enables the reduction of additional methane emissions beyond what could be achieved by prior VOC-focused rules.''

Response: The EPA agrees that, in theory, the direct regulation of GHG and consideration of the costs in relation to GHG reduction could result in more stringent standards and more emission reductions than if decisions were made entirely based on VOC emission reductions. The EPA also acknowledges that, for the 2016 Rule, the costs were considered both in relation to the VOC and methane emission reductions. However, the EPA disagrees with the comment that removing methane standards would ''almost certainly'' lead to less protective standards. A separate action amending NSPS subpart OOOOa (EPA–HQ–OAR–2017–0483; FRL–10013–60–OAR; FR Doc. 2020–18115), which will be finalized in the **Federal Register** of Tuesday, September 15, 2020, is an example of how this assertion by the commenter is incorrect.

In 2018, the EPA proposed amendments and clarifications to NSPS subpart OOOOa (83 FR 52056, October 15, 2018) as a result of the reconsideration of issues raised in petitions on the 2016 Rule. In 2018, the EPA proposed to decrease the monitoring frequency for well sites with average combined oil and natural gas production for the wells at the site greater than or equal to 15 barrels of oil equivalent (boe) per day from semi-annually to annually. The EPA also proposed to decrease the monitoring frequency at compressor stations from quarterly to semi-annually. For both of these situations, the standards were both for VOC and methane and the cost-effectiveness based on both VOC and methane emission reductions considered. In fact, the ''multi-pollutant'' cost effectiveness was also considered where the control costs were split between VOC and methane.

In a separate action, the EPA is finalizing the reconsideration amendments to NSPS subpart OOOOa (EPA–HQ–OAR–2017–0483; FRL–10013–60–OAR; FR Doc. 2020–18115). However, the decisions for these reconsideration amendments take into account this final policy review action, which first rescinds the methane standards for production and processing sources. Therefore, the separate reconsideration amendments are finalizing ''VOC-only'' standards based on the cost effectiveness of the reduction in VOC only. These final reconsideration amendments are more stringent than the proposed reconsideration amendments, which were based on both VOC and methane standards. Specifically, in the separate reconsideration action, the EPA is finalizing semi-annual monitoring for well sites with average combined oil and natural gas production for the wells at the site greater than or equal to 15 boe per day and semi-annual monitoring for gathering and boosting compressor stations. Therefore, in this specific situation, the elimination of methane standards resulted in more stringent standards.

Comment: Commenters state that the redundancy rationale does not consider future BSER evaluations required by CAA section 111(b)(1)(B). One commenter notes that CAA section 111(b)(1)(B) requires the EPA to periodically—every 8 years—review and, if appropriate, revise the standards established under this section (we refer to this as the 8-year review). Commenters state that removing methane will mean that the methane requirements will not be subject to this review. One commenter states that the EPA's claimed redundancy ignores that methane regulation will have unique impacts on the 8-year review, including how the Agency considers cost and benefits, which are relevant factors in the likely stringency of the standards the EPA ultimately adopts.

A commenter states that, while the BSER is largely the same for methane

and VOC in the current NSPS, there is no guarantee that the BSER will not diverge for the two pollutants in the future. The commenter adds that at least one other GHG—CO_2—is emitted in significant quantities from this industry, and the EPA may determine in the future that it has a rational basis to regulate those emissions under CAA section 111(b). The commenter states that, in that case, the BSER for GHG may differ significantly from the BSER for VOC, since the former would encompass controls for methane and CO_2.

Some commenters remark specifically on the future of technologies for fugitive emission detection and the impact on redundancy. One commenter states that future developments in leak monitoring technology may be able to speciate emissions (*i.e.,* distinguish between methane and VOC), potentially allowing operators to comply with a VOC-only NSPS by controlling VOC while leaving methane emissions unabated. The commenter states that the EPA fails to consider the impact of these VOC-only technologies on future methane emissions in the absence of the current NSPS. Another commenter similarly notes that for newly developed technologies that have the potential to significantly reduce the cost of compliance for regulated entities, the mandates are not redundant. The commenter states that more than 20 percent of natural gas produced in the U.S. has little or no VOC content, making VOC an inherently poor measurement target compared to methane. The commenter adds that some emerging emissions detection technologies—such as spectroscopic sensors used for aerial and satellite surveillance—are more sensitive to methane than to VOC. The commenter adds that, by signaling that reduction of methane emissions is not a national priority, the EPA discourages the development and improvement of the best available controls for methane.

Response: The EPA acknowledges the comments made regarding potential future control technologies and how that could impact redundancy. However, methane and VOC emissions occur through the same emission points and processes, and the same currently available technologies and techniques minimize both pollutants from these emission sources. The EPA recognizes that new control technologies are under development, particularly for detecting fugitive emissions. These emerging technologies include technologies that would detect speciated fugitive emissions from oil and natural gas operations, and, in the 2019 Proposal, the EPA solicited comment on these technologies. 84 FR 50260. We received some information, but we consider it speculative and lacking in specific examples, so that we do not have enough information to evaluate these technologies at this time, much less how these technologies could impact future analyses. In short, the potential for developing future technology that will distinguish between methane and VOC emissions does not change our conclusion that methane requirements at present are redundant. If such technology does develop, the EPA could consider whether to revisit the issue of regulation of methane. By the same token, it is speculative that the 8-year review would result in different levels of controls if EPA were to consider methane emissions and requirements, along with VOC emissions and requirements. In any event, commenters on that review could raise the issue of whether methane should be controlled and whether doing so would result in more stringent VOC controls. With respect to the comment that some natural gas produced has little or no VOC content, the detection of a leak using OGI equipment is not dependent on the relative concentrations of VOC or methane, so that leaks of even low VOC gases would still be identified and required to be repaired. As discussed above, how the emergence of technology in the future could impact the requirements to detect and repair leaks is speculative at this point in time.

The EPA does not agree with the commenter that this action signals a reduction in the prioritization of the reduction in methane. As explained in section V.B.4 of this preamble and above in this section, the methane and VOC requirements are redundant, and the rescission of the methane requirements will streamline the regulation without impacting the methane reductions. With regard to discouraging the development of the best available controls for methane, future evaluations of BSER will continue to recognize the nationwide profile of natural gas, which includes VOC and methane. Therefore, improvements for the control of methane will be considered, as they also will represent improvements for VOC reductions.

Comment: One commenter expresses concern that although methane reductions would still occur even after the EPA rescinds the methane NSPS, the EPA has recently indicated its view that that reductions of co-emitted (but formally unregulated) pollutants should not factor into a benefits analysis in the same manner as those pollutants that are directly regulated. The commenter contends that, under this view, removing methane as a regulated pollutant could result in the Agency disregarding the benefits of methane emission reductions, which the EPA states are the only pollution reduction benefits from the oil and natural gas sector that the EPA can monetize (citing 81 FR 35827, June 3, 2016).

Response: The EPA maintains, as it did at proposal (84 FR 50278), that because the methane control options are redundant with VOC control options in the NSPS subpart OOOOa rule, there are no expected emission impacts or environmental disbenefits from rescinding the methane requirement for the production and processing segments. The EPA has made control decisions on the basis of the cost-effectiveness of the controls, for which monetization of health and environmental impacts other than emission reductions is not necessary. The decision whether to quantify and monetize health and environmental impacts is based upon technical judgments made within the context of developing RIAs which are written to satisfy Executive Order 12866 requirements. The EPA recognizes that in the current previous Oil and Natural Gas NSPS RIAs, the Agency has not quantified the benefits of reductions in emissions other than methane (except for quantifying the amounts of emissions reduced). These RIAs also explained these technical decisions. However, these choices have not influenced the choice of what pollutants to regulate, or the stringency of the standards promulgated, in the Oil and Natural Gas NSPS rulemakings.[71]

Comment: Several commenters state that the EPA fails to identify any way in which the alleged redundancy is problematic. The commenter notes that, while agencies may reconsider and revise their policies, before doing so they must demonstrate ''that the new policy is permissible under the statute, [and] that there are good reasons for it,'' taking into account the record of the previous rule (citing *Fox Television,* 556 U.S. at 515–16). The commenter states

[71] It should be noted that in its recently promulgated rule, ''National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review'' (signed by the Administrator on April 16, 2020), *https://www.epa.gov/sites/production/files/2020-04/documents/frn_mats_finding_and_rtr_2060-at99_final_rule.pdf,* the EPA based its regulatory decision primarily on the amounts and costs of reductions of the regulated pollutant, but stated that it may continue to consider the co-benefits of reductions in other pollutants, as long as doing so is consistent with the applicable CAA provisions.

that the EPA has failed to provide any ''good reasons'' for why the alleged redundancy between methane and VOC requirements justifies the removal of methane requirements. The commenter explains that the EPA states in the 2019 Proposal that there are ''no expected cost . . . effects from removing the methane requirements . . .'' (citing 84 FR 50247). The commenter states that the EPA characterizes removal of methane requirements as ''less disruptive'' than removal of VOC requirements (citing 84 FR 50260), but does not explain why it is taking any ''disruptive'' action at all, especially since the 2016 Rule has been in full effect and successfully implemented for over 3 years.

Response: The fact that the air pollution controls implemented by sources in the Crude Oil and Natural Gas Production source category to comply with the VOC NSPS reduce methane emissions along with VOC emissions means that the legal requirement to control methane—that is, the methane NSPS—is redundant to the VOC requirement, and, therefore, is unnecessary. The fact that the methane NSPS does not provide benefits—it does not reduce emissions beyond what would otherwise occur—means that the EPA erred in the 2016 Rule when it determined that it had a rational basis to promulgate the methane NSPS, which is sufficient justification to rescind that regulation. As discussed elsewhere, as a predicate for promulgating NSPS for methane, the EPA was required to, and failed, to make a SCF for methane emissions from the appropriately constituted source category.

Comment: One commenter states that the EPA's true rationale for rescinding the methane NSPS is to prevent regulation of existing sources under CAA section 111(d). The commenter notes that the courts have held that administrative agencies must identify their actual reasons for policy choices, that an agency's decision may be arbitrary or pretextual if there is a substantial mismatch between the action and the rationale, and that the courts will compare the evidence for the Agency's decision with the stated explanation to discern whether such a mismatch is present (citing *Dep't of Commerce* v. *New York,* 139 S.Ct. 2551, 2575 (2019)). Noting that CAA section 111(d) imposes, as a precondition to regulation of GHG from existing sources, promulgation of NSPS for GHG under CAA section 111(b), the commenter asserts that in this case, the Agency's true rationale for rescinding the methane NSPS is to prevent regulation of methane emissions from existing oil and natural gas sources under CAA section 111(d). The commenter reviews email communications between oil and natural gas industry officials and EPA (including transition team) officials related to the Agency's decision in early 2017 to rescind the Information Collection Request (ICR) under CAA section 114 for information from existing oil and natural gas sources concerning their methane emissions, coupled with the rescission of that ICR, as evidence of what the commenter considers to be the Agency's true rationale. The commenter asserts that the Agency's stated rationale of redundancy is arbitrary and pretextual.

Response: The EPA disagrees with the commenter. The EPA's reasons for rescinding the methane NSPS are as stated in the 2019 NSPS subparts OOOO and OOOOa proposal, this preamble, and the accompanying documents: The methane NSPS is redundant to the VOC NSPS and does not achieve additional reductions. In other sections of this preamble and the supporting documents, the EPA elaborates upon this rationale and relies on it in responding to adverse comments. The Agency justified its rescission of the ICR in the rulemaking action in which it did so, and that action is separate from this rulemaking.

Comment: Several commenters address the issue of which set of NSPS to retain, methane or VOC. One commenter notes that by keeping the focus on VOC, the EPA ensures that storage tanks, which represent an important source of emissions in the production, gathering and boosting, and processing segments, remain regulated, whereas storage vessels would not be regulated under a methane-only rule. The commenter adds that the EPA data supporting NSPS subpart OOOO shows that, aside from completion activities, estimated VOC reductions from storage vessels represent the largest source of VOC reductions. *See* Regulatory Impact Analysis, April 2012 at Table 3–4. *See* 2019 Proposal, 50260 (''Some sources, such as storage vessels, are subject only to VOC requirements and not methane requirements.''). Other commenters asserted that, if redundancy is the concern for the EPA, the Agency should make methane the key pollutant and remove VOC from the requirements because this will allow for the regulation of existing sources of methane and VOC, and thereby result in reduced environmental, social, and health impacts from both pollutants.

Response: As noted in section V.B above, the EPA is rescinding the methane NSPS and retaining the VOC NSPS, rather than vice versa, because rescinding the latter would affect more facilities, and affect facilities that had been regulated for a longer period. The EPA does not agree that the methane standards should be retained instead of the VOC standards in order to retain the trigger of the CAA section 111(d) requirement to develop standards for existing sources standards. The purpose of the NSPS is to reduce emissions from new sources; as a result, the decision of which NSPS to retain should not turn on the impact on existing sources.

IX. Summary of Significant Comments and Responses on Significant Contribution Finding for Methane

This section summarizes and responds to comments on the 2019 Proposal's solicitation of comment on whether the EPA is required to make, or is authorized to make, a SCF for methane emissions from the Oil and Natural Gas Production source category as a predicate for promulgating methane NSPS.

A. Requirement for Pollutant-Specific Significant Contribution Finding

1. Promulgation of NSPS for Pollutants That the EPA Did Not Evaluate When It Listed the Source Category

Comment: Some commenters assert that CAA section 111 cannot be interpreted to authorize the EPA to promulgate NSPS for air pollutants that were not the subject of the EPA's initial determination that the source category causes or significantly contributes to dangerous air pollution. Commenters argue that in determining which pollutants the EPA should regulate from a source category under CAA section 111(b), it is reasonable to conclude that it should be limited to the pollutants that justified listing that source category for regulation in the first place. Commenters add that this interpretation provides for consistency in applying CAA section 111 across all air pollutants, that is, the EPA regulates air pollutants that it considered when it made a SCF determination for the source category, as well as air pollutants that it regulates subsequently, as long as it makes a similar SCF determination for those subsequently regulated air pollutants. A commenter adds that this approach makes sense because, to list the source category, the Agency must engage in some level of analysis to understand the nature of the emissions from that category; and that the Agency should apply the same analysis to air pollutants that it subsequently seeks to regulate. Numerous commenters state that it is anomalous for the EPA to attempt to regulate methane, as of 2016,

based on a SCF determination the EPA made in 1977 and 1978, when methane was not even a regulated pollutant under the CAA.

Other commenters take the opposite view. One asserts that CAA section 111(b)(1) affords the EPA broad discretion to determine which pollutants and sources to regulate and allows the EPA to revise the NSPS to include pollutants or emission sources that were not currently regulated for a particular source category. Other commenters assert that, if the Agency failed to regulate a pollutant emitted from a listed category when it first issued standards for the source category, it must do so in a later rulemaking to achieve the purposes of the CAA, within the limitations set forth in CAA section 111. One commenter argues that CAA section 111(b)(1)(A)'s statutory factors for listing a source category provide a floor according to which the EPA must regulate a particular pollutant from that category, regardless of whether the pollutant is addressed in the initial listing decision.

