# EPA Proposes Amendments to the 2016 New Source Performance Standards for the Oil and Natural Gas Industry: Fact Sheet

## Overview of Action

- On September 11, 2018, the U.S. Environmental Protection Agency (EPA) proposed targeted improvements to the 2016 New Source Performance Standards (NSPS) for the Oil and Natural Gas Industry, including amendments to the fugitive emissions monitoring requirements in the rule. The proposal would significantly reduce regulatory burden, saving the industry tens of millions of dollars in compliance costs each year. The changes also would streamline requirements and improve alignment between EPA's rule and existing state programs.
- The proposed amendments address a range of technical issues in response to administrative petitions and would clarify certain requirements in the rule. They include proposed changes to the frequency for monitoring fugitive emissions (also known as "leaks") at well sites and compressor stations; requirements for pneumatic pumps at well sites, and requirements that a professional engineer certify when meeting those requirements is technically infeasible. The Agency also is proposing amendments to requirements that a professional engineer certify the design of closed vent systems; and requirements for requesting alternative means of emissions limitations.
- The proposal changes address implementation issues that have been brought to the Agency's attention in the two years since the final standards were issued, including clarifying the acceptable location of separators used during well completions, clarifying the definition of "well site" to avoid unintended burdens on third parties, and correcting the definition of "capital expenditure" for onshore natural gas processing plant requirements. In addition, this action would make technical corrections and amendments to further clarify the rule.
- EPA's regulatory impact analysis (RIA) estimates that the proposed amendments would save the oil and gas industry up to $75 million a year, or a total of $484 million for the 2019-2025 period (3 percent discount rate). The RIA also shows that the savings are estimated at $73 million a year, for a total of $424 million from 2019 through 2025 (7 percent discount rate).
- The Agency continues to consider broad policy issues in the 2016 rule, including the regulation of greenhouse gases in the oil and natural gas sector. These issues will be addressed in a separate proposal at a later date.
- EPA will take comment the proposed rule for 60 days after the proposal is published in the Federal Register and will hold a public hearing in Denver. Details about the public hearing will be available shortly.

## Summary of Proposed Targeted Improvements

### Changes to fugitive emissions (leaks) requirements

- "Fugitive emissions," can occur at several points at a well site or compressor station when connections are not properly fitted, hatches are not properly weighted and sealed, or when seals and gaskets start to deteriorate.
- The 2016 NSPS required that owners/operators develop and implement a fugitive emissions monitoring plan at oil and natural gas well sites and at compressor stations. The rule set a schedule for monitoring and for repairing any leaking components found.
- The proposed amendments would modify the schedule for fugitive emissions monitoring at both well sites and compressor stations, along with the schedule for making repairs. Owners/operators would be allowed to apply to conduct the surveys using emerging technologies, and the proposal clarifies requirements for doing so. In addition, the amendments would establish alternative fugitive emissions standards that are based on requirements established by certain states.

*Proposed monitoring frequency for well sites*

- The 2016 NSPS required owners/operators at new and modified well sites to conduct an initial monitoring survey within 60 days of the startup of production, and semiannual monitoring surveys afterward. After the 2016 rule was issued, EPA received petitions seeking changes to several aspects of the monitoring frequency, along with requests for exemptions to monitoring requirements for low production well sites and well sites located on the Alaskan North Slope.
- EPA is proposing the following requirements for monitoring fugitive emissions at new and modified well sites:
    - For low production well sites, biennial monitoring would be required (once every other year). A low production well site has a combined oil and natural gas production of less than 15 barrels of oil equivalent per day, averaged over the first 30 days of production.
    - For well sites that are not low production, annual monitoring would be required. Non-low production well sites are those with a combined oil and natural gas production of 15 or more barrels of oil equivalent per day, averaged over the first 30 days of production.
    - For all well sites, EPA is proposing to allow monitoring to be stopped once all major production and processing equipment is removed so that the site contains only wellheads. However, separate tank batteries receiving oil or gas produced from wellhead-only sites are considered modified and would be subject to fugitive emissions monitoring requirements.

- EPA addressed requirements for well sites on the Alaskan North Slope in final amendments that the Agency issued in March 2018 to address significant and immediate compliance concerns. The March amendments required well sites on the Alaskan North Slope to be monitored annually (at least nine months apart); today's proposal would further change the monitoring schedule to require that *low-production* well sites be monitored every other year.

- EPA is seeking comment on a number of aspects of the fugitive emissions requirements, including the proposed schedule for initial monitoring, the frequency of monitoring, repair requirements, proposed changes to definitions in the rule, and supporting information.

*Proposed monitoring frequency for compressors stations*

- The 2016 rule also required monitoring for fugitive emissions at new and modified gathering and boosting compressor stations, and at transmission and storage compressor stations. The rule required an initial monitoring survey within 60 days after startup of a new or modified compressor station, then quarterly monitoring afterward. EPA is co-proposing changing the monitoring schedule to require either semi-annual or annual monitoring.

- Because some of the individual compressors at a station may not be operating when a monitoring survey is conducted, the proposal would require owners or operators to keep a record of the operating mode of each compressor at the station at the time of the survey. Owners/operators also would be required to monitor each compressor at the station at least once per calendar year when it is operating.

