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Proposed Revisions to 2016 New Source Performance Standards for Oil & Gas

On September 11, 2018, the Environmental Protection Agency (EPA) released proposed amendments to aspects of the 2016 New Source Performance Standards for Oil & Gas (NSPS). EPA proposes to amend provisions related to: (1) fugitive emissions requirements, (2) well site pneumatic pump standards, and (3) requirements for professional engineer (PE) certification of closed vent systems, as established in the 2016 NSPS regulations. EPA also proposes to address implementation issues identified after NSPS promulgation and to clarify certain definitions. If finalized, EPA projects that these proposed revisions would reduce compliance costs for oil and gas companies while increasing methane, volatile organic compound (VOC), and hazardous air pollutant (HAP) emissions.

EPA notes in materials accompanying the proposal that it continues to consider broad policy issues in the 2016 rule, including the regulation of greenhouse gases (GHGs) in the oil and natural gas sector. These issues will be addressed in a subsequent proposal. Additionally, The Department of Interior's Bureau of Land Management (BLM) is expected to propose a rule replacing an Obama-era regulation limiting emissions of methane from drilling on public lands.

Comments on the proposed rule are due 60 days after publication in the Federal Register.

Key Takeaways

- EPA proposes to reduce the frequency of fugitive emissions monitoring at well sites and compressor stations, as well as separate initial monitoring requirements for Alaska North Slope compressor stations.
- EPA proposes to eliminate the categorical distinction between greenfield and non-greenfield sites, as well as the categorical restriction of the technical infeasibility provision to existing sites, for pneumatic pump requirements. This could permit companies to classify pneumatic pump emissions control as technically infeasible at newly designed or constructed sites.
- EPA proposes that in-house engineers, not only PEs, be permitted to certify pneumatic pump closed vent system (CVS) design and technical infeasibility.
- If finalized, EPA projects that this rule would increase methane emissions by 380,000 to 480,000 short tons, VOC emissions by 100,000 to 124,000 tons, and HAPs by 3,800 to 4,700 tons from 2019 to 2025. EPA projects total cost savings of $380 million to $424 million over the same period assuming a seven percent discount rate).
- EPA evaluates each state's fugitive emissions programs for well sites and compressor stations to determine if state standards could be deemed equivalent to proposed federal standards. If equivalent, state standards can serve as alternative standards to the federal rule. EPA proposes permitting alternative standards for both

well sites and compressor stations in California, Colorado, Ohio, and Pennsylvania, and for well sites only in Texas and Utah.

- EPA proposes additional amendments on alternate emissions limitations, well completions, onshore natural gas processing plants and storage vessels to clarify and streamline implementation of the rule.
- While addressing technical issues in this proposal, EPA notes in materials accompanying the proposal that it continues to consider broad policy issues, including the regulation of GHG emissions from the oil and gas sector, and will publish a subsequent proposal on those issues.

Background

On June 3, 2016, EPA published "Oil and Natural Gas Sector: Emissions Standards for New, Reconstructed, and Modified Sources; Final Rule," also known as "2016 NSPS OOOOa."[1] This rule established standards for GHG and VOC emissions from the oil and natural gas sector. Following the ruling, EPA received petitions to reconsider several provisions.[2]

On April 18, 2017, EPA granted reconsideration of well site and compressor station fugitive emissions requirements[3], and soon after granted reconsideration of well site pneumatic pump standards and requirements for CVS by professional engineers. EPA also received questions regarding the implementation of the 2016 NSPS OOOOa requirements.

Proposed Revisions to Technological Requirements

Fugitive Emissions Requirements

The 2016 NSPS required methane monitoring twice a year for well sites. In this new rule, EPA proposes annual monitoring for non-low production well sites and biennial monitoring for low production well sites. Monitoring would no longer be required when all major production and processing equipment is removed from a well site such that it becomes a wellhead-only well site.

The 2016 NSPS also required methane monitoring twice a year for compressor stations. EPA proposes annual monitoring for compressor stations located on the Alaska North Slope and co-proposes semiannual and annual monitoring for other stations. Existing compressor station low temperature waivers would be removed.

