United States Environmental Protection Agency

Proposed Policy Amendments to 2012 and 2016 New Source Performance Standards (NSPS) for Oil and Gas Sources

Briefing for Science Advisory Board

March 2020

Overview

- CAA Section 111: Oil and Gas Sector
- Oil and Natural Gas NSPS: Background
- Oil and Natural Gas Industry Overview: Current
- Policy Review Proposal
  - Primary Proposal
  - Alternative Proposal
- Oil and Natural Gas Industry Overview: Proposed Amendments
- Seeking Comment
  - 2016 NSPS Background
  - Legal Authority
- Existing Sources
- Regulatory Impact Analysis

Clean Air Act (CAA) Section 111: Oil and Gas Sector

Section 111

- Section 111 directs EPA to establish standards for stationary sources of air pollution that "may reasonably be anticipated to endanger public health or welfare
- Section 111 requires EPA to set NSPS for categories of industrial facilities that EPA has listed because they cause, or significantly contribute to, air pollution that may endanger public health or welfare – known as "source categories"
- Section 111(b) details the Agency's authority to regulate new and modified sources

What does section 111(b) mean for the oil and natural gas sector?

Source Category

- Issued in 1979, EPA's original source category listing for the oil and natural gas industry only included the production and processing segments
- 2012 and 2016 NSPS rules: EPA interpreted source category to also include the transmission and storage segment
  - 2016 NSPS rule: As an alternative, EPA also expanded the source category to include the transmission and storage segment

Oil and Natural Gas NSPS

Background

2012

- EPA issued NSPS under Section 111 of CAA or "OOOO"
  - Rule intended to reduce volatile organic compounds (VOC) from **certain** new, reconstructed, and modified sources across the crude oil and natural gas sector (*e.g.*, production, processing, transmission, and storage)

2016

- EPA issued NSPS under Section 111 of CAA or "OOOOa"
  - Rule intended to reduce VOC and greenhouse gases, in the form of limitations on methane, emissions **from a broader set** of new, reconstructed, and modified sources across the crude oil and natural gas sector (*e.g.*, production, processing, transmission, and storage)

2017

- EPA announced two actions:
  - Reconsideration on technical requirements and implementation challenges of 2016 OOOOa rule; and
  - Policy review of the 2016 OOOOa rule *(*as mandated by March 28, 2017, Executive Order)*
- Petition for review of 2012 NSPS revision (bifurcated from challenge to 2012 NESHAP and consolidated with challenges to 2014 NSPS amendment and 2016 NSPS setting methane standards) (*American Petroleum Institute, et al. v. EPA*, No. 13-1108 (DC Cir.)
  - Held in abeyance

2018

- EPA amended two narrow provisions of 2016 NSPS to address two fugitive emissions requirements and later in 2018 proposed technical amendments and clarifications
  - EPA received over 500,000 written comments and plans to finalize this rule in late 2019 in a separate action
- EPA received judicial complaint from NGOs and states for an unreasonably delay in establishing guidelines limiting methane emissions from existing sources (*New York et al. v. EPA*, No. 1:18-cv-773 (D.D.C.)
  - In discovery phase of lawsuit