Response: The EPA agrees that it promotes consistent treatment of all air pollutants subject to the NSPS to require a pollutant-specific SCF as a predicate for regulating a pollutant that the Agency did not consider at the time it made the SCF for the source category and promulgated the initial NSPS. The EPA further agrees that it is anomalous for the Agency to newly regulate an air pollutant, like methane, long after listing the source category on the basis of other pollutants, unless the Agency makes a determination concerning that pollutant that is comparable to the determination that it made when it listed the source category. These considerations support the Agency's interpretation, described in section VI above, that the Agency's authority to promulgate standards of performance for particular air pollutants under CAA section 111(b)(1)(B), along with the definition of ''standard of performance'' under CAA section 111(a)(1), must be interpreted within the context of the finding the Agency makes concerning the source category's contribution to dangerous air pollution under CAA section 111(b)(1)(A). For the same reasons, the Agency disagrees with commenters who assert that listing the source category is a sufficient predicate for subsequent regulation of air pollutants that the Agency did not address in that listing or in promulgating the initial set of standards of performance.

2. Congressional Intent

Comment: The EPA noted in the 2019 Proposal that during the 1977 CAA Amendments, the House-Senate Conference Committee Report described the revisions made to the SCF and endangerment requirements in CAA section 111 and other provisions as follows:

> Provides a uniform standard of proof for EPA regulation of air pollutants which applies to the setting of . . . criteria for national ambient air quality standards under Section 108; . . . new stationary source performance standards under Section 111; . . . new auto emission standards under Section 202; . . . regulations of fuels and fuel additives under Section 211; aircraft emission standards under Section 231.
>
> *In all future rulemaking in these areas, the Administrator could regulate any air pollutant from those sources, the emissions of which ''in his judgment cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.''*

H.R. Rep. No. 95–564, at 183–84 (1977) (emphasis added) (cited in 84 FR 50264). The EPA stated in the 2019 Proposal that the emphasized language is evidence that Congress intended to require the EPA (or understood that the EPA had always been required), in promulgating a pollutant-specific NSPS under CAA section 111, to make a pollutant-specific finding, as the EPA does under the other provisions mentioned in the Conference Report. *Id.* at 50264–65.

The 2019 Proposal added that the House Committee Report for the 1977 CAA Amendments included a similar statement in describing one of its purposes for rephrasing the various endangerment finding provisions: ''To provide the same standard of proof for *regulation of any air pollutant, whether that pollutant comes from stationary or mobile sources, or both,* and to make the vehicle and fuel industries equally responsible for cleaning up vehicle exhaust emissions.'' H.R. Rep. No. 94–1175, at 33 (1976) (emphasis added) (cited in *Id.* at 50265). The EPA added that the emphasized phrase could suggest that the House Committee drafters understood the SCF provision in CAA section 111(b)(1)(A) to concern the particular air pollutant subject to the NSPS, like other analogous provisions. *Id.*

Commenters offered competing interpretations of these statements in the 1977 legislative history. Some commenters agreed with the EPA's discussion, noted above. Other commenters, however, state that those Committee Report statements do not support interpreting CAA section 111 to require a pollutant-specific SCF. They assert that the 2019 Proposal was incorrect in suggesting that the 1977 CAA Amendments imposed uniform requirements on the several CAA provisions calling for contribution and endangerment determinations; rather, the commenters noted, the precise terms Congress adopted varied for each of those provisions, the terms function differently for each of the provisions, and the language in the Conference Report was a paraphrase of those provisions. For example, one commenter noted, the statement in the Conference Report does not describe how the cause-or-contribute phrase that appears in section 108 works. The commenter explained that this phrase relates not the to ''the Administrator['s] . . . regulat[ion] [of an] air pollutant from [a] source[ ],'' but instead to the Administrator's decision as to which emissions to include on the list of NAAQS pollutants. The commenter states that the NAAQS program is an area-specific program, not a source-specific one, and it grants states, not the Administrator, the primary authority to directly control emissions to achieve the NAAQS. Other commenters state that the purpose of this language in the Conference Report was to explain that Congress revised the various SCF and endangerment provisions to assure that they were each precautionary, not to assure that they each required a pollutant-specific SCF. Another commenter notes that these revisions to the SCF and endangerment provisions were made to CAA section 111(b)(1)(A), which covers source category listings, but not to CAA section 111(b)(1)(B), which requires the EPA to promulgate standards of performance. The commenter asserts that, if Congress had wanted to make clear that the EPA may not issue standards under CAA section 111(b)(1)(B) unless it had made a pollutant-specific SCF, it could have achieved that result by amending CAA section 111(b)(1)(B) in addition to CAA section 111(b)(1)(A), but it chose not to do so. The commenter asserts that ''[w]hen Congress amends one statutory provision but not another, it is presumed to have acted intentionally'' (citing *Gross* v. *FBL Fin. Servs., Inc.,* 557 U.S. 167, 174 (2009)). Other commenters contend that the Conference Report is at best ambiguous as to whether the source or the air pollutant must be the focus of the ''cause or contribute'' finding, and, in any event, cannot overcome what they describe as the plain meaning of the statute.

Response: We appreciate the different perspectives that commenters provide

on the above-quoted statements in the legislative history. Because these statements explicitly describe CAA section 111, along with other CAA provisions, as requiring a pollutant-specific SCF, we think that they can fairly be read to indicate that interpreting CAA section 111 to require, or at least authorize the Administrator to require, a pollutant-specific SCF is consistent with Congressional intent. It was not necessary for Congress to amend CAA section 111(b)(1)(B) explicitly to require a pollutant-specific SCF because its provisions, read in context, already required, or at least authorized the EPA to require, that SCF. None of the commenters point to anything in the legislative history that indicates Congress did not intend to require a pollutant-specific SCF under CAA section 111.

3. Comparison With Other CAA Provisions That Generally Include a Cause or Contribute Finding on a Pollutant-Specific Basis

In the 2019 Proposal, the EPA noted that when Congress enacted CAA section 111 as part of the 1970 CAA Amendments, Congress also enacted several other provisions that required the EPA to promulgate regulations for certain pollutants or certain sources, and that in each of these provisions, Congress required the EPA to make an endangerment or cause or contribute finding, and, further, required the EPA to make the relevant finding on a pollutant-specific basis. The EPA solicited comment on the relevance of whether any of these other provisions for whether CAA section 111 could be interpreted to require, or at least authorize, a pollutant-specific SCF. 84 FR 50263 and 64, 50265 n.74 (discussing, among others, CAA sections 108(a)(1)(A) and (B), 115(a), 202(a)(1), 211(c)(1), 231(a)(2)).

Comment: Some commenters stated that interpreting CAA section 111 to not require a pollutant-specific SCF renders that section anomalous compared with other CAA provisions that premise the EPA's regulatory authority on a pollutant-specific ''cause or contribute'' finding. One commenter suggests that the primary difference between CAA section 111(b) and certain other CAA provisions is that CAA section 111(b) requires that the source category cause or contribute ''significantly'' to air pollution endangering public health or welfare. The commenter states that this implies that the EPA should face a higher burden to justify regulating each specific pollutant under CAA section 111, not a lower burden that allows the EPA to regulate every pollutant from the source category so long as just one meets the statutory criteria.

Other commenters take the opposite position. They assert that the requirements for pollutant-specific cause-or-contribute findings under other CAA sections shows that Congress knew how to require pollutant-specific findings when it intended to do so, and it evidently did not intend to do so under CAA section 111. Another commenter adds that Congress clearly chose to use different phrasing in different sections because it amended all these provisions at the same time in the same section of the 1977 CAA Amendments. From this, the commenter infers that Congress chose to use different phrasing in CAA section 111 than in the other provisions.

One commenter distinguishes CAA section 111 from other CAA provisions that the EPA cited because the latter provisions identify the particular category or class of sources as requiring regulation, and the EPA proceeds to regulate particular pollutants from those sources that it determines cause or contribute to dangerous air pollution. The commenter states that these provisions include CAA section 183(f)(1)(A) (addressing standards applicable to the loading and unloading of tank vessels) and CAA section 213(a)(1) through (4) (governing emission standards for new nonroad engines and vehicles). In contrast, the commenter explains, CAA section 111 does not pre-define any source category for regulation, but instead directs the EPA to fulfill this obligation. The commenter asserts that it is implausible that Congress would rest on any implication from CAA section 111(b) that the EPA must make an additional SCF for each pollutant regulated. The commenter adds that Congress knew how to provide for such an additional finding because CAA section 213(a)(4) requires one for an air pollution problem that (1) emissions from new nonroad engines or vehicles contribute significantly to and (2) emissions from classes or categories of new nonroad engines or vehicles cause or contribute to.

The commenter also identifies another distinction between CAA section 111 and some of the other provisions the EPA cites, which is that the latter address a specific kind or sub-class of pollutants. For example, according to the commenter, CAA sections 108(a)(1)(A) and (B) charges the Administrator with determining which emissions should be classified as criteria pollutants subject to the NAAQS because they contribute to dangerous air pollution and are emitted by numerous diverse mobile or stationary sources, and CAA section 115(a) concerns specific instances in which a pollutant or pollutants that originated in the U.S. cross an international border and endanger public health or welfare in a foreign country. The commenter suggests that a pollutant-specific contribution finding is sensible for these programs: The Agency's task is to identify all the air pollutants that contribute to an air pollution problem in order to determine whether they should qualify as NAAQS pollutants or whether they are harming public health or welfare in another country. The commenter states that this approach is distinct from CAA section 111, which is oriented toward source categories and requires them to achieve an emission limitation that reflects deployment of the BSER for dangerous pollutants, and which does not focus on or even reference any particular type or sub-class of pollutants.

Response: The EPA appreciates the commenters' perspectives on whether the other provisions in the CAA that explicitly require a pollutant-specific contribution finding suggest that Congress did or did not intend that CAA section 111 do so as well. For the reasons described in section VI above, by their terms, CAA section 111(b)(1)(B), in conjunction with CAA section 111(a)(1), and in the context of CAA section 111(b)(1)(A), requires, or at least authorizes the EPA to require, a pollutant-specific SCF as a predicate to promulgating a NSPS for that pollutant, notwithstanding the fact that Congress did not explicitly require such a determination in CAA section 111(b)(1)(B). We believe that this interpretation is consistent with the fact that Congress included requirements for a pollutant-specific cause-or-contribute finding in other CAA provisions. It is true, as the EPA recognized in the 2019 Proposal, 84 FR 50264, and as commenters noted, these other provisions differ from CAA section 111(b) in certain respects, but they differ from each other as well. For example, in CAA sections 213(a)(2), (3), and (4), Congress required a two-step determination, unlike in other provisions. In addition, the fact that CAA section 111 delegates to the EPA the task of identifying the source category for regulation, whereas other provisions themselves identify the source category, explains why it is necessary for the EPA to make a SCF for the source category (it is to assure that the source category merits regulation), but does not provide a compelling reason why the EPA should not also,

when it subsequently promulgates a NSPS for a particular pollutant, make a SCF for that pollutant. The important point from comparing these various provisions is that Congress recognized the utility of a pollutant-specific cause-or-contribute finding in a range of circumstances, including a range of regulatory schemes for a range of industries that emit a range of air pollutants that affect a range of geographic areas (including other nations, under CAA section 115). That supports interpreting CAA section 111 to include a pollutant-specific finding as well.

Comment: A commenter asserts that a two-step process in which the EPA makes a SCF for the source category and then for the particular pollutant is anomalous since the other provisions the EPA cites involve only a one-step process. The commenter adds that the two-step process is anomalous because the first step—listing the source category on grounds that it contributes significantly to dangerous air pollution—becomes unnecessary if the EPA must also determine that particular pollutants contribute significantly to dangerous air pollution. The commenter further suggests that a two-step scheme creates two additional anomalies: (1) The EPA might determine that emissions from a source category significantly contribute, but might not be able to determine that any individual air pollutant significantly contributes, and, therefore, might not be able to regulate at all; and (2) the EPA might determine that emissions from a source category significantly contributes, but might be able to regulate only an insignificant portion of those emissions. Another commenter asserts that the other provisions require only a cause-or-contribute finding, not a cause-or-contribute significantly finding, which casts doubt on the EPA's interpretation that CAA section 111(b) requires the latter type of finding.

Response: As noted above, CAA sections 213(a)(2), (3), and (4) impose a two-step process. The commenter's claimed anomalies may be theoretically possible but are highly unlikely to actually occur. The source categories that the EPA lists under CAA section 111(b)(1)(A) are industrial sources that the EPA has determined contribute significantly to dangerous air pollution and that typically emit more than one air pollutant; it is highly unlikely that none of such a category's air pollutants, or only a minor portion of its pollutants, would contribute significantly to dangerous air pollution, and the commenter does not claim that either of those situations is true of any of the some 76 source categories that the EPA has listed. As noted below, the rational-basis approach creates its own set of anomalies. Contrary to the commenter's views, a two-step process under CAA section 111(b)(1), under which the EPA makes a SCF for the source category and a SCF for the particular air pollutants, does not render the first step unnecessary. As the EPA explained in section VI above, the EPA has generally evaluated the contributions of the source category and the air pollutants it emits at the same time, and it has generally relied on data concerning the individual air pollutants to make the SCF for the source category. As a practical matter, then, the EPA generally would need to make a SCF for an air pollutant separately from the SCF for the source category only when the EPA seeks to promulgate a NSPS for an air pollutant that the EPA did not consider when it listed the source category. It is true, as the commenter noted, that the other provisions cited by the EPA in the 2019 Proposal and discussed by the commenters require a pollutant-specific cause-or-contribute finding, and not a SCF, but interpreting CAA section 111(b)(1)(B) to require, or at least authorize the EPA to require, a SCF is consistent with the requirement for a SCF under CAA section 111(b)(1)(A). Section 111(b)(1)(B) of the CAA is not unique in this regard—in the 1990 CAA Amendments, Congress revised the Good Neighbor Provision, CAA section 110(a)(2)(D)(i)(I), to require that SIPs prohibit sources from emitting air pollutants in amounts that will ''contribute significantly'' to nonattainment downwind.