*Compressor Stations on the Alaskan North Slope*

- EPA is proposing separate monitoring requirements for compressor stations located on the Alaskan North Slope to accommodate the area's arctic climate. The Alaskan North Slope extends from the Brooks mountain range to the Arctic Ocean.

- The proposed changes for compressor stations on the Alaskan North Slope mirror those the Agency issued in March 2018 for well sites:

    - New or modified compressor stations that begin operation between September and March would be required to conduct initial leaks monitoring surveys within six months after startup or by June 30, whichever is later. Subsequent monitoring would be required annually.

    - New or modified compressor stations that begin operation between April and August would be required to conduct initial monitoring surveys within 60 days of the startup of production. Subsequent monitoring would be required annually.

    - EPA is proposing the amendments after considering concerns about implementation challenges raised in comments on Notices of Data Availability the Agency issued in 2017. Those comments noted that the monitoring technologies specified in the 2016

rule cannot reliably detect methane emissions for much of the year because of extremely cold temperatures. Temperatures in the North Slope region often are below zero.

*Initial monitoring for fugitive emissions*

- EPA also is seeking comment on whether to extend the 60-day time for conducting initial monitoring surveys for all well sites and compressor stations -- including those located on the Alaskan North Slope -- to allow additional time to install equipment.

*Schedule for repairing leaks*

- The 2016 NSPS requires owners/operators who find fugitive emissions to repair leaking components within 30 days after the emissions are detected. Owners/operators must then re-survey the component within 30 days to verify that the repair was successful.
- Because these requirements may create unintended compliance issues in instances where the repair is unsuccessful, EPA is proposing to amend the repair requirements so that owners/operators would have up to 60 days after fugitive emissions are detected to *complete* repairs; they would have to make a first attempt at repair during the first 30 days of that period. The proposal includes definitions for "first attempt at repair" and "repaired."

**Improved Alignment with State Programs**

- The proposed amendments would allow owners/operators to meet certain existing state requirements as alternatives to meeting specific aspects of EPA's fugitives requirements for well sites and/or compressor stations. These include requirements such as monitoring, repair and recordkeeping. Not all states have separate requirements for addressing fugitive emissions; some do so by incorporating EPA's requirements in their rules.
- In the 2016 rule, EPA noted that it had been unable to conclude that any state or local program for addressing fugitive emissions could be deemed to be "at least equivalent" to the requirements in the NSPS due to differences in both the sources covered and in specific requirements. The 2016 rule allowed owners/operators to use the alternative means of emissions limitation (AMEL) process to request permission to meet a state or local program in lieu of EPA's requirements; however, both petitioners and states questioned the practicality of doing so.
- After additional review of state and local programs for addressing fugitive emissions, EPA has determined that several are at least equivalent to the fugitive emissions monitoring, repair and recordkeeping requirements included in the proposed rule. Based on this evaluation, EPA is proposing to allow owners/operators to choose to base fugitive emissions monitoring and repair plans on requirements from certain states, in lieu of the requirements in the NSPS. Those states are:

1. California (well sites and compressor stations)
2. Colorado (well sites and compressor stations)
3. Ohio (well sites and compressor stations)
4. Pennsylvania (well sites and compressor stations)
5. Texas (well sites)
6. Utah (well sites)

- Owners/operators would be required to notify EPA at least 90 days in advance that they intend to use a particular state's fugitive emissions standards as an alternative standard.

Standards for pneumatic pumps at well sites

- EPA is proposing to amend several aspects of the requirements for pneumatic pumps, including:
    - a requirement that a professional engineer certify when it is technically infeasible to route emissions from a pneumatic pump to a control device or process, and
    - the definition of "greenfield site" as it relates to those requirements.
- Pneumatic pumps use gas pressure to drive fluids. These pumps are used at oil or natural gas production sites where electricity is not readily available. At well sites, pneumatic diaphragm pumps are used to transfer fluids or to circulate glycol "heat trace medium," which is used to keep pipes and equipment from freezing, for example.
- Based on concerns raised in administrative petitions for reconsideration of the rule, EPA is proposing to expand a technical infeasibility provision to include all well sites – both those considered to be "greenfield" (new) sites and those that are not.
    - The 2016 rule required the routing of methane and volatile organic compound (VOC) emissions from diaphragm pumps at natural gas well sites to an existing control device or process on site (such as a device to control emissions from other equipment) unless it is technically infeasible to do so. This exemption was allowed only for "non-greenfield" (existing) well sites, based on an assumption that the technical infeasibility in routing emissions at an existing well site could be addressed in advance when new well sites are developed.
    - The Agency is seeking comments and examples of circumstances at new well sites that would make it technically infeasible to control pneumatic pump emissions, along with information about additional costs that an owner/operator may incur as a result of installing controls that also would accommodate pneumatic pump emissions at a new well site.