2019

- EPA proposes amendments to 2012 and 2016 NSPS

https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry

Oil and Natural Gas Industry Overview

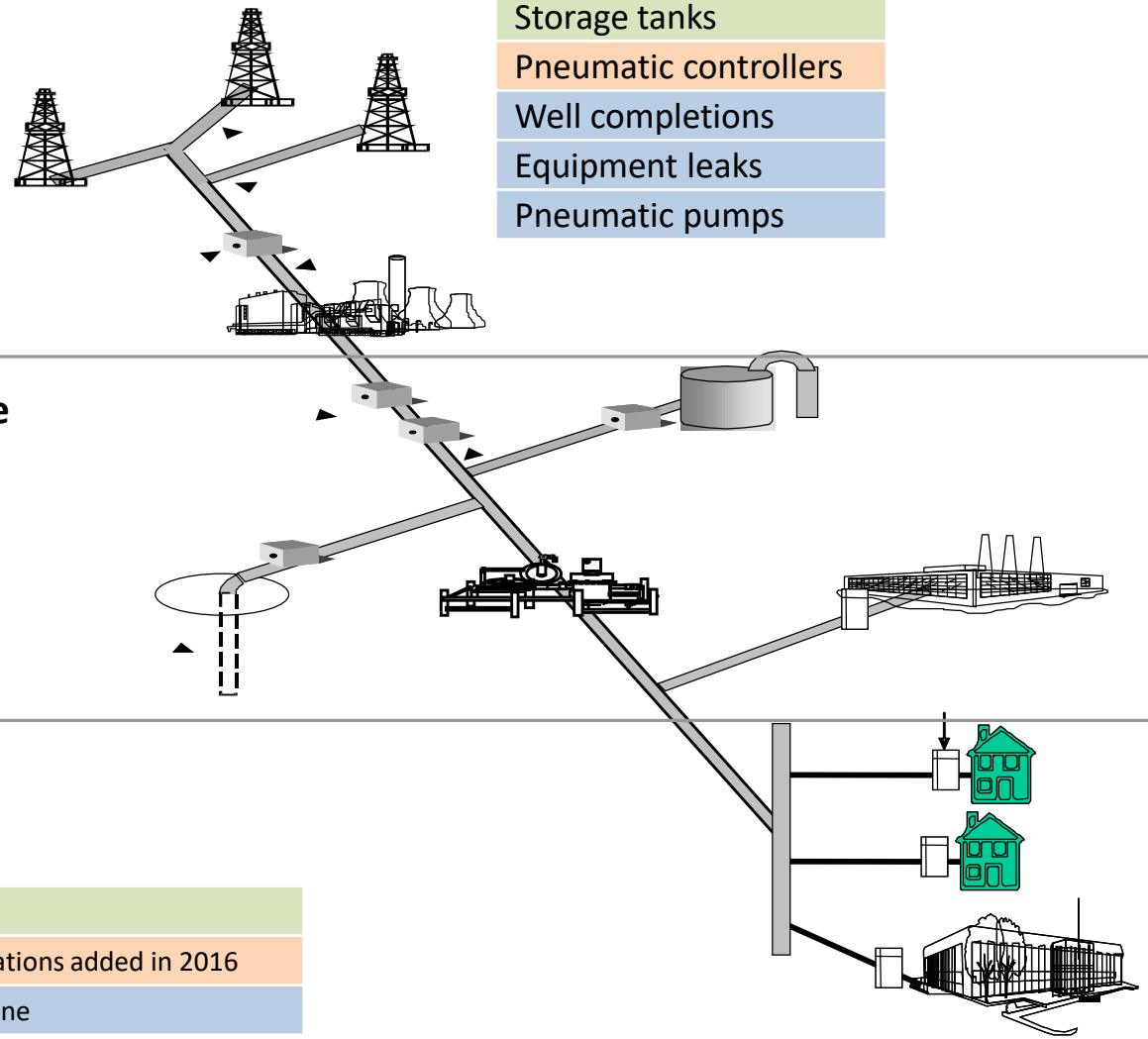
Current

Natural Gas Production & Processing*

- Storage tanks
- Well completions
- Pneumatic controllers
- Processing plant leaks
- Compressors
- Equipment leaks
- Pneumatic Pumps

Oil Production *

- Storage tanks
- Pneumatic controllers
- Well completions
- Equipment leaks
- Pneumatic pumps



Natural Gas Transmission and Storage

- Storage Tanks
- Compressors
- Equipment leaks
- Controllers

Gas Distribution – *not covered*

Key

*1979 source category listing

- New sources added in 2012 for VOCs only
- New sources added in 2012 for VOCs; methane regulations added in 2016
- New sources added in 2016 for both VOCs and methane

Equipment leaks are referred to as "fugitive emissions" in the NSPS

Picture courtesy of American Gas Association

Policy Review Proposal

August 28, 2019: EPA proposes amendments to 2012 and 2016 NSPS in response to *Executive Order on Promoting Energy Independence and Economic Growth*

- Primary Proposal
  - Remove transmission and storage segment from source category
  - Rescind methane from production and processing
- Alternative Proposal
  - Rescind methane standards from all sources without revising source category

Both proposals note that because the controls to reduce VOCs emissions reduce methane at the same time, separate methane limitations for the industry are redundant