4. Rational Basis Approach

Comment: Numerous commenters agree with, and elaborate on, the concerns that the EPA expressed in the 2019 Proposal about the rational basis approach (discussed in section VI of this preamble). Some note that the approach is not tied to any language in the CAA, is not based on any statutory criteria, and, thus, is largely undefined. They state that it does not meaningfully limit the EPA's authority and, therefore, injects confusion into the regulatory process. One commenter asserts that it makes no sense to regulate unless there is assurance that the regulation will produce the desired benefits, which may be accomplished only by analyzing emissions on a pollutant-specific basis. Other commenters add that the rational basis standard allows the EPA to rely on a SCF made for a source category decades ago for a different pollutant in order to justify regulating any pollutant from the category—even pollutants that do not cause or significantly contribute to endangerment. Many commenters assert that, without a pollutant-specific SCF, the EPA would have unfettered discretion to add pollutants no matter how minimal the contribution or how benign the impacts to public health and welfare, and that this could result in potentially costly, disruptive, and inefficient regulations on an industry. Another commenter points to anomalies that could result from the rational basis approach: (1) The approach could lead to a case where the EPA would be free to regulate all pollutants from a source category, even though only one of the pollutants was found to contribute to endangerment; and (2) it could result in disparate treatment of similarly emitting source categories: For example, Source Categories 1 and 2 may both emit Pollutant A in equal amounts that do not significantly contribute to endangerment, while Source Category 1 also emits Pollutant B in an amount that does significantly contribute to endangerment. The commenter states that, under the rational basis approach, the EPA would have the authority to list Source Category 1 and regulate emissions of Pollutant A from it, but would not have the authority to list Source Category 2, and, therefore, would not be able to regulate emissions of Pollutant A from it, even though each Source Category's emissions of Pollutant A present identically insignificant risks. The commenter contends that requiring a SCF for each pollutant would prevent these anomalies. In contrast to the vague rational basis standard, other commenters state, CAA section 111(b) provides clear criteria for whether the EPA is authorized to regulate a source's emissions of a pollutant: The endangerment and SCF determinations for listing a source category. Other commenters add that CAA section 111(b) established this rigorous finding as necessary to justify the EPA's authority to promulgate nationwide standards, and that only a pollutant-specific SCF, not a rational basis standard, would maintain that rigorous approach.

Other commenters assert that the requirement of a rational basis standard is appropriate. They note that the standard is equivalent to the ''arbitrary and capricious'' standard. They state that CAA section 111(b)(1)(A), by its terms, applies the endangerment and SCF findings to the source category as a whole, and not to each newly-regulated pollutant emitted from a previously-listed source category, and that, given that many decisions delegated to the EPA are governed by a

default rational basis standard, it is reasonable to conclude that Congress could have intended that standard to govern the regulation of subsequent pollutants from previously-listed sources in the absence of any other prescription for how the EPA is to make the decision. Commenters further state that the arbitrary and capricious standard is not undefined. Rather, one commenter says, the Supreme Court, in defining ''[t]he scope of review under the 'arbitrary and capricious' standard,'' has explained that ''the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made'' (citing *Motor Vehicle Mfrs. Ass'n of U.S., Inc.* v. *State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 42–43 (1983)). The commenter adds that the Court affirmed that it ''may not set aside an agency rule that is rational, based on consideration of the relevant factors and within the scope of the authority delegated to the agency by the statute.'' [72] The commenter adds that this standard applies whether or not Congress has expressly specified the criteria relevant to the Agency's decision. A commenter further notes that under the ''arbitrary and capricious'' standard, the Court has identified certain factors that the EPA must consider in promulgating emission standards under CAA section 111(b) (citing *Sierra Club* v. *Costle,* 657 F.2d 298, 326 (D.C. Cir. 1981). A commenter adds that the Court remanded the Lime Kiln NSPS under the ''arbitrary and capricious'' standard, and quoted from the legislative history of the 1977 Amendments, which indicated Congress's intent that the arbitrary and capricious standard to have teeth: ''With respect to the 'arbitrary and capricious' scope of review retained in these amendments, the conferees intend that the courts continue their thorough, comprehensive review which has characterized judicial proceedings under the CAA thus far'' (citing *Nat'l Lime Ass'n* v. *EPA,* 627 F.2d 416, 452 (D.C. Cir. 1980) (quoting H.R. Conf. Rep. No. 564, 95th Cong., 1st Sess. 178 (1977))). The commenters contend that, under the arbitrary and capricious standard, an EPA decision to promulgate a standard of performance for a benign or harmless substance would fail.

Response: In the 2019 Proposal, the EPA acknowledged that the rational basis test ''offers some protection against arbitrary or capricious decisions by the EPA.'' 84 FR 50263. However, CAA section 111 includes no explicit criteria to guide the application of such a test, and in the times that the EPA has used the test, the EPA has not attempted to articulate criteria or metrics to guide it, and rather, has relied on facts and circumstances. In those respects, the rational basis test is largely (or wholly) undefined and could potentially incorporate a wide range of considerations and lead to inconsistent results. This creates uncertainty for the regulated industry and other stakeholders over whether particular additional pollutants will be regulated or not. The EPA has concluded that the standard is not appropriate for determining the air pollutants for which it will promulgate standards of performance under CAA section 111(b)(1)(B) because of statutory context: CAA section 111(b)(1)(A) makes clear that before the EPA may regulate any air pollutants from major new sources, it must determine that the source category whose sources emit the air pollutants cause or contribute significantly to dangerous air pollution. This is a rigorous predicate for regulation. It is not consonant with this rigorous predicate for the Agency to proceed to regulate the individual air pollutants based only on a rational basis determination. Rather, requiring the Agency to make a SCF determination is consistent with CAA section 111(b)(1)(A). In addition, the SCF determination is better defined because it is focused directly on the extent of the air pollutant's impact on dangerous air pollution, and it provides a metric for assessing that extent: The air pollutant causes or contributes significantly to that air pollution. These metrics more clearly cabin the EPA's discretion.

5. Impacts on the CAA Section 111 Program if a Pollutant-Specific SCF Is Needed

Comment: Commenters state that for more than 4 decades the EPA has interpreted CAA section 111(b)(1) to require a SCF as a prerequisite only for the initial listing of a source category. Commenters contend that, if the EPA now contradicts its past practice and interpretation and undermines or repeals what they describe as the dozens of NSPS it has issued during that time, entities that are subject to new and existing source performance standards under CAA section 111, as well as for the states and local agencies that implement those standards, and other stakeholders, will face regulatory uncertainty and harm to their reliance interests. Commenters add that the EPA's reversal of precedent would also call into question the validity of state implementation plans that were based in part on the continued existence of regulation under CAA section 111(b), as well as the validity of state and Federal plans based on CAA section 111(d) guidelines, and conclude that health and welfare will suffer. Commenters express concern that the EPA fails to provide an analysis of the potential impacts on the overall CAA section 111 program if a pollutant-specific SCF is needed. Commenters assert the EPA should not alter what they describe as the EPA's longstanding interpretation that a pollutant-specific SCF is not needed without first completing a full analysis of impacts such a change would have on existing CAA section 111 rules and soliciting further public participation through a separate notice-and-comment rulemaking process. One commenter contends that, even if the EPA begins requiring a pollutant specific contribution finding, this should not affect the validity of previously, lawfully issued NSPS and CAA section 111(d) guidelines and state plans.

Response: The EPA has listed some 76 source categories and promulgated over 100 standards of performance for them. In the vast majority of cases, the EPA identified the pollutants of concern at the time that it listed the source category or when it promulgated the initial set of standards of performance contemporaneously with the listing or shortly thereafter. It is only in recent rulemakings concerning GHG that stakeholders have expressed concerns that the EPA had not considered GHG when listing the source category, and, thus, had not made determinations for GHG consistent with the determinations that the EPA made to justify regulation of other pollutants from the source categories. Accordingly, the EPA disagrees with commenters who are concerned that interpreting CAA section 111 to require a pollutant-specific SCF will undermine numerous NSPS, with adverse effects for other CAA control programs. In addition, the rational basis approach, under which the EPA promulgates a standard of performance for a pollutant upon determining that it has a rational basis for doing so, cannot be considered to be long-established. The EPA clearly articulated this standard for the first time to justify regulation of a previously unregulated

[72] By the same token, a commenter notes that the EPA explained the rational basis test in its response to comments on the 2016 Rule as follows: ''the EPA's use of the phrase 'rational basis' . . . explains how the agency's actions are supported by the record and is a reasonable exercise of the EPA's broad authority under section 111'' (citing the EPA's Response to Public Comments at 2–16, Docket ID Item No. EPA–HQ–OAR–2010–0505–7632 (May 2016).

air pollutant in the 2015 EGU GHG NSPS rule, and then again in the 2016 Rule. The EPA considers that the present rulemaking has provided a full opportunity for the public to respond to the solicitation of comment on the pollutant-specific SCF interpretation.

B. Significant Contribution Finding in 2016 Rule

1. 2016 SCF for Methane Emissions From the Oil and Natural Gas Source Category

Comment: Several commenters contend that oil and gas methane emissions are too small to be considered ''significant.'' These commenters cite as support that the contribution of oil and gas to total U.S. GHG emissions is only 3 percent, that U.S. methane emissions are only 7 percent of global methane emissions, that U.S. methane emissions are only 1 percent of global GHG emissions, and that estimated impacts of the 2016 Rule would be to reduce methane concentrations in 2100 by 0.12 percent and temperatures by less than a thousandth of a degree. Other commenters assert that, if a SCF for methane emissions from the Oil and Natural Gas source category were required under the statute, the EPA fully satisfied this obligation in the 2016 Rule. Several commenters assert that, even if the EPA eliminates the transmission and storage segment from the source category, the 2016 SCF remains appropriate and binding. A commenter notes in the 2019 Proposal the production and processing segments account for 1.8 percent of global methane and 0.3 percent of total global GHG and states this is equal to or greater than the total methane emissions from all but eight countries around the world. The commenter asserts that these totals are significant by any measure. One commenter states that because climate change is a global phenomenon, small percentage changes are relevant and addressing a large number of smaller sources will ultimately reduce the rate of climate change. The commenter adds that to solve a global problem, reductions of a fraction of a percent are substantial and important (citing 2016 Rule's Response to Comments Document, Docket ID Item No. EPA–HQ–OAR–2010–0505–7632). One commenter states that, if the production and processing segments were listed as an individual methane source, it would still be larger than every other source currently listed apart from enteric fermentation. One commenter notes that in light of methane's 20-year GWP of 87, methane from the domestic sources accounts for 9.3 percent of total U.S. GHG emissions and 1.2 percent of global GHG emissions. One commenter states that the transmission and storage segment emits 16.8 percent of the source category's total GHG emissions and it would be arbitrary and capricious for the EPA to undermine its 2016 SCF by removing from that source category facilities that emit only a minority of the pollutants.

Response: The EPA agrees with commenters that the 2016 Rule failed to provide a pollutant-specific SCF as a prerequisite to imposing NSPS regulations for methane emissions. The SCF determination made in the 2016 Rule was on the basis of methane emissions from the production, processing, transmission and storage segments. In this action, the EPA is removing the transmission and storage segment from the source category. The 2016 Rule did not assess whether methane emissions from the production and processing segments alone cause or contribute significantly to dangerous air pollution; thus, we find that the 2016 Rule's determination is not adequate. In addition, the EPA has yet to makes an appropriate determination that methane emissions from the Oil and Natural Gas Production source category cause or contribute significantly to dangerous air pollution. The EPA appreciates the commenters' views concerning the amounts and impacts of methane emissions from the transmission and storage segment, as well as the production and processing segments, but until the EPA itself reviews and assesses those amounts of emissions, it cannot make a determination as to whether methane emissions from the production and processing segments contribute significantly to dangerous air pollution.

2. Identification of the Standard for Determining Significance

Comment: Commenters responded to the EPA's solicitation of comment concerning whether, as a matter of law, under CAA section 111, the EPA is obligated to identify the standard by which it determines whether a source category's emissions contribute significantly, and whether, if not so obligated, the EPA nevertheless fails to engage in reasoned decision-making by not identifying that standard. Some commenters stated that the EPA must identify the standard by which it determines whether a source category's emissions ''contribute significantly.'' They asserted that, in order to not be arbitrary and capricious, an agency must articulate a reasonable explanation for the actions it takes, and that as a result, the EPA should establish what constitutes ''significant'' contribution for purposes of CAA section 111(b). They note that the EPA has done so for other programs that require a similar showing, such as CAA sections 110(a)(2)(D)(i), 189(e), and 213 (citing 76 FR 48208, 48236 and 37 (August 8, 2011) (Cross-State Air Pollution Rule)). Other commenters assert there is no indication that Congress intended that the EPA must establish such a standard before making a SCF and that the EPA has made SCFs for dozens of source categories over almost 50 years without having established such a standard. They added that in the past, the EPA has appropriately relied on a facts and circumstances analysis and that it would be irrational to adopt a standard or threshold because different air pollutants have different effects on health and/or welfare, as well as different geographic trajectories.

Response: The EPA appreciates these comments, as well as the additional ones noted in the Response to Comments Document. They will inform the Agency's future consideration of this issue. As explained above, the Agency has concluded that it must identify a standard for ''contribute significantly'' in order to make a SCF for a source category, to ensure not only that the public is on notice of the criteria that the Agency uses in making such determinations but also that the Agency itself is acting consistently in making such determinations. However, it is not necessary to resolve the specific content of this standard in this rulemaking because, as discussed above in section VI of this preamble, the EPA is rescinding the SCF for methane from the Oil and Natural Gas Production source category that the Agency made in the 2016 Rule, on the ground that the scope of the source category inappropriately included the transmission and storage segment.

C. Criteria for Making a Significant Contribution Finding Under CAA Section 111

Comment: Several commenters responded to the EPA's solicitation of comment regarding criteria for the EPA to consider in making a SCF. Some recommend that the EPA defer any action on SCF criteria and instead address this question in a future advance notice of proposed rulemaking, ICR, and/or proposed rulemaking. One commenter adds that deferring the issue would allow the EPA to focus on finalizing the core rulemaking and to streamline issues in any future legal challenge to a final rule. Some commenters discuss other contexts under the CAA in which the Agency has

interpreted and applied similar language to governing the SCF determinations under CAA section 111(b)(1)(A). For example, these commenters discuss factors suggested by past EPA action under CAA sections 189(e) and 213(a)(2), (3), and (4). Some commenters suggest specific criteria that the EPA could consider, including, among others, consideration of the 1979 source category listing methodology, factors related to climate change, all factors relevant to a source category's contribution on a case-by-case basis, accumulation in the atmosphere of pollutants, projected future emissions, and consistency with the goal of protection of the Nation's air resources. We summarize these comments at greater length in the Response to Comments Document.

Response: The EPA acknowledges the commenters' statements. As pointed out in the proposal, the EPA does not intend for these comments to inform the finalization of this rule, but rather to inform the EPA's actions in future rules. Therefore, the EPA is not evaluating the merits of comments on these topics at this time. However, the Agency will look at the details provided in these comments when considering future action in making a SCF.