The proposed rule also includes separate initial monitoring requirements for Alaska North Slope compressor stations. Stations that start up between September and March must conduct initial monitoring within six months or by June 30, whichever is later. Stations that start up between April and August must conduct monitoring within 60 days.

EPA clarifies the following specific definitions related to fugitive emissions requirements:

(1) **"First attempt at repair"** and **"repaired":** EPA proposes to amend the definition of "repaired" to include a requirement to verify that the fugitive emissions are repaired before the repair is completed. EPA proposes that a first attempt at repair be completed within 30 days of identifying a component with fugitive emissions, with final repair completed within 60 days.

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1 EPA, "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Final Rule," 81 Fed. Reg. 35824 (June 3, 2016), available at: https://www.gpo.gov/fdsys/pkg/FR-2016-06-03/pdf/2016-11971.pdf.

2 See Docket ID EPA-HQ-OAR-2017-0483.

3 See Docket ID No. EPA-HQ-OAR-2010-0505-7730.

(2) **"Well site":** EPA proposes that the definition would include exclusions for third-party equipment located downstream of the custody meter assembly and saltwater disposal facilities.

Finally, EPA is proposing specific changes to the fugitive emissions monitoring plan, including alternative requirements to the site plan and observation path.

Well Site Pneumatic Pump Standards

The 2016 NSPS included a technical infeasibility provision for the well site pneumatic pump requirements for circumstances such as insufficient pressure or control device capacity. This provision was categorically unavailable to pneumatic pumps at "greenfield," or newly constructed, sites, as EPA previously concluded that the circumstances that would otherwise make control of a pneumatic pump technically infeasible at an existing location could be addressed in the design and construction of a new site.

EPA proposes to expand the technical infeasibility provision to all well sites by eliminating the categorical distinction between greenfield and non-greenfield sites. The proposal would also remove the current restriction of technical infeasibility provision to existing sites, which could allow companies to classify pneumatic pump emissions control as technically infeasible at newly designed or constructed sites.

Professional Engineer (PE) Certification for Closed-Vent Systems

EPA proposes to allow certification for CVS design and technical infeasibility for pneumatic pumps by an in-house engineer with relevant expertise. Previously, only PEs could certify CVS.

Alternative Means of Emissions Limitations (AMEL) Provisions

The 2016 NSPS allowed owners and operators to request an alternative means of emissions limitations (AMEL) for specific standards for well completions, reciprocating compressors, and collection of fugitive emissions components at well sites and compressor stations. An AMEL request would have to demonstrate that an alternative means would achieve at least equivalent emission reductions and include an agreement to submit to compliance monitoring. These alternatives could be based on emerging technologies or requirements under state or local programs.

EPA is proposing to amend the existing language for incorporation of emerging technologies. Additionally, it proposes to account for equivalency of some existing state programs. EPA evaluated state fugitive emissions programs for well sites and compressor stations to determine if these programs can serve as alternative fugitive standards. It proposes to allow standards for both well sites and compressor stations in California, Colorado, Ohio, and Pennsylvania, and for well sites only in Texas and Utah, to serve as alternatives.

Additional Proposed Revisions Relating to Technical Corrections and Timing

EPA proposes a series of additional revisions related to technical corrections and timing. They include:

- Location of Separator During Flowback: The 2016 NSPS requires owners or operators to have a separator onsite during the entirety of the flowback period. EPA proposes to amend this requirement to clarify that having a separator "onsite" means that the separator may be located at the well site or near to the well site, and not necessary on the well site, such that it is able to commence separation flowback as required by the rule.
- Screenouts and Coil Tubing Cleanouts: EPA acknowledges that screenouts and coil tubing cleanouts are not part of flowback, but rather are functional processes that allow for flowback to begin. Thus, EPA proposes to revise the definition of flowback to exclude these processes and proposes definitions for the processes.