Primary Proposal

Standards Remaining:
VOC in production and processing

- Remove transmission and storage segment from source category
  - EPA erred when it interpreted or expanded source category in 2012 and 2016 to include transmission and storage segment, because that segment of the industry is functionally separate from production and processing segments
  - EPA would need to make a separate finding that transmission and storage segment contributes significantly to air pollution that is anticipated to endanger public health or welfare before those sources in that segment could be listed for regulation
- Rescind methane from production and processing
  - Methane standards are redundant with VOC standards because they do not provide benefits beyond benefits from VOC
  - Controls to reduce VOCs emissions reduce methane at the same time, addition of methane as a pollutant did not change the standards

Alternative Proposal

Standards Remaining:
VOC in production, processing, transmission and storage

- Rescind methane standards from all sources without revising source category
  - As in the primary proposal the controls to reduce VOCs emissions reduce methane at the same time, separate methane limitations for the industry are redundant

Oil and Gas Industry Overview

Proposed Amendments to 2012 and 2016 NSPS

Natural Gas Production & Processing*

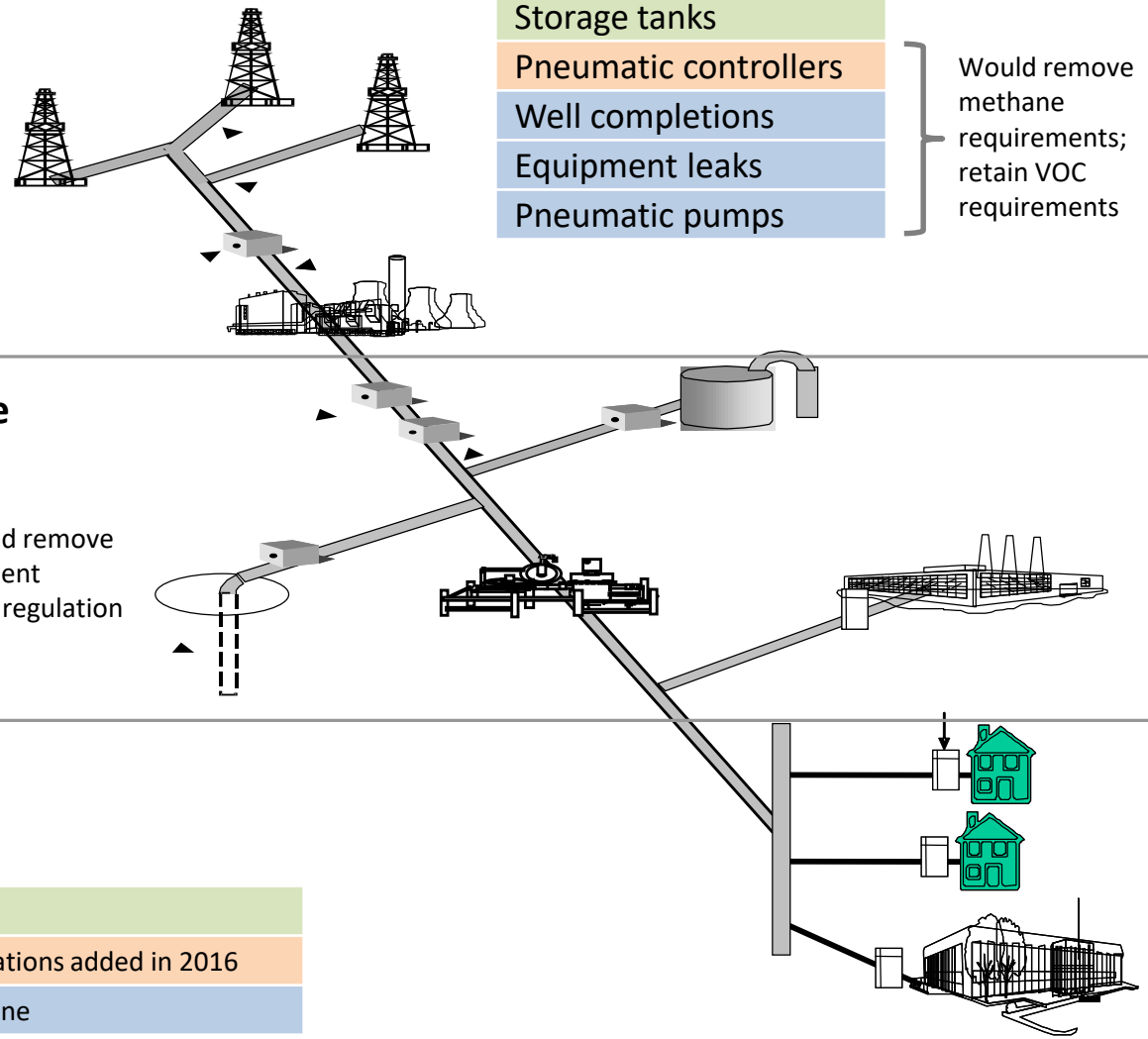
- Storage tanks
- Well completions
- Pneumatic controllers
- Processing plant leaks
- Compressors
- Equipment leaks
- Pneumatic Pumps