X. Summary of Significant Comments and Responses Concerning Implications for Regulation of Existing Sources

A. Existing Source Regulation Under CAA Section 111(d)

Comment: Several commenters agree with the statements in the 2019 Proposal that the EPA's rescission of the applicability of the NSPS to methane emissions for the sources in the Crude Oil and Natural Gas Production source category that are currently covered by the NSPS would have the consequence that the EPA would no longer be authorized to regulate existing sources of the same type in the source category under CAA section 111(d).

However, other commenters assert that the 2016 Rule regulation of methane from the oil and natural gas sector has already triggered a mandatory duty for the EPA to develop CAA section 111(d) EG for existing sources within that sector. They state that the EPA's 2009 endangerment finding for GHG emissions and its 2016 rational basis determination and pollutant-specific endangerment/SCF for methane emissions from the Oil and Natural Gas Production source category obligate the EPA to regulate such emissions not just from new sources under CAA section 111(b), but also from existing sources under CAA section 111(d).

Response: The EPA agrees that following promulgation of the methane NSPS in the 2016 Rule, the EPA was obligated to develop EG under CAA section 111(d) for existing sources of methane in the source category. However, that obligation ends with the rescission of those NSPS. Section 111(d)(1) of the CAA provides by its terms that the EPA is authorized to promulgate guidelines for regulation of any existing source ''to which a standard of performance under this section would apply if such existing source were a new source.'' Once the EPA has rescinded the methane NSPS, existing sources of methane would no longer be subject to such an NSPS if they were new sources. As a result, from the time of the rescission forward, the EPA would no longer have authority to promulgate guidelines to regulate those sources. Nothing in CAA section 111(d) indicates that once the EPA promulgates NSPS that trigger an obligation to regulate existing sources, that obligation remains in place even after the NSPS has been rescinded.

Comment: As discussed in the proposal preamble for this action, the EPA interprets CAA section 111(d) as not permitting a CAA section 111(d) existing source regulation to be developed as a result of the NSPS for VOC emissions from new sources in the Crude Oil and Natural Gas Production source category under CAA section 111(b). Specifically, the EPA stated that VOC do not qualify as the type of air pollutant that, if subjected to a standard of performance for new sources, would trigger the application of CAA section 111(d) the pollutants excluded from regulation under CAA section 111(d) include pollutants which have been included on the EPA's CAA section 108(a) list. VOC are not expressly listed on the EPA's CAA section 108(a) list, but they are precursors to ozone and PM, both of which are listed CAA section 108(a) pollutants. The definition of ''air pollutant'' in CAA section 302(g) expressly provides that the term ''air pollutant'' includes precursors to the formation of an air pollutant ''to the extent that the Administrator has identified such precursor or precursors for the particular purpose for which the term 'air pollutant' is used.'' Based on this ''particular purpose'' phrasing, it is appropriate to identify VOC as a listed CAA section 108(a) pollutant for the particular purpose of applying the CAA section 108(a) exclusion in CAA section 111(d) [hereinafter referred to as the EPA's ''VOC exclusion argument'']. 84 FR 50272. Comments provided on the proposal both agree and disagree with this interpretation. These comments are provided below.

Commenters that agree with the EPA's interpretation assert that the statute is clear that a source category cannot be subject to CAA section 111(d) emission standards for ''any pollutant . . . for which air quality criteria have . . . been issued or which is . . . included on a list published under'' CAA section 108(a). The commenters state that while VOC are not themselves directly on the list of criteria pollutants under CAA section 108, the EPA has designated them as precursors for ozone and PM, both of which are listed CAA section 108(a) criteria pollutants. The commenters add that the CAA defines ''air pollutant'' to include ''any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term 'air pollutant' is used,'' and because the ''particular purpose'' of the term ''air pollutant'' in CAA section 111(d) is to identify pollutants that are already subject to regulation under the NAAQS program, it is appropriate to conclude that VOC are one of the ''air pollutants'' covered by this exclusion.

Conversely, several other commenters disagree with the EPA's interpretation that CAA section 111(d) does not require that existing source regulation be developed as a result of the NSPS for VOC emissions from new sources in the Crude Oil and Natural Gas Production source category under CAA section 111(b). One commenter notes that the EPA first argues that VOC are ''regulated under the CAA's NAAQS/SIP program'' because they are precursors to listed pollutants ozone and PM, pointing to provisions of the CAA relating to requirements for ozone non-attainment areas that explicitly call for reductions in VOC emissions. The commenter asserts, however, that the statutory test for whether a pollutant is excluded is not whether it is ''regulated under'' CAA section 108 or CAA section 110, but rather the test is whether air quality criteria have been issued for the pollutant of concern, or the pollutant has been listed under CAA section 108. The commenter asserts that neither of these is true here for VOC, as the only pollutants for which air quality criteria have been issued or included on a list published under CAA section 108(a) are SO_2, PM_{10} and $PM_{2.5}$, CO, ozone, NO_X, and lead.

One commenter contends that the proposal VOC exclusion argument contradicts the Agency's own position in other regulations and notes that in 1996 the EPA finalized parallel

rulemakings for new and existing municipal solid waste (MSW) landfills under CAA sections 111(b) and 111(d), respectively. The commenter states that pollutants deemed harmful to human health emitted from MSW landfills included methane, VOC, HAP, and odorous compounds, collectively termed ''landfill gas.'' The commenter notes that the EPA chose to use non-methane organic compounds (NMOC), which includes VOC, as a surrogate for landfill gas in its setting standards of performance and EG for new and existing MSW landfills under CAA sections 111(b) and 111(d). The EPA updated these regulations in 2016 (2016 Standard), with its new EG ''expected to significantly reduce emissions of LFG [landfill gas] and its components, which include methane, VOC, and hazardous air pollutants (HAP).'' The commenter states that the EPA noted that reducing methane had become more important since the prior 1996 rulemaking, which had focused on NMOC (including VOC) ''because NMOC contain[ed] the air pollutants that at that time were of most concern due to their adverse effects on public health and welfare.'' The commenter adds that, as such, the 2016 Standard was focused on ''reducing [both] the NMOC and methane components of LFG.'' The commenter provides that the EPA acknowledged VOC was a precursor to criteria pollutants $PM_{2.5}$ and ozone, but nowhere did the EPA make the argument the Agency now raises that VOC status as a precursor means that it is not subject to regulation under CAA section 111(d).

Response: First, with respect to the comment that the EPA has applied a ''regulated under CAA 108'' test rather than the ''listed under CAA 108'' test that is stated in the statute, this comment misstates the EPA's argument. The EPA's conclusion is that VOC are included within the CAA section 108(a) listings for ozone and $PM_{2.5}$ for the particular purpose of applying the CAA section 108(a) exclusion in CAA section 111(d). The ''regulated under CAA 108'' point is one of the reasons why the EPA has concluded that it is appropriate to consider VOC to be part of the CAA section 108(a) listings for ozone and PM 2.5 for this purpose—because VOC are regulated through the NAAQS implementation program, and thus there is no gap in the CAA regulation of VOC that needs to be covered by CAA 111(d) regulation. In other words, we are not concluding that VOC are excluded from CAA 111(d) regulation because they are regulated under the NAAQS implementation program. Instead, we are concluding that VOC are excluded from 111(d) regulation because they are part of the CAA 108(a) listings for ozone and $PM_{2.5}$ for the purpose of applying CAA section 111(d), and we reach that conclusion based in part on the fact that VOC are regulated through the NAAQS implementation program.

Second, the argument that EPA's regulation of municipal solid waste (MSW) landfill emissions (sometimes referred to as ''landfill gas'') under CAA 111(d) contradicts EPA's conclusion that VOC cannot be regulated under CAA 111(d), because MSW landfill emissions landfill includes VOC among its components, is incorrect. The EG and standards of performance for MSW landfills that were originally promulgated in subparts Cc and WWW of part 60 and subsequently in subparts Cf and XXX regulate only ''MSW landfill emissions,'' not the individual components of landfill gases. *See* 40 CFR 60.30c through 60.36c; 40 CFR 60.30f through 60.41f; 40 CFR 60.750 through 60.759, and 40 CFR 60.760 through 60.769. Both the regulatory text in these subparts and the EPA's preamble discussion explicitly address this issue and clarify that ''MSW landfill emissions'' is a single designated pollutant and the only pollutant subject to regulation by these subparts.

For example, the regulatory text of 40 CFR part 60, subpart Cc, clarified that it contains guidelines for the control of ''certain designated pollutants'' and identifies ''MSW landfill emissions'' as the pollutant to be controlled by the state plans. 40 CFR 60.30c and 60.33c(a). The same is true for 40 CFR part 60, subpart Cf. 40 CFR 60.30f (subpart establishes requirements for ''designated pollutants), 60.33f(a) (pollutant to be controlled is ''MSW landfill emissions''). Similarly, 40 CFR part 60, subparts WWW and XXX, require affected sources to collect and control landfill gases, and each defines ''MSW landfill emissions'' as ''gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.'' 40 CFR 60.751; 40 CFR 60.761. This definition in each subpart makes clear that the regulated pollutant is confined to emissions that originate from an MSW landfill.

Further, in proposing the MSW regulations in 1991, the EPA was explicit that it was regulating only MSW landfill emissions collectively, and not the individual components of those emissions. The EPA stated the following in the preamble to the proposed rule:

> The pollutant to be regulated under the proposed standards and guidelines is ''MSW landfill emissions.'' Municipal solid waste landfill emissions, also commonly referred to as ''landfill gas,'' is a collection of air pollutants, including methane and NMOC's [non-methane organic compounds], some of which are toxic. The composite pollutant is proposed to be regulated under section 111(b), for new facilities, and is proposed to be the designated pollutant under section 111(d), for existing facilities.

56 FR 24468, 24470 (May 30, 1991). In additional discussion, the EPA explained the following:

> The EPA views these emissions as a complex aggregate of pollutants which together pose a threat to public health and welfare based on the combined adverse effects of the various components. . . . [T]he exact composition of MSW landfill emissions can vary significantly from landfill to landfill and over time. Although the types of compounds are typically the same, the complex mixture cannot be characterized quantitatively in terms of single pollutants. The EPA thus views the complex air emission mixture from landfills to constitute a single designated pollutant.

Id. at 24474–24475. Thus, the argument that VOC or any other of the individual components of landfill gases are separately regulated under these provisions is incorrect and inconsistent with the regulatory text and record for these subparts.

Comment: The proposal preamble for this action cited CAA section 112(b)(2) and argued that the ''except'' phrasing of CAA section 112(b)(2) suggests that air pollutants which are ''listed under section 7408(a)'' can be read to include precursors to the pollutant that is listed under CAA section 108(a). The EPA provided that otherwise the pollutants that are described in the second part of the sentence (pollutants that meet the listing criteria and are precursors to a CAA section 108(a) pollutant) would not be an exception to the prohibition in the first part of the sentence. 84 FR 50272.

One commenter contends that the EPA's analogy to CAA section 112 to ostensibly demonstrate that Congress would have explicitly subjected precursors to regulation in CAA section 111(d) if it wanted to, because it did so in CAA section 112 is inapposite here. The commenter states that, first, as the EPA acknowledges, Congress provided a flexible definition of ''air pollutant'' depending on ''the particular purpose for which the term 'air pollutant' is used.'' The commenter states that the particular purpose for which the term ''air pollutant'' is used in CAA section 112 is quite different than in CAA section 111(d). The commenter notes that the relevant statutory provision in

CAA section 112 excludes from regulation as a HAP any ''air pollutant[s] listed under section [108(a)] . . . except that . . . precursor[s] to a pollutant which [are] listed under section [108(a)]'' can be regulated as a HAP. The commenter states that the EPA argues that to interpret the phrase ''air pollutant[s] listed under section [108(a)]'' as being exclusive of precursors would render meaningless the exception in CAA section 112(b)(2) for precursors. The commenter contends that it may be true in the context of CAA section 112, but it does not follow that the same interpretation applies in CAA section 111, which lacks such an express statutory exception.

Response: This commenter misunderstands the relevance of the text in CAA section 112(b)(2) in determining whether VOC are excluded from CAA section 111(d) regulation by the CAA section 108(a) exclusion. The EPA is not drawing an analogy to the outcome in CAA section 112(b)(2), which expressly removes precursors from the prohibition on the regulation under CAA section 112 of air pollutants listed under CAA section 108(a). The point here is that CAA section 112(b)(2) demonstrates that Congress understood that the phrase ''air pollutant listed under section 7408(a)'' could be read to encompass precursors. Moreover, in CAA section 112(b)(2) Congress included express language stating its choice: That regulation of precursors under CAA section 112 was not barred by the prohibition on regulating pollutants listed under CAA section 108(a). In CAA section 111(d), however, Congress did not state a choice; it stated an exclusion for pollutants listed under CAA section 108(a) without specifying whether that exclusion extended to precursors. This ambiguity, combined with the CAA section 302(g) definition of ''air pollutant'' that expressly gives the EPA the discretion to determine whether precursors are to be considered part of ''air pollutant'' on a case-by-case basis for each ''particular purpose for which the term 'air pollutant' is used,'' means that the EPA has to apply its expertise in administering the CAA program to determine whether the air pollutants excluded from CAA section 111(d) regulation by the CAA section 108(a) exclusion covers precursors. For all of the reasons discussed, the EPA has reasonably concluded that precursors are excluded by the CAA section 108(a) exclusion.

Comment: The proposal preamble for this action stated that ''CAA section 111(d) is properly understood as a 'gap-filling' measure to address pollutants that are not addressed under either the NAAQS/SIP provisions in CAA sections 108–110 or the HAP provisions in CAA section 112. Because VOC are regulated as precursors to ozone and $PM_{2.5}$ under CAA sections 108–110, they are properly excluded from regulation under CAA section 111(d) because the ''gap-filling'' function of CAA section 111(d) is not needed.'' 84 FR 50272. Some commenters agreed with the EPA's interpretation that CAA ''section 111(d) is properly understood as a 'gap filling' measure to address pollutants that are not addressed under either the NAAQS [SIP] provisions in CAA sections 108–110 or the [HAP] provisions in CAA section 112.'' These commenters generally note that regulation of existing sources under CAA section 111(d) is very rare and that the provision has been used only a handful of times, in part because it can only be triggered by a handful of pollutants and that Congress' inclusion of CAA section 111(d) can only be viewed as a safety valve for a limited number of circumstances. One commenter concludes that because VOC emissions are regulated under CAA section 108 and related statutory provisions as part of the NAAQS implementation program, they do not fall into this ''gap'' and cannot be regulated under CAA section 111(d).

Conversely, other commenters assert that the EPA's proposal preamble discussion regarding CAA section 111(d) as a gap-filling measure does not support the EPA's claim that Congress intentionally chose to exclude criteria pollutant precursors from regulation under CAA section 111(d) and that the ramifications of such an interpretation would be enormous.