- Definition of "Capital Expenditure": EPA proposes to adjust the formula in the definition of "capital expenditure" by replacing reference to 2011 with 2015 in order to address a mathematical issue for affected facilities constructed in 2015.
- Maximum Average Daily Throughput: EPA proposes to specify when and how daily production may be averaged, and to define maximum average daily throughput as the maximum average daily throughput for an individual storage vessel over the days that production is routed to that vessel during the 30-day evaluation period.
- Certifying Official: EPA proposes to amend the definition of "certifying official" to remove references to permitting programs, in order to clarify that NSPS requirements are not associated with a permitting program.
- Onshore Natural Gas Processing Plant Monitoring Exemption: EPA proposes to exempt from monitoring certain equipment at onshore natural gas processing plants that an owner or operator designates as being in VOC service less than 300 hours per year.
- Recordkeeping and Reporting Requirements: EPA proposes to streamline certain reporting and recordkeeping requirements to reduce administrative burden. For example, EPA is proposing that operators do not need to record or report the date and time of each attempt to direct flowback to a separator where there is no initial flowback stage. It is also proposing a requirement to describe how a well site determined it is a low production well site. EPA is soliciting comment on additional ways to streamline reporting and recordkeeping.

Projected Impacts of Proposed Rule

EPA projects net benefits for oil and gas producers. The costs are calculated as foregone social benefits using an estimate of the social cost of carbon based on anticipated direct impacts of climate change within the contiguous U.S. only, consistent with the Trump Administration's direction under Executive Order 13783.[4] As summarized in Table 1, assuming semiannual monitoring at compressor stations, the total cost savings would be $380 million from 2019 to 2025 (assuming a seven percent discount rate). Total cost savings would increase to $424 million from 2019 to 2025 (assuming a seven percent discount rate) with annual monitoring at compressor stations.

As summarized in Table 2, EPA projects the proposed rule would increase methane, VOC, and HAP emissions. The emissions increase is greater if EPA assumes annual monitoring at compressor stations, instead of semiannual monitoring.

[4] US EPA, Oil and Natural Gas NSPS Reconsideration RIA, Section 3, pp. 7-13. https://www.epa.gov/sites/production/files/2018-09/documents/oil_and_natural_gas_nsps_reconsideration_proposal_ria.pdf

Table 1. EPA Estimated Cost Savings & Forgone Benefits from 2018 Baseline from 2019-2025 (millions 2016$), assuming semiannual monitoring at compressor stations

	7% Discount Rate		3% Discount Rate	
	Present Value	**Equivalent Annualized Value**	**Present Value**	**Equivalent Annualized Value**
Benefits (Total Cost Savings[5])	$380	$66	$484	$75
Cost Savings	*$429*	*$74*	*$546*	*$85*
Forgone Value of Product Recovery	*$48*	*$8.4*	*$62*	*$9.6*
Costs (Forgone Domestic Climate Benefits)	$13.5	$2.3	$54	$8.3
Net Benefits	$367	$64	$431	$67

Table 2. EPA Estimated Increase in Emissions from 2018 Baseline from 2019-2025, assuming semiannual monitoring at compressor stations

Emission Type	**Total increase (assuming semiannual monitoring at compressor stations)**	**Total increase (assuming annual monitoring at compressor stations)[6]**
Methane (short tons)	380,000	480,000
Methane (million metric tons CO2e)	8.5	11
Volatile Organic Compounds (VOC) (tons)	100,000	120,000
Hazardous Air Pollutants (HAP) (tons)	3,800	4,700

Next Steps

In the proposed rule, EPA states that it intends to hold at least one public hearing in response to the proposed action. Information about the hearing will be published in a second Federal Register notice, and comments on the proposed rule will be due 60 days after publication in the Federal Register.

EPA has indicated that it is working on a separate rulemaking effort that will consider broad policy issues, including the regulation of GHG emissions from the oil and gas. Separately, the Department of the Interior's Bureau of Land Management announced in February that it would be revising or replacing Obama-era regulations on methane released from drilling, and an updated version of this rule is expected in the near future.

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5 Total cost savings include the planning cost savings for all fugitive emissions, the annual operating and maintenance cost savings for the fugitive emissions requirements every year, the cost savings of certifications in each year, the cost savings from streamlined recordkeeping and reporting, and the forgone revenue from the decrease in product recovery, discounted to 2016.

6 US EPA, Oil and Natural Gas NSPS Reconsideration RIA, Table 2-18. https://www.epa.gov/sites/production/files/2018-09/documents/oil_and_natural_gas_nsps_reconsideration_proposal_ria.pdf

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