Would remove methane requirements; retain VOC requirements

Oil Production *

- Storage tanks
- Pneumatic controllers
- Well completions
- Equipment leaks
- Pneumatic pumps

Would remove methane requirements; retain VOC requirements



Natural Gas Transmission and Storage

- ~~Storage Tanks~~
- ~~Compressors~~
- ~~Equipment leaks~~
- ~~Controllers~~

Would remove segment from regulation

Gas Distribution – *not covered*

Key

*1979 source category listing

- New sources added in 2012 for VOCs only
- New sources added in 2012 for VOCs; methane regulations added in 2016
- New sources added in 2016 for both VOCs and methane

Equipment leaks are referred to as "fugitive emissions" in the NSPS

Picture courtesy of American Gas Association

Seeking Comment

- In the 2016 rule, EPA took the position that methane could be regulated without making a pollutant specific determination that GHG emissions (primarily methane) from the oil and natural gas industry cause, or significantly contribute to, air pollution that may endanger public health or welfare
  - As an alternative to that position, EPA completed a separate pollutant-specific finding which indicated that GHG emissions (primarily methane) from the oil and gas industry do cause or contribute significantly to air pollution that may reasonably expected to endanger public health or welfare

Seeking Comment (cont.)

Legal Authority

- Whether EPA should revise the positions it took in the 2016 rule:
  - Whether CAA section 111 requires EPA to make a pollutant-specific significant contribution finding for GHG emissions (primarily methane) from the oil and natural gas industry; and
  - If the law does require a pollutant-specific finding, whether the finding in the alternative in the 2016 rule properly satisfied that requirement
- Appropriate criteria to use when determining, under section 111, whether a pollutant emitted from a particular source category significantly contributes to air pollution that may reasonably be anticipated to endanger public health and the environment
  - Seeking these comments to inform actions in future rulemaking
- All aspects of the proposed amendments

Existing Sources

Implications

- Removes the obligation to regulate methane from existing sources - VOC do not qualify as the type of pollutant that would trigger application of existing source standards
  - We expect the number of existing sources to decline over time
  - Sources already have incentives to control methane (*e.g.*, economic incentives, existing state regulatory programs, and voluntary programs)

Regulatory Impact Analysis

Impacts of Removing Transmission and Storage

- In the regulatory impact analysis (RIA), EPA analyzed costs that would be avoided and emission reductions that would not occur if the policy amendments are finalized as proposed
- RIA estimates the proposed amendments would save the oil and natural gas industry $17-$19 million a year, for a total of $97-$123 million (2019-2025)
  - Total cost savings reflect both the cost savings associated with proposed changes to requirements in the rule and the forgone value of natural gas that would not be recovered as a result of those changes
- RIA estimates the following emissions reductions would not occur (2019-2025) as a result of the proposed amendments:
  - 370,000 short tons of methane (8.4 million metric tons of carbon dioxide equivalent)
  - 10,000 short tons of volatile organic compounds
  - 300 short tons of hazardous air pollutants
- RIA also estimates the total present value of climate benefits within the United States that would not occur at $13-$52 million, which translates to $2.3-$8.1 million per year

Additional Information

Public Engagement

- EPA held a public hearing in Dallas, Texas, on October 17, 2019, and the public comment period for this proposal closed on November 25, 2019.
- Over 290,000 written comments were received from industry, state, local and tribal governments, non-industry advocacy groups, congressional representatives and private citizens.

For Additional Information

- https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/actions-and-noticesabout-oil-and-natural-gas#regactions

OAQPS Contact: Amy Hambrick (hambrick.amy@epa.gov)

Questions?