The commenter states that the EPA makes a structural argument that excluding VOC from regulation under CAA section 111(d) makes sense with respect to that section's ''gap-filling'' role, since VOC are already ''regulated as pre-cursors under CAA sections 108–110'' and, thus, there is no gap to be filled. However, the commenter believes that this argument ignores the legislative history of CAA section 111(d). The commenter asserts that CAA section 111(d) began as a Senate proposal with an explicit list of pollutants to be regulated, and that ultimately, this explicit list was replaced with gradually broader phrasing until the language we see today was included in the 1970 CAA Amendments. The commenter adds that the legislative history reflects Congress' intent to give the EPA the flexibility to regulate a broad range of pollutants, rather than to constrain the EPA's discretion to a designated list of pollutants subject to regulation under CAA section 111(d). The commenter contends that the EPA's current interpretation would restrict the applicability of CAA section 111(d) to a narrower set of pollutants than Congress intended, and indeed, to a narrower set of pollutants than the Agency itself has regulated in the past. The commenter concludes that contrary to the EPA's assertions in its proposal, such a narrow interpretation upends the very idea of a ''gap-filling'' provision intended to give the Agency the flexibility to regulate a broad range of pollutants where necessary to fill gaps left by the NAAQS and NESHAP programs.

Response: The EPA disagrees with this comment. First, the argument that legislative history shows that Congress intended to give the EPA the authority to regulate a broad range of pollutants under CAA section 111(d) fails in the face of the statutory exclusions of pollutants that Congress enacted. The exclusions in CAA section 111(d) expressly narrowed the breadth of the pollutants that the EPA can regulate under CAA section 111(d). Second, the gap-filling role of CAA section 111(d) is properly understood to fill the gaps that exist *between* the regulatory regimes that address criteria/CAA section 108(a) pollutants and HAP—that is, the regulation of those pollutants that are not listed and regulated under those other CAA programs. CAA section 111(d) is not properly read to fill gaps that exist *within* those other CAA programs.

B. Impact of Lack of Regulation of Existing Oil and Natural Gas Sources Under CAA Section 111(d)

In the proposal preamble, the EPA stated that ''the lack of regulation of existing sources under CAA section 111(d) will not mean a substantial amount of lost emission reductions.'' 84 FR 50271. The proposal preamble provided several reasons for why there could be limited impact from not regulating existing oil and natural gas sources under CAA section 111(d), including (1) equipment turnover/source modifications will result in existing sources being subject to the NSPS, (2) market incentives capture valuable methane product, (3) voluntary actions to reduce methane emissions are prevalent, and (4) state regulations result in emission reductions. The EPA received comments that both agree and disagree with the EPA's conclusions and reasoning presented in the proposal preamble. These comments and the EPA response to their comments are provided below.

Comment: Several commenters assert that the EPA's assertion that the lack of

regulation of existing sources directly caused by the proposed rule to deregulate methane emissions from new sources will have ''limited impact,'' does not have sufficient supporting data or analysis, and is false and arbitrary and capricious. One commenter states that, although the EPA attempts to downplay the likely impact from its non-regulation of existing sources, the EPA fails either to define what it means by ''substantial'' or to provide evidence to support this claim.

The commenters state that it would not be rational or legal for the EPA to put blinders on in order to ignore the enormous consequences of rescinding methane regulation for existing sources. The commenters assert that section 111 of the CAA is concerned with reducing dangerous pollution from stationary sources—new, modified, and existing. *See, e.g.,* 42 U.S.C. 7411(b)(1)(B) (discussing ''new sources within such category''); *Id.* 42 U.S.C. 7411(d)(2)(B) (discussing existing sources as ''sources in the category of sources''). Some commenters state that while the EPA claims that ''[a]nalysis of potential impacts of removing the requirement to regulate existing sources under CAA section 111(d) is outside the scope . . . and would be speculative,'' the EPA's refusal to consider these impacts renders its proposal unlawful.

Response: The EPA acknowledges in the proposal preamble (84 FR 50271) that by rescinding the applicability of the methane NSPS for the sources in the Crude Oil and Natural Gas Production source category, existing sources of the same type in the source category will not be subject to regulation under CAA section 111(d). The EPA is not required under a CAA section 111(b) NSPS subpart OOOOa rulemaking, however, to consider the impacts of existing sources not being regulated under a hypothetical CAA section 111(d) rule as a result of amending a CAA section 111(b) rule. While the EPA did not prepare and include a quantitative analysis that estimates the levels at which source modification/equipment turnover, market incentives, voluntary programs, and state requirements—might limit potential emissions increases from not regulating existing sources, the EPA discusses how each of these factors currently contribute and will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources in absence of an EG in absence of existing source CAA section 111(d) guidelines.

The EPA concedes, however, that the use of the term ''substantial'' conveys a quantitative value, and that it would have been more accurate in absence of a quantitative analysis to state that these factors all have the potential to motivate or require operators to control emissions from existing sources in absence of a CAA section 111(d) EG. Further detail regarding comments received on the potential for limiting emissions from existing sources for each of these factors, and responses to these comments are provided below.

Comment: Several commenters suggest that the EPA's claim that equipment turnover, market incentives, voluntary actions, and state regulations will mean that there will not be a substantial loss of emission reductions is inconsistent with findings the EPA itself made in prior rulemakings, including the 2016 Rule. The commenters state that the EPA has provided no rational basis for its drastic shift in position (citing *Lone Mountain Processing, Inc.* v. *Secretary of Labor,* 709 F.3d 1161, 1164 (D.C. Cir. 2013)).

Response: The EPA's notes that changes have occurred since the earlier rulemakings that affect emissions from existing oil and natural gas sources. For example, there is greater industry participation in voluntary methane emissions reduction programs/actions and more state regulations/permits limiting emissions from oil and natural gas operations than there were when the EPA developed the 2016 Rule.

Comment: Commenters contend that the EPA cannot support not establishing standards under CAA section 111(d) based on source modification/equipment turnover, market incentives, voluntary programs, or state requirements factors mitigating potential emissions increases from not regulating existing sources. The commenters note that the cited factors are precisely the ones that Congress rejected when it chose to require uniform national standards. The commenters also note that the CAA is clear: The EPA ''shall prescribe regulations'' for existing sources in listed source categories that are subject to new source requirements for air pollutants not regulated under the NAAQS or section 112. 42 U.S.C. 7411(d)(1). The commenters suggest that the EPA's reliance on source modification, market incentives, voluntary programs, and state requirements to justify the proposal exceeds the Agency's authority under the CAA (citing *Massachusetts* v. *EPA,* 549 U.S. 497, 533–535 (2007) (the EPA cannot rely on a ''laundry list of reasons not to regulate'' when there is a ''clear statutory command'' under the CAA)).

Response: The EPA recognizes that rescinding the applicability of the NSPS to methane emissions for the sources in the Crude Oil and Natural Gas Production source category that are currently covered by the NSPS will mean that existing sources of the same type in the source category will not be subject to regulation under CAA section 111(d). The reasoning for not developing a CAA section 111(d) standard is not because source modification, market incentives, voluntary programs, and state requirements will limit emissions increases that may result from not pursuing a CAA section 111(d) standard. Rather, this is a legal consequence that results from the application of the CAA section 111 requirements.

Comment: Several commenters specifically provide support for, and opposition to, the individual factors (equipment turnover/source modifications, market incentives, voluntary actions, and state regulation) cited by the EPA as mitigating emission increases as a result of not regulating existing sources.

Equipment turnover/source modifications. One of the factors that the EPA provided in the proposal for the limited impact of the lack of regulation of existing sources under CAA section 111(d) was ''that the number of existing sources may decline over time due to obsolescence or to shut down and removal actions.'' 84 FR 50273. The EPA provided analysis to support this rationale and also solicited comment regarding the rate at which this decline can be expected to occur. One commenter supported the proposal by stating that because CAA section 111 defines an ''existing source'' as one that is not a ''new source,'' the universe of existing oil and natural gas sources potentially subject to CAA section 111(d) requirements would be any affected facility for which construction commenced on or before September 18, 2015, indicating that any ''existing source'' has already been in operation for at least 4 years. The commenter contends that even if the EPA were to issue EG for methane for these sources today, the Agency's 40 CFR part 60, subpart Ba regulations implementing CAA section 111(d) (Emission Guidelines for Municipal Solid Waste Landfills) provide states with 3 years to develop and submit their state plans. The commenter notes that these state plans may provide a source with up to 24 months to comply with emission standards (or longer if the compliance schedule includes legally enforceable increments of progress), and states retain discretion under CAA section 111(d) and the regulations to further

extend these compliance deadlines for an individual source based on its remaining useful life or other factors. The commenter states that by the time CAA section 111(d) emission standards would become effective, roughly 10 years will have passed since the date marking the cutoff between ''new'' and ''existing'' sources. During that time period, the commenter states, it is likely that sources constructed before this cutoff will have been plugged and abandoned or replaced with new equipment that would itself be subject to the VOC requirements of NSPS subpart OOOO (which will also reduce associated methane emissions). The commenter adds that those existing oil and natural gas sources that are not plugged and abandoned or replaced may also undergo changes that qualify as ''modifications'' under NSPS subpart OOOOa, and in that case would be treated as new sources.

Conversely, several other commenters express concern that the EPA has not supported its claim that source turnover is one reason for the limited impact of not regulating existing sources. One commenter contends that the EPA's withdrawal of the ICR, coupled with its lack of information that could support a reasoned analysis, makes its action arbitrary and capricious. One commenter notes that the average life of an oil and natural gas well is 20 to 30 years, meaning that facilities installed prior to September 2015 could still be in operation in September 2045. The commenter points out that many of the largest-emitting facilities (*e.g.,* field storage tanks) typically do not undergo modification or reconstruction during their useful life.

Another commenter asserts that the EPA's claim that the existing source inventory will turn over is undercut by the EPA's extensive list, in the 2019 Proposal preamble, of questions to stakeholders about the rate of modification practices within the sector. The commenter states that the existence of the EPA's extensive list of questions indicates that the EPA has little information on how regularly these transitions occur and cannot claim that there will be little emissions impacts until after the Agency has analyzed the information that it requests.

Some commenters assert that the EPA-cited data from the U.S. Greenhouse Gas Inventory (GHGI) (for pneumatic controllers, compressors, tank throughput, and well completions); *Drillinginfo.com* (for well completions); and NSPS subpart OOOOa compliance reports (for assessing turnover rates) do not support the EPA's turnover conclusions, and exhibit substantial limitations for assessing turnover and obsolescence rates. For example, the commenters note that the GHGI provides absolute source counts for each year, but does not include information on specific sources—meaning it is not possible to assess the number of sources that are new, the number that have ceased operation, or the number that have remained in use over a time period.

Furthermore, the commenters contend that the EPA's analysis ignores large sources of emissions, such as reciprocating compressors and all leaks downstream of well pads. The commenters address the data the EPA provided by source (*i.e.,* pneumatic controllers, compressors, storage vessels, well completions) to illustrate their point that the data are insufficient or do not support the EPA's claim that many existing sources will become ''modified'' sources in the future, while other existing sources will be replaced by new facilities or shut down.

Some commenters also assert that the compliance reports and the preliminary data submitted in response to the ICR indicate that the large majority of facilities in the oil and natural gas sector are not currently complying with the NSPS. This means, according to the commenters, that these sources are existing sources with limited turnover. One commenter adds that records of natural gas operations in New Mexico demonstrates that numerous oil and natural gas fugitive emissions sources, storage tanks, and loadout emissions sources with construction dates going back to 1970 have not been modified, reconstructed, or replaced with new equipment.

Market incentives. Many commenters generally agree with the EPA's statements in the 2019 Proposal that market incentives already provide a powerful impetus for owners and operators of sources in the oil and natural gas industry to limit their methane emissions. Commenters state that the fact that the ''pollutant'' at issue is itself a valuable commodity means that source owners and operators have economic incentives to prevent its release in order to maximize the amount of natural gas that is sold for revenue. One commenter notes that the EPA's data bear that out, demonstrating that over the past 80 years, the fraction of natural gas withdrawals lost to venting and flaring has decreased from over 20 percent to just 1 or 2 percent.

Conversely, other commenters contend that there are a number of flaws with the EPA's theory that market incentives will meaningfully address methane emissions from existing oil and natural gas sources. First, one commenter notes that these theoretical ''market incentives'' largely depend on natural gas price trajectories, and contends that the EPA fails to conduct any analysis of how operators might be anticipated to reduce their emissions in light of expected natural gas prices. In reality, the commenter states, examples abound of operators choosing to flare or vent gas, rather than capture it, under current market prices. Second, a commenter states that the EPA ignores a fundamental economic principle in its discussion of market incentives: When there is a negative externality associated with an activity (here, the emission of both climate-disrupting and conventional pollution) that is not reflected in an individual operator's costs, market incentives are typically insufficient to reduce the activity to socially optimal levels. Third, a commenter states that the emissions trends noted by the EPA do not support the proposition that market incentives are adequate to reduce methane emissions from existing sources; and in fact, the data cited by the EPA shows that emissions from the oil and natural gas industry have remained persistently high despite those incentives.

Voluntary actions. Several commenters present information regarding existing voluntary programs and methane mitigation strategies being employed to reduce methane emissions from oil and natural gas operations. These commenters present a series of voluntary programs/strategies that the industry is currently undertaking and will continue to undertake to help reduce its methane emissions.

One industry representative organization [American Petroleum Institute (API)] adds that participants in The Environmental Partnership's Leak Detection and Repair Program reported a leak occurrence rate of just 0.16 percent, and that figure comes from more than 156,000 surveys across more than 78,000 production sites and is an important signal that ongoing industry efforts to identify and fix emissions sources are working.

Several other commenters contend that voluntary measures to control methane emissions would not compensate for the removal of the Federal methane requirements. Commenters note that of the thousands of oil and natural gas sources across the U.S., only about 1 percent participate in voluntary programs to address methane emissions (citing *http://blogs.edf.org/energyexchange/2019/09/03/epas-proposal-to-rollback-methane-rules-ignores-scientific-evidence-will-lead-to-5-million-tons-of-methane-pollution/*).

Commenters note that even industry members that have participated in these voluntary programs have noted that they are not a substitute for strong, uniform regulatory requirements. In addition, some commenters state that while voluntary efforts are important for reducing emissions and understanding how production operations can become more efficient and deliver environmental benefits, they cannot replace uniform Federal methane regulations for the oil and natural gas industry.

State regulations. Some commenters agree with the EPA that there are several states—including many of the states with the most significant oil and natural gas activity levels, that are already taking actions to reduce VOC and, by extension, methane emissions. One commenter states that while not every state has adopted such regulations, the states the EPA cites in the proposal cover the vast majority of the nation's oil and natural gas production, and while not every state's regulatory program covers all of the emission sources listed in NSPS subparts OOOO and OOOOa, they do all include regulatory requirements for storage vessels and fugitive emissions at well sites, ''two of the largest emission sources within the oil and natural gas industry.'' Another commenter concludes that current regulations of VOC emissions in North Dakota and other top oil and natural gas producing states will be sufficient to reduce methane emissions from the oil and natural gas industry, and that the participation of those states in national organizations such as the Environmental Council of the States (ECOS) are generating increasingly consistent state requirements that will meaningfully reduce emissions should the proposed amendments be finalized.

Other commenters assert that emissions control requirements of state regulatory programs will not be sufficient to reduce methane emissions. Commenters note that California, Colorado, Montana, New Mexico, North Dakota, Ohio, Pennsylvania, Texas, Utah, and Wyoming—the states that the EPA includes in the Proposal's ''Comparison of State Oil and Natural Gas Regulations'' table, 84 FR 50277—take widely divergent approaches that vary significantly in stringency, and most states have no standards applicable to existing sources. In 2020, according to the commenters, state standards applicable to existing sources (certain standards in California, Colorado, Utah, Wyoming (in the Upper Green River Basin ozone non-attainment area), and Texas) will reduce only 180,000 metric tons of methane, roughly 5 percent of what CAA section 111(d) guidelines modeled on the current NSPS could achieve. Other commenters added that regulation of existing sources by the EPA under section 111(d) of the CAA is preferable to a patchwork of regulations created separately by each state Agency (or the lack of regulation in some states). One commenter explains that Federal regulation creates a consistent framework that establishes a minimum level of emission control that strengthens public confidence in the natural gas industry and ensures GHG emission reductions.

Modeling analyses of impacts of foregone regulation of existing sources. Commenters presented two competing modeling analyses estimating the potential impacts of not pursuing EGs under CAA section 111(d). One presented by API supported the EPA's statements in the 2019 Proposal that the impacts would be limited, and one presented by the Environmental Defense Fund (EDF) disputed the EPA's claim.[73] [74] The assumptions used in these analyses vary; including the assumed EG requirements, the date when emissions that could have and would be controlled under an EG, what sources/segments the EG would cover, and how they accounted for turnover rates and state regulations when projecting emissions from existing sources. Neither of these analyses provide sufficient detail by emission source by segment to do a direct comparison of their analyses. However, the most important driver of differences between the competing analyses appears to be the differing assumptions regarding the emissions sources and segments the EG would regulate and the date when emissions could have and would be controlled under an EG.

The API Analysis includes a subset of emission sources compared to the EDF Analysis. The API Analysis includes the following production sources: Storage vessels, pneumatic devices, pneumatic pumps, and fugitive emissions from non-low production wells—it does not include low production wells, reciprocating/centrifugal compressors, or fugitive emissions from gathering and boosting compressor stations based on what was covered under the 2016 *Control Techniques Guidelines for the Oil and Natural Gas Industry.*[75] The EDF Analysis assumes that the EG will extend the requirements found in the 2016 Rule to all affected existing sources, specifically: High-bleed pneumatic controllers at well sites and transmission and storage compressor stations, all continuous bleed pneumatic controllers at natural gas processing plants, fugitive emissions from gas processing plants, well sites, and compressor stations, reciprocating and centrifugal compressors at both processing plants and compressor stations, and pneumatic pumps at well sites and processing plants. The EDF Analysis estimates emissions uncontrolled from existing sources starting in 2017 that would have been controlled by an EG and API assumes that an EG would not have been implemented (and, therefore, uncontrolled emissions as a result of a lack of an EG would not apply) until 2028. In absence of any other assumptions, this difference leads to vastly different results.

According to the API Analysis, if an existing source rule were implemented in 2028, minimal methane emission reductions (5 percent – (102,000 MT (metric tons) methane) from NSPS regulated sources would be realized with their hypothetical reductions decaying to ~1 percent (24,000 MT) of the total emissions from regulated sources by 2043. The API Analysis concludes that by 2028, 94 percent (and by 2043, 99 percent) of oil and natural gas production will be regulated by 40 CFR part 60, subpart OOOO or OOOOa. In other words, the API Analysis estimates that an EG modeled after a modified version of the EPA's 2016 Control Techniques Guideline would only achieve an additional 5 percent of emissions reductions when compared to the NSPS regulations alone. The API provides that their analysis illustrates that an existing source rule would provide negligible environmental benefit.

This is in contrast to the EDF Analysis that estimates that each year that the EPA does not promulgate EG under CAA section 111(d) will allow substantial additional emissions. They estimate emissions that have occurred and will occur starting in 2017 through 2030 by the EPA's failure to adopt EGs, as well as the emission reductions possible if EGs were promulgated. For example, they estimate that, in 2021, 9.8

[73] Earth Systems Sciences, LLC (for API). Methane Emissions from Regulated Onshore Production Sources. Evaluating the Impact of Existing Federal and State Regulations. October 2019. (Docket ID Item No. EPA–HQ–OAR–2017–0757–2090, Appendix A) (API Analysis).

[74] EDF. Assessment of Harm to the Public from Foregoing Methane Guidelines for Existing Sources. November 21, 2019. (Docket ID Item No. EPA–HQ–OAR–2017–0757–2134; Appendix D) (EDF Analysis).

[75] U.S. EPA. Control Techniques Guidelines for the Oil and Natural Gas Industry. October 2016. EPA–453–/B–16–001). *https://www.epa.gov/sites/production/files/2016-10/documents/2016-ctg-oil-and-gas.pdf.*

million metric tons of methane will be emitted by affected existing sources. The EDF Analysis estimates that by 2030, emissions from existing sources will be substantial and have a cumulative impact of about 126 MMT of methane; about 29 MMT of VOC; and about 1.1 million tons of HAP. The EDF Analysis estimates that in the over 3 years since the EPA has promulgated the 2016 Rule, 33.4 MMT of methane have been emitted by existing oil and natural gas sources. They further estimate that 12.2 MMT of those methane emissions, or 37 percent, could have been avoided if EGs were in effect.

Response: The EPA's response to comments specific to the four factors cited by the EPA in the proposal preamble for why there would be limited impacts from not regulating existing oil and natural gas sources under CAA section 111(d), are provided in the following paragraphs. *Equipment turnover/source modifications.* For the first factor (equipment turnover/source modifications will result in existing sources being subject to the NSPS), the EPA reviewed information and analyses supporting the proposal's claim of a high turnover rate (limited impact of an EG) and information/analyses that supporting a low turnover rate (substantial impact of an EG).

Referring to the API and EDF Analyses, each of those analyses accounted for turnover and source modifications differently in their emissions projections in absence of an EG under CAA section 111(d). The approaches used and information provided in these analyses do not allow for a direct comparison on how their differing assumptions impact their results. The API Analysis does not include modification triggers in their projection modeling, contending that the lack of modification triggers in their model is a conservative assumption because it will underestimate the number of wells that are covered by NSPS requirements in the future. However, the API Analysis used historical well records to estimate a distribution for the expected lifetime of wells (and associated equipment) in each state. The EDF Analysis assumes that emissions attributable to existing sources decline year-over-year as existing sources are removed from operation or undertake modifications that subject them to regulation as modified sources under the 2016 Rule based on turnover rate percentages. Insufficient detail provided by EDF on where the turnover percentage rates they used in their analysis came from. It is unclear how the percentages used (existing source decline turnover rate of 5 percent for production sources, 4 percent for gathering and boosting sources, and 1 percent for all downstream sources) in the EDF Analysis were estimated.

The EPA recognizes the limitations pointed out by commenters regarding the GHGI (for pneumatic controllers, compressors, tank throughput, and well completions); *Drillinginfo.com* (for well completions); and NSPS subpart OOOOa compliance reports (for assessing turnover rates). As commenters indicate, when comparing activity counts, compliance reports, and preliminary information received in the ICR process, the data indicates that there is incomplete information to assess turnover and obsolescence rates. The justification of the EPA's rescission of the ICR is presented in a separate rulemaking action, ''Notice Regarding Withdrawal of Obligation To Submit Information'' (82 FR 12817, March 7, 2017). Absent further information (which is why we solicited comment on turnover rates) and time, where compliance report information can be assessed over a longer time period, there will continue to be a high level of uncertainty with any estimates on turnover/obsolescence rates.

The EPA maintains, however, as it did in the proposal, that equipment turnover and source modification are a factor (albeit difficult to quantify with any certainty) that will limit the emissions from existing sources in the oil and natural gas industry in the absence of a CAA section 111(d) EG. In addition to the reasons stated in the proposal, we acknowledge that it could take up to 7 to 10 years from date of promulgation of an EG for requirements to be fully implemented. During this time, the EPA expects that a percentage of existing sources will shut down or undertake modification, which will result in them becoming subject to regulation under CAA section 111(b). This turnover, in the case of well-sites, would likely be impacted as production declines and dependent on the economic viability of the well-site.

Lastly, the EPA acknowledges the information the state of New Mexico identifies that indicates that there are existing sources in that state that have never been modified as supporting that turnover and modifications will not be a factor that results in reducing emissions from oil and natural gas existing sources in that area in absence of an EG and accepts that these are examples of existing sources that have continued to operate for long periods of time without being reconstructed or modified.

Market incentives. With regards to the second factor (market incentives), as stated in section VII.B of this preamble, there are market incentives for the oil and natural gas industry to capture as much natural gas (and, by extension, methane) as is cost effective. Depending on the future trajectories of natural gas prices and the costs of natural gas capture and emission reductions, market incentives may continue to drive emission reductions, even in the absence of specific regulatory requirements applicable to methane emissions from existing sources. While it is a challenging concept to quantify in monetary terms, improving their environmental performance is increasingly important for firms to maintain a ''social license to operate.'' Generally speaking, the social license to operate means that the firm's employees, investors, customers, and the general public find that the firm's business activities and operations are acceptable to continue to freely participate in the marketplace. Maintaining the social license by improving environmental performance, such as reducing emissions, can help firms respond to the complex environment within which they operate in ways that are favorable to their longer-term business interests.

In response to the commenter that states that the emissions trends noted by the EPA do not support the proposition that market incentives are adequate to reduce methane emissions from existing sources in lieu of Federal regulation, the EPA is not making that claim. The EPA claims that market incentives are one factor (among others) that contribute and will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources in absence of an EG.

Voluntary action. With regards to the third factor (voluntary actions), the EPA maintains, and has received a lot of comments in support of, its position that the plethora of voluntary methane emissions mitigation programs will limit (among other factors) methane emissions increases from existing oil and natural gas industry emission sources in absence of a CAA section 111(d) EG. The EPA does acknowledge, however, as several commenters contend, that the industry as a whole is not uniformly meeting voluntary measures at the same level of control and that some companies may not be participating in cited voluntary methane emissions programs at all. This makes it difficult to verify the impacts on emissions as a result of voluntary program participation. Additional time will be needed to allow these programs

to further develop and to be fully implemented to better quantify the impacts the varied programs have on limiting emissions from oil and natural gas industry sources.

In response to the commenters that contend that voluntary actions cannot be relied upon to reduce methane emissions from existing sources in lieu of Federal regulation, the EPA is not making that claim. As with other mitigating factors cited by the EPA, voluntary actions are one factor (among others) that contribute and will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources in absence of an EG.

State regulations. With regards to the fourth and final factor (state regulations), the EPA agrees that there could be an impact of not regulating existing oil and natural gas sources, but at this time, the EPA has not conducted a quantitative analysis of the impact of state regulatory programs to determine the degree to which those programs would reduce emissions from existing sources. The EPA also acknowledges that state requirements do vary in stringency and that only a subset of states include requirements for sources that the EPA could potentially define as existing sources. However, those states that have standards applicable to existing sources (certain standards in California, Colorado, Utah, Wyoming (in the Upper Green River Basin ozone non-attainment area), and Texas) account for a substantial portion of oil and natural gas production in the United States. The EPA also expects a percentage of existing sources to shut down or undertake modification which would make them become subject to certain state standards or permits. As one of the commenters points out, and the EPA agrees, while not every state has adopted specific methane emissions regulations for oil and natural gas industry existing sources, current regulations (and permits) controlling VOC emissions in North Dakota and other top oil and natural gas producing states will concurrently reduce methane emissions from the oil and natural gas industry.

In response to the commenters that contend that state regulations/permits that include oil and natural gas industry existing source emissions control requirements cannot be relied upon to reduce methane emissions from existing sources in lieu of Federal regulation, the EPA is not making that claim. As with other mitigating factors cited by the EPA, existing source state requirements are one factor (among others) that contribute and will continue to contribute to the downward trend of total methane emissions from oil and natural gas existing sources in absence of an EG.

XI. Impacts of This Final Rule

A. What are the air impacts?

The EPA projected that, from 2021 to 2030, relative to the baseline, the final rule will forgo about 448,000 short tons of methane emissions reductions (10.1 million tons CO_2 Eq.), 12,000 short tons of VOC emissions reductions, and 400 short tons of HAP emission reductions from facilities affected by this reconsideration.[76] The EPA estimated regulatory impacts beginning in 2021 as it is the first full year of implementation of this rule. The EPA estimated impacts through 2030 to illustrate the accumulating effects of this rule over a longer period. The EPA did not estimate impacts after 2030 for reasons including limited information, as explained in the RIA.

B. What are the energy impacts?

Energy impacts in this section are those energy requirements associated with the operation of emissions control devices. Potential impacts on the national energy economy from the rule are discussed in the economic impacts section. Under the final rule, there will likely be little change in the national energy demand resulting from the deregulatory actions finalized here.

C. What are the compliance costs?

The PV of the regulatory compliance cost reduction associated with this final rule over the 2021 to 2030 period was estimated to be $67 million (in 2016 dollars) using a 7-percent discount rate and $83 million using a 3-percent discount rate. The EAV of these cost reductions is estimated to be $8.9 million per year using a 7-percent discount rate and $9.4 million per year using a 3-percent discount rate.

These estimates do not, however, include the forgone producer revenues associated with the decrease in the recovery of saleable natural gas, though some of the compliance actions required in the baseline would likely have captured saleable product that would have otherwise been emitted to the atmosphere. Estimates of the value of the recovered product were included in previous regulatory analyses as offsetting compliance costs. Because of the deregulatory nature of this final action, the EPA projected a reduction in the recovery of saleable product. Using the 2020 Annual Energy Outlook (AEO) projection of natural gas prices to estimate the value of the change in the recovered gas at the wellhead projected to result from the final action, the EPA estimated a PV of regulatory compliance cost reductions of the final rule over the 2021 to 2030 period of $31 million using a 7-percent discount rate and $38 million using a 3-percent discount rate. The corresponding estimates of the EAV of cost reductions after accounting for the forgone revenues were $4.1 million per year using a 7-percent discount rate and $4.3 million per year using a 3-percent discount rate.

D. What are the economic and employment impacts?

The EPA used the National Energy Modeling System (NEMS) to estimate the impacts of the 2016 Rule on the U.S. energy system. The NEMS is a publicly available model of the U.S. energy economy developed and maintained by the EIA and is used to produce the AEO, a reference publication that provides detailed projections of the U.S. energy economy.[77] The EPA estimated small impacts on crude oil and natural gas markets of the 2016 Rule over the 2020 to 2025 period. This final rule will result in a decrease in total compliance costs relative to the baseline. Therefore, the EPA expects that this rule will partially reduce the impacts estimated for the 2016 Rule in the 2016 Rule RIA.

Executive Order 13563 directs Federal agencies to consider the effect of regulations on job creation and employment. According to the Executive order, ''our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science.'' (Executive Order 13563, 2011). While a standalone analysis of employment impacts is not included in a standard benefit-cost analysis, such an analysis is of concern in the current economic climate given continued interest in the employment impact of regulations such as this proposed rule. The EPA estimated the change in compliance-related labor due to the reduced requirements for the installation, operation, and maintenance of control equipment, control activities, and labor associated with reporting and recordkeeping requirements in the 2016

[76] In a separate action, the EPA is finalizing technical reconsideration amendments to 40 CFR part 60, subpart OOOOa (EPA–HQ–OAR–2017–0483; FRL–10013–60–OAR; FR Doc. 2020–18115). These technical amendments were proposed in October 2018. 83 FR 52056. Please reference that final rule for the summary and rationale of those technical changes. Please refer to the RIA for both rules to see the combined impacts.

[77] *https://www.eia.gov/outlooks/aeo/.*

Rule RIA. Under the final rule, the EPA expects there will be slight reductions in the labor required for compliance-related activities associated with the 2016 Rule requirements relating to the rescission of requirements in the transmission and storage segment of the oil and natural gas industry.

E. What are the benefits of the final standards?

The EPA expects forgone climate and health benefits due to the forgone emissions reductions projected under this final rule. The EPA estimated the forgone domestic climate benefits from the forgone methane emissions reductions using an interim measure of the domestic social cost of methane (SC-CH_4). The SC-CH_4 estimates used here were developed under Executive Order 13783 for use in regulatory analyses until an improved estimate of the impacts of climate change to the U.S. can be developed based on the best available science and economics. Executive Order 13783 directed agencies to ensure that estimates of the social cost of GHG used in regulatory analyses ''are based on the best available science and economics'' and are consistent with the guidance contained in OMB Circular A–4, ''including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates'' (Executive Order 13783, Section 5(c)). In addition, Executive Order 13783 withdrew the technical support documents (TSDs) and the August 2016 Addendum to these TSDs describing the global social cost of GHG estimates developed under the prior Administration as no longer representative of government policy. The withdrawn TSDs and Addendum were developed by an interagency working group that included the EPA and other executive branch entities and were used in the 2016 Rule RIA.

The EPA estimated the PV of the forgone domestic climate benefits over the 2021 to 2030 period to be $17 million under a 7-percent discount rate and $63 million under a 3-percent discount rate. The EAV of these forgone benefits is estimated $2.2 million per year under a 7-percent discount rate and $7.2 million per year under a 3-percent discount rate. These values represent only a partial accounting of domestic climate impacts from methane emissions and do not account for health effects of ozone exposure from the increase in methane emissions.

Under the final rule, the EPA expects that forgone VOC emission reductions will degrade air quality and are likely to adversely affect health and welfare associated with exposure to ozone, $PM_{2.5}$, and HAP, but did not quantify these effects at this time. This omission should not imply that these forgone benefits may not exist; rather, it reflects the inherent difficulties in accurately modeling the direct and indirect impacts of the projected reductions in emissions for this industrial sector. To the extent that the EPA were to quantify these ozone and PM impacts, it would estimate the number and value of avoided premature deaths and illnesses using an approach detailed in the Particulate Matter NAAQS and Ozone NAAQS Regulatory Impact Analyses.[78] [79] This approach relies on full-form air quality modeling. The Agency is committed to assessing ways of conducting full-form air quality modeling for the oil and natural gas sector that would be suitable for use in regulatory analysis in the context of NSPS, including ways to address the uncertainties regarding the scope and magnitude of VOC emissions.

When quantifying the incidence and economic value of the human health impacts of air quality changes, the Agency sometimes relies upon alternative approaches to using full-form air quality modeling, called reduced-form techniques, often reported as ''benefit-per-ton'' values that relate air pollution impacts to changes in air pollutant precursor emissions.[80] A small, but growing, literature characterizes the air quality and health impacts from the oil and natural gas sector.[81] [82] [83] The Agency feels more work needs to be done to vet the analysis and methodologies for all potential approaches for valuing the health effects of VOC emissions before they are used in regulatory analysis, but is committed to continuing this work. Recently, the EPA systematically compared the changes in benefits, and concentrations where available, from its benefit-per-ton technique and other reduced-form techniques against the changes in benefits and concentrations derived from full-form photochemical model representation of a few different specific emissions scenarios.[84] The Agency's goal was to create a methodology by which investigators could better understand the suitability of alternative reduced-form air quality modeling techniques for estimating the health impacts of criteria pollutant emissions changes in the EPA's benefit-cost analysis, including the extent to which reduced form models may over- or under-estimate benefits (compared to full-scale modeling) under different scenarios and air quality concentrations. The EPA Science Advisory Board (SAB) recently convened a panel to review this report.[85] In particular, the SAB will assess the techniques the Agency used to appraise these tools; the Agency's approach for depicting the results of reduced-form tools; and, steps the Agency might take for improving the reliability of reduced-form techniques for use in future Regulatory Impact Analyses RIAs. The scenario-specific emission inputs developed for this project are currently available online.[86] A thorough description of the study design and methodology is also available.[87]

XII. Statutory and Executive Order Reviews

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

[78] U.S. EPA. December 2012. Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter. EPA–452/R–12–005. Office of Air Quality Planning and Standards, Health and Environmental Impacts Division. *https://www3.epa.gov/ttnecas1/regdata/RIAs/finalria.pdf.* Accessed January 9, 2020.

[79] U.S. EPA. September 2015. Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone. EPA–452/R–15–007. Office of Air Quality Planning and Standards, Health and Environmental Impacts Division. *https://www3.epa.gov/ttnecas1/docs/20151001ria.pdf.* Accessed January 9, 2020.

[80] U.S. EPA. February 2018. Technical Support Document: Estimating the Benefit per Ton of Reducing $PM_{2.5}$ Precursors from 17 Sectors. *https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf.* Accessed January 9, 2020.

[81] Fann, N., K.R. Baker, E.A.W. Chan, A. Eyth, A. Macpherson, E. Miller, and J. Snyder. 2018. ''Assessing Human Health $PM_{2.5}$ and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025.'' Environmental Science and Technology 52(15):8095–8103.

[82] Litovitz, A., A. Curtright, S. Abramzon, N. Burger, and C. Samaras. 2013. ''Estimation of Regional Air-Quality Damages from Marcellus Shale Natural Gas Extraction in Pennsylvania.'' Environmental Research Letters 8(1), 014017.

[83] Loomis, J. and M. Haefele. 2017. ''Quantifying Market and Non-market Benefits and Costs of Hydraulic Fracturing in the United States: A Summary of the Literature.'' Ecological Economics 138:160–167.

[84] This analysis compared the benefits estimated using full-form photochemical air quality modeling simulations (CMAQ and CAMx) against four reduced-form tools, including: InMAP; AP2/3; EASIUR; and EPA's benefit-per-ton.

[85] 85 FR 23823 (April 29, 2020).

[86] The scenario-specific emission inputs developed for this project and all associated documentation are currently available online at *https://github.com/epa-kpc/RFMEVAL.*

[87] Baker, K.R., M. Amend, S. Penn, J. Bankert, H. Simon, E. Chan, N. Fann, M. Zawacki, K. Davidson, K. and H. Roman. 2020. ''A Database for Evaluating the InMAP, APEEP, and EASIUR Reduced Complexity Air-Quality Modeling Tools.'' Data in Brief 28: 104886.

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

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review because it raises novel legal or policy issues. Any changes made in response to OMB recommendations have been documented in the docket. In addition, the EPA prepared an RIA of the potential costs and benefits associated with this final action. The RIA available in the docket describes in detail the empirical basis for the EPA's assumptions and characterizes the various sources of uncertainties affecting the estimates below. Table 8 shows the PV and EAV of the costs, benefits, and net benefits of the final rule for the 2021 to 2030 period relative to the baseline using discount rates of 7 and 3 percent, respectively. The table also shows the total forgone emission reductions projected from 2021 to 2030 relative to the baseline.

In the following table, we refer to the compliance cost reductions as the ''benefits'' and the forgone benefits as the ''costs'' of this final action. The net benefits are the benefits (total cost reductions) minus the costs (forgone domestic climate benefits).

TABLE 8—SUMMARY OF THE PV AND EAV OF THE MONETIZED FORGONE BENEFITS, COST REDUCTIONS, AND NET BENEFITS FROM 2021 TO 2030, 7- AND 3-PERCENT DISCOUNT RATES

[Millions of 2016$]

	7-Percent discount rate		3-Percent discount rate	
	PV	EAV	PV	EAV
Benefits (Total Cost Reductions)	$31	$4.1	$38	$4.3
Compliance Cost Reductions	*67*	*8.9*	*83*	*9.4*
Forgone Value of Product Recovery	*36*	*4.7*	*45*	*5.1*
Costs (Forgone Domestic Climate Benefits)	17	2.2	63	7.2
Net Benefits	14	1.9	−25	−2.9
Non-Monetized Forgone Benefits	Non-monetized climate impacts from increases in methane emissions. Health effects of $PM_{2.5}$ and ozone exposure from an increase of about 11,000 short tons of VOC from 2021 through 2030. Health effects of HAP exposure from an increase of about 330 short tons of HAP from 2021 through 2030. Health effects of ozone exposure from an increase of about 400,000 short tons of methane from 2021 through 2030. Visibility impairment. Vegetation effects.			

Note: Estimates may not sum due to independent rounding.

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

This action is considered an Executive Order 13771 deregulatory action. Details on the estimated cost savings of this final rule can be found in the EPA's analysis of the potential costs and benefits associated with this action.

C. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 2604.02 and OMB Control Number 2060–0729. The information collection requirements are not enforceable until OMB approves them.

A summary of the information collection activities previously submitted to the OMB for the final action titled ''Standards of Performance for Crude Oil and Natural Gas Facilities for Construction, Modification, or Reconstruction'' (2016 Rule) under the PRA, and assigned OMB Control Number 2060–0721 (EPA ICR number 2523.02), can be found at 81 FR 35890. You can find a copy of the ICR in the 2016 Rule Docket (Docket ID Item No. EPA–HQ–OAR–2010–0505–7626). In this rule, the EPA is finalizing the information collection activities as a result of the EPA's review under Executive Order 13783 (EPA ICR number 2604.02). These final changes (2020 NSPS Subpart OOOOa Executive Order 13783 Review Final) would remove reporting and recordkeeping requirements associated with the rescinded requirements.[88]

Comments were received on the October 15, 2018 (83 FR 52056) proposed rule indicating that the recordkeeping and reporting burden for the 2016 Rule was significantly underestimated. In particular, the commenters pointed to the estimated burden associated with the fugitive emissions requirements. As a result of these comments, the EPA reexamined the analysis for the 2016 Rule recordkeeping and reporting burden and made adjustments where warranted. This resulted in an updated and more accurate assessment of the recordkeeping and reporting burden for the 2016 Rule. The updated 2016 Rule recordkeeping and reporting burden was estimated at a 3-year annual average of 689,154 hours and $110,336,343 (2016$) over the 3-year period. These figures represent the ''baseline'' from which changes made in these final amendments (2020 NSPS Subpart OOOOa Executive Order 13783 Review Final) can be compared. Burden associated with this rule (2020 Rule E.O. 13783 Review Final):

Respondents/affected entities: Oil and natural gas operators and owners.

Respondent's obligation to respond: Mandatory.

Estimated number of respondents: 519.

[88] In a separate action, the EPA is finalizing technical reconsideration amendments to NSPS subpart OOOOa (EPA–HQ–OAR–2017–0483; FRL–10013–60–OAR; FR Doc. 2020–18115). These technical amendments where proposed in October 2018. 83 FR 52056. The information collection burden for the combination of these NSPS subpart OOOOa Reconsideration final amendments and the Policy Review final amendments is addressed in a separate ICR (OMB Control Number 2060–0721; EPA ICR number 2523.04).

Frequency of response: Varies depending on affected facility.[89]

Total estimated burden: 680,841 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $108,723,359 (2016$), which includes no capital or O&M costs.

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

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. This is a deregulatory action, and the burden on all entities affected by this final rule, including small entities, is the same or reduced compared to the 2016 Rule. *See* the discussion in section XI of this preamble and the RIA for details. The EPA has, therefore, concluded that this action will have no net increase regulatory burden for all directly regulated small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the National Government and the states, or on the distribution of power and responsibilities among the various levels of government.

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

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this action.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, on September 10, 2019, the EPA sent a letter to all tribal governments inviting consultation. Additionally, on August 29, 2019, and September 18, 2019, the EPA provided an overview of the proposed rule to the National Tribal Air Association. The EPA did not receive any requests for consultation.

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

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866. The 2016 Rule, as discussed in the RIA,[90] was anticipated to reduce emissions of methane, VOC, and HAP, and some of the benefits of reducing these pollutants would have accrued to children. The final rule is expected to decrease the impact of the emissions reductions estimated from the 2016 Rule on these benefits, as discussed in the RIA.

The final action does not affect the level of public health and environmental protection already being provided by existing NAAQS and other mechanisms in the CAA. This final action does not affect applicable local, state, or Federal permitting or air quality management programs that will continue to address areas with degraded air quality and maintain the air quality in areas meeting current standards. Areas that need to reduce criteria air pollution to meet the NAAQS will still need to rely on control strategies to reduce emissions. The EPA does not believe the decrease in emission reductions projected by the final rule will have a disproportionate adverse effect on children's health.

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

This action is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. In the RIA accompanying the 2016 Rule, the EPA used the NEMS to estimate the impacts of the 2016 Rule on the United States energy system. The EPA estimated small impacts of that rule over the 2020 to 2025 period relative to the baseline for that rule. This final rule is estimated to result in a decrease in total compliance costs, with the reduction in costs affecting a subset of the affected entities under NSPS subpart OOOOa. Therefore, the EPA expects that this deregulatory action will reduce the impacts estimated for the final NSPS in the 2016 RIA and, as such, is not a significant energy action.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes that this final action is unlikely to have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The 2016 Rule was anticipated to reduce emissions of methane, VOC, and HAP, and some of the benefits of reducing these pollutants would have accrued to minority populations, low-income populations, and/or indigenous peoples. The final rule is expected to decrease the impact of the emission reductions estimated from the 2016 Rule on these benefits. These communities may experience forgone benefits as a result of this action, as discussed in the RIA.

This final action does not affect the level of public health and environmental protection already being provided by existing NAAQS and other mechanisms in the CAA. This final action does not affect applicable local, state, or Federal permitting or air quality management programs that will continue to address areas with degraded air quality and maintain the air quality in areas meeting current standards. Areas that need to reduce criteria air pollution to meet the NAAQS will still

[89] The specific frequency for each information collection activity within this request is shown in Tables 1a through 1d of the Supporting Statement in the public docket.

[90] *See* Final RIA in the public docket for this rulemaking.

need to rely on control strategies to reduce emissions.

The EPA believes that this final action is unlikely to have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples. The EPA notes that the potential impacts of the final rule are not expected to be experienced uniformly, and the distribution of avoided compliance costs associated with this action depends on the degree to which costs would have been passed through to consumers.

L. Congressional Review Act (CRA)

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

List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements.

Andrew Wheeler,

Administrator.

For the reasons set forth in the preamble, the EPA amends 40 CFR part 60 as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

■ 2. Revise the heading of subpart OOOO to read as follows:

Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015

■ 3. Section 60.5360 is amended to read as follows:

§ 60.5360 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities in the crude oil and natural gas production source category that commence construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015.

■ 4. Section 60.5365 is amended by revising the introductory text and paragraphs (b), (c), and (d)(1), removing and reserving paragraph (d)(2), and revising paragraph (e) introductory text to read as follows:

§ 60.5365 Am I subject to this subpart?

You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section that is located within the Crude Oil and Natural Gas Production source category, as defined in § 60.5430 for which you commence construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015.

* * * * *

(b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

(c) Each reciprocating compressor affected facility, which is a single reciprocating compressor. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

(d)(1) For the oil and natural gas production segment, each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 standard cubic feet per hour.

* * * * *

(e) Each storage vessel affected facility, which is a single storage vessel, and has the potential for VOC emissions equal to or greater than 6 tons per year (tpy) as determined according to this section by October 15, 2013, for Group 1 storage vessels and by April 15, 2014, or 30 days after startup (whichever is later) for Group 2 storage vessels, except as provided in paragraphs (e)(1) through (4) of this section. The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline specified in this section. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority.

* * * * *

■ 5. Section 60.5420 is amended by revising paragraph (c)(5)(iv) to read as follows:

§ 60.5420 What are my notification, reporting, and recordkeeping requirements?

* * * * *

(c) * * *

(5) * * *

(iv) For storage vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships), records indicating the number of consecutive days that the vessel is located at the site. If a storage vessel is removed from the site and, within 30 days, is either returned to or replaced by another storage vessel at the site to serve the same or similar function, then the entire period since the original storage vessel was first located at the site, including the days when the storage vessel was removed, will be added to the count towards the number of consecutive days.

* * * * *

■ 6. Section 60.5430 is amended by:

■ a. Adding the definition for *Crude Oil and Natural Gas Production source category* in alphabetical order.

■ b. Revising the definition of *Custody transfer.*

■ c. Adding the definitions for *Local distribution company (LDC) custody transfer station* and *Natural gas transmission and storage segment* in alphabetical order.

The additions and revision read as follows:

§ 60.5430 What definitions apply to this subpart?

* * * * *

Crude Oil and Natural Gas Production source category means:

(1) Crude oil production, which includes the well and extends to the point of custody transfer to the crude oil transmission pipeline or any other forms of transportation; and

(2) Natural gas production and processing, which includes the well and extends to, but does not include, the point of custody transfer to the natural gas transmission and storage segment.

Custody transfer means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.

* * * * *

Local distribution company (LDC) custody transfer station means a metering station where the LDC receives

a natural gas supply from an upstream supplier, which may be an interstate transmission pipeline or a local natural gas producer, for delivery to customers through the LDC's intrastate transmission or distribution lines.

* * * * *

Natural gas transmission and storage segment means the transport or storage of natural gas prior to delivery to a ''local distribution company custody transfer station'' (as defined in this section) or to a final end user (if there is no local distribution company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage segment after the point of ''custody transfer'' (as defined in this section). A compressor station that transports natural gas prior to the point of ''custody transfer'' or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage segment.

* * * * *

Subpart OOOOa—Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After September 18, 2015

■ 7. Section 60.5360a is revised to read as follows:

§ 60.5360a What is the purpose of this subpart?

(a) This subpart establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities in the Crude Oil and Natural Gas Production source category that commence construction, modification, or reconstruction after September 18, 2015. The effective date of the rule in this subpart is August 2, 2016.

(b) [Reserved]

■ 8. Section 60.5365a is amended by revising the introductory text to read as follows:

§ 60.5365a Am I subject to this subpart?

You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (j) of this section, that is located within the Crude Oil and Natural Gas Production source category, as defined in § 60.5430a, for which you commence construction, modification, or reconstruction after September 18, 2015.

* * * * *

■ 9. Section 60.5375a is amended by revising the section heading and introductory text to read as follows:

§ 60.5375a What VOC standards apply to well affected facilities?

If you are the owner or operator of a well affected facility as described in § 60.5365a(a) that also meets the criteria for a well affected facility in § 60.5365(a) (in subpart OOOO of this part), you must reduce VOC emissions by complying with paragraphs (a) through (g) of this section. If you own or operate a well affected facility as described in § 60.5365a(a) that does not meet the criteria for a well affected facility in § 60.5365(a) (in subpart OOOO of this part), you must reduce VOC emissions by complying with paragraphs (f)(3) and (4) or paragraph (g) of this section for each well completion operation with hydraulic fracturing prior to November 30, 2016, and you must comply with paragraphs (a) through (g) of this section for each well completion operation with hydraulic fracturing on or after November 30, 2016.

* * * * *

■ 10. Section 60.5380a is amended by revising the section heading, introductory text, and paragraph (a)(1) to read as follows:

§ 60.5380a What VOC standards apply to centrifugal compressor affected facilities?

You must comply with the VOC standards in paragraphs (a) through (d) of this section for each centrifugal compressor affected facility.

(a)(1) You must reduce VOC emissions from each centrifugal compressor wet seal fluid degassing system by 95.0 percent.

* * * * *

■ 11. Section 60.5385a is amended by revising the section heading, introductory text, and paragraph (a)(3) to read as follows:

§ 60.5385a What VOC standards apply to reciprocating compressor affected facilities?

You must reduce VOC emissions by complying with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

(a) * * *

(3) Collect the VOC emissions from the rod packing using a rod packing emissions collection system that operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of § 60.5411a(a) and (d).

* * * * *

■ 12. Section 60.5390a is amended by revising the section heading and introductory text to read as follows:

§ 60.5390a What VOC standards apply to pneumatic controller affected facilities?

For each pneumatic controller affected facility you must comply with the VOC standards, based on natural gas as a surrogate for VOC, in either paragraph (b)(1) or (c)(1) of this section, as applicable. Pneumatic controllers meeting the conditions in paragraph (a) of this section are exempt from the requirements in paragraph (b)(1) or (c)(1) of this section.

* * * * *

■ 13. Section 60.5393a is amended by revising the section heading and introductory text to read as follows:

§ 60.5393a What VOC standards apply to pneumatic pump affected facilities?

For each pneumatic pump affected facility you must comply with the VOC standards, based on natural gas as a surrogate for VOC, in either paragraph (a) or (b) of this section, as applicable, on or after November 30, 2016.

* * * * *

■ 14. Section 60.5397a is amended by revising the section heading and introductory text to read as follows:

§ 60.5397a What fugitive emissions VOC standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station?

For each affected facility under § 60.5365a(i) and (j), you must reduce VOC emissions by complying with the requirements of paragraphs (a) through (j) of this section. The requirements in this section are independent of the closed vent system and cover requirements in § 60.5411a.

* * * * *

■ 15. Section 60.5398a is amended by revising the section heading and paragraphs (a) and (d)(1)(xi) to read as follows:

§ 60.5398a What are the alternative means of emission limitations for VOC from well completions, reciprocating compressors, the collection of fugitive emissions components at a well site and the collection of fugitive emissions components at a compressor station?

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a

reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under §§ 60.5375a, 60.5385a, and 60.5397a, the Administrator will publish, in the **Federal Register**, a notice permitting the use of that alternative means for the purpose of compliance with §§ 60.5375a, 60.5385a, and 60.5397a. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

* * * * *

(d) * * *

(1) * * *

(xi) Operation and maintenance procedures and other provisions necessary to ensure reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under § 60.5397a.

* * * * *

■ 16. Section 60.5400a is amended by revising the section heading and paragraph (c) to read as follows:

§ 60.5400a What equipment leak VOC standards apply to affected facilities at an onshore natural gas processing plant?

* * * * *

(c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of § 60.5402a.

* * * * *

■ 17. Section 60.5401a is amended by revising the section heading to read as follows:

§ 60.5401a What are the exceptions to the equipment leak VOC standards for affected facilities at onshore natural gas processing plants?

* * * * *

■ 18. Section 60.5402a is amended by revising the section heading and paragraphs (a) and (d)(2) introductory text to read as follows:

§ 60.5402a What are the alternative means of emission limitations for VOC equipment leaks from onshore natural gas processing plants?

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the **Federal Register**, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

* * * * *

(d) * * *

(2) The application must include operation, maintenance, and other provisions necessary to assure reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard in paragraph (a) of this section by including the information specified in paragraphs (d)(2)(i) through (x) of this section.

* * * * *

■ 19. Section 60.5410a is amended by revising paragraphs (a) introductory text, (b)(1), (d) introductory text, and (f) to read as follows:

§ 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?

* * * * *

(a) To achieve initial compliance with the VOC standards for each well completion operation conducted at your well affected facility you must comply with paragraphs (a)(1) through (4) of this section.

* * * * *

(b)(1) To achieve initial compliance with standards for your centrifugal compressor affected facility you must reduce VOC emissions from each centrifugal compressor wet seal fluid degassing system by 95.0 percent or greater as required by § 60.5380a(a) and as demonstrated by the requirements of § 60.5413a.

* * * * *

(d) To achieve initial compliance with VOC emission standards for your pneumatic controller affected facility you must comply with the requirements specified in paragraphs (d)(1) through (6) of this section, as applicable.

* * * * *

(f) For affected facilities at onshore natural gas processing plants, initial compliance with the VOC standards is demonstrated if you are in compliance with the requirements of § 60.5400a.

* * * * *

■ 20. Section 60.5412a is amended by paragraphs (a)(1)(i) and (a)(2) to read as follows:

§ 60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?

* * * * *

(a) * * *

(1) * * *

(i) You must reduce the mass content of VOC in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of § 60.5413a(b), with the exceptions noted in § 60.5413a(a).

* * * * *

(2) Each vapor recovery device (*e.g.,* carbon adsorption system or condenser) or other non-destructive control device must be designed and operated to reduce the mass content of VOC in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of § 60.5413a(b). As an alternative to the performance testing requirements in § 60.5413a(b), you may demonstrate initial compliance by conducting a design analysis for vapor recovery devices according to the requirements of § 60.5413a(c).

* * * * *

■ 21. Section 60.5413a is amended by revising paragraph (d)(11)(iii) to read as follows:

§ 60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?

* * * * *

(d) * * *

(11) * * *

(iii) A manufacturer must demonstrate a destruction efficiency of at least 95 percent for THC, as propane. A control device model that demonstrates a destruction efficiency of 95 percent for THC, as propane, will meet the control requirement for 95-percent destruction of VOC (if applicable) required under this subpart.

* * * * *

■ 22. Section 60.5415a is amended by revising paragraphs (b)(1) and (f) to read as follows:

§ 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, and affected facilities at onshore natural gas processing plants?

* * * * *

(b) * * *

(1) You must reduce VOC emissions from the wet seal fluid degassing system by 95.0 percent or greater.

* * * * *

(f) For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400a.

* * * * *

■ 23. Section 60.5420a is amended by revising paragraph (c)(5)(iv) to read as follows:

§ 60.5420a What are my notification, reporting, and recordkeeping requirements?

* * * * *

(c) * * *

(5) * * *

(iv) For storage vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships), records indicating the number of consecutive days that the vessel is located at a site in the Crude Oil and Natural Gas source category. If a storage vessel is removed from a site and, within 30 days, is either returned to the site or replaced by another storage vessel at the site to serve the same or similar function, then the entire period since the original storage vessel was first located at the site, including the days when the storage vessel was removed, will be added to the count towards the number of consecutive days.

* * * * *

■ 24. Section 60.5421a is amended by revising the section heading to read as follows:

§ 60.5421a What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?

* * * * *

■ 25. Section 60.5422a is amended by revising the section heading to read as follows:

§ 60.5422a What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?

* * * * *

■ 26. Section 60.5430a is amended by:

■ a. Revising the definition for *Compressor station.*

■ b. Removing the definition for *Crude oil and natural gas source category.*

■ c. Adding the definition for *Crude Oil and Natural Gas Production source category* in alphabetical order.

■ d. Revising the definitions for *Equipment* and *Fugitive emissions component.*

■ e. Adding the definition for *Natural gas transmission and storage segment* in alphabetical order.

The revisions and additions read as follows:

§ 60.5430a What definitions apply to this subpart?

* * * * *

Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering pipelines. This includes, but is not limited to, gathering and boosting stations. The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station for purposes of § 60.5397a.

* * * * *

Crude Oil and Natural Gas Production source category means:

(1) Crude oil production, which includes the well and extends to the point of custody transfer to the crude oil transmission pipeline or any other forms of transportation; and

(2) Natural gas production and processing, which includes the well and extends to, but does not include, the point of custody transfer to the natural gas transmission and storage segment.

* * * * *

Equipment, as used in the standards and requirements in this subpart relative to the equipment leaks of VOC from onshore natural gas processing plants, means each pump, pressure relief device, open-ended valve or line, valve, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by those same standards and requirements in this subpart.

* * * * *

Fugitive emissions component means any component that has the potential to emit fugitive emissions of VOC at a well site or compressor station, including valves, connectors, pressure relief devices, open-ended lines, flanges, covers, and closed vent systems not subject to § 60.5411 or § 60.5411a, thief hatches or other openings on a controlled storage vessel not subject to § 60.5395 or § 60.5395a, compressors, instruments, and meters. Devices that vent as part of normal operations, such as natural gas-driven pneumatic controllers or natural gas-driven pumps, are not fugitive emissions components, insofar as the natural gas discharged from the device's vent is not considered a fugitive emission. Emissions originating from other than the device's vent, such as the thief hatch on a controlled storage vessel, would be considered fugitive emissions.

* * * * *

Natural gas transmission and storage segment means the transport or storage of natural gas prior to delivery to a ''local distribution company custody transfer station'' (as defined in this section) or to a final end user (if there is no local distribution company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage segment after the point of ''custody transfer'' (as defined in this section). A compressor station that transports natural gas prior to the point of ''custody transfer'' or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage segment.

* * * * *

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