Professional engineer certifications

- The 2016 rule required that a qualified professional engineer certify when it is technically infeasible to route pneumatic pump emissions to an existing control or process. In response

to issues raised in petitions for reconsideration, EPA is proposing to amend the certification requirements to allow either a professional engineer or in-house engineer with appropriate expertise to make those certifications.

- Similarly, EPA is proposing to allow in-house engineers with appropriate expertise to evaluate designs of closed vent systems and certify that their design and capacity are sufficient to route emissions to a control device from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels.

### Alternative means of emissions limitations

- An alternative means of emissions limitation, or AMEL, refers to the use of different types of work practices to accomplish emissions reductions that are equal to or greater than a work practice specified in the rule. The 2016 NSPS included provisions to allow owners and operators to request an AMEL for monitoring for, and reducing, fugitive emissions from well sites and compressor stations, and a separate AMEL for limiting emissions from well completions and reciprocating compressors.

- After the 2016 rule was issued, several stakeholders identified a need to streamline the process for requesting AMELs. To address this need, EPA is proposing to clarify that an individual AMEL application may include the same technology for multiple sites, provided the required information is provided for each site – including a demonstration of emission reduction equivalency for each site included in the application.

- The proposed amendments also would allow owners/operators to join with manufacturers, vendors or trade associations to apply for an AMEL that incorporates the use of emerging technologies. Applications would be required to include site-specific procedures for ensuring that emission reductions would be continuous.

- EPA also is proposing to allow applicants to supplement field data with test data, modeling analyses and other documentation, provided the field data provides information related to seasonal variations.

## Cost Savings and Emissions Reductions

- EPA has analyzed the costs savings that would occur if the technical amendments are finalized as proposed, along with emission reductions that would not occur.

- The regulatory impact analysis (RIA) for the proposal estimates that the oil and gas industry would save a total of $380 million (present value using a 7 percent discount rate) and $484 million (3 percent discount rate) from 2019 through 2025, or $66 million and $75 million a year (7 percent and 3 percent discount rates, respectively), assuming *semiannual* monitoring is required at compressor stations. The total cost savings include 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.

- EPA's analysis estimates the following emissions reductions would not occur from 2019 through 2025 as a result of the proposed amendments if *semiannual* monitoring is required at compressor stations: 380,000 short tons of methane (8.5 million metric tons of carbon dioxide equivalent); 100,000 tons of VOCs; and 3,800 tons of hazardous air pollutants. The analysis also estimates the total present value of climate benefits that would not occur at $13.5 million (7 percent discount rate) and $54 million (3 percent discount rate), or $2.3 and $8.3 million a year, using 7 percent and 3 percent discount rates, respectively.
- EPA's analysis estimates the total net present value, assuming semiannual monitoring at compressor stations is required, is $367 million (7 percent discount rate) and $431 million (3 percent discount rate), or $64 million and $67 million a year (7 percent and 3 percent discount rates, respectively).
- The RIA also estimates the total cost savings and the emission reductions that would not occur if *annual* monitoring is required at compressor stations. Under this option, the oil and gas industry would save a total of $424 million from 2019 through 2025 (present value using a 7 percent discount rate), or $73 million a year.
- The analysis estimates the following emissions reductions would not occur from 2019 through 2025 if *annual* monitoring of compressor stations is required: 480,000 short tons of methane (11 million metric tons of carbon dioxide equivalent); 120,000 tons of volatile organic compounds; and 4,700 tons of hazardous air pollutants.

**How to Comment**

- EPA will take public comment on the proposed amendments for 60 days after they are published in the Federal Register. There are multiple ways to submit written comments. Please use one of the methods below to ensure EPA receives your comments.
- **The Docket ID number for the proposed amendments is EPA-HQ-OAR-2017-0483.**
- Label your comments with the Docket ID number, then submit them by any one of the following methods:
    - Online - go to www.regulations.gov and type the Docket ID number above in the search box. Click on the "Comment Now!" button at the top right of the page, and follow the instructions for submitting your comments.
    - E-mail: Send comments by e-mail to a-and-r- Docket@epa.gov, Attention Docket ID EPA-HQ-OAR-2017-0483. Please include the docket number in the subject line of your email message.
    - Fax: You may fax your comments to: (202) 566-9744, Attention Docket ID. No. EPA-HQ-OAR-2017-0483

- NOTE: Confidential Business Information (CBI), or other information that is subject to disclosure restrictions by law, should never be sent to EPA electronically. If you have questions about submitting CBI or other information subject to disclosure restrictions by law, please visit http://www2.epa.gov/dockets/commenting-epa-dockets for additional information.

- Mail: You may mail your comments to Environmental Protection Agency, EPA Docket Center (EPA/DC), Mail Code 28221T, Attention Docket ID No. EPA-HQ-OAR-2017-0483, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

- Hand delivery/courier delivery: Comments may be delivered to EPA Docket Center, Room 3334, EPA WJC West Building, 1301 Constitution Ave., NW, Washington, D.C. 20004, Attention Docket ID No. EPA-HQ-OAR-2017-0483. Please note that hand/courier deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

- For tips on submitting comments, see https://www.epa.gov/dockets/commenting-epadockets

**For additional information**

- To read the proposed amendments, visit https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/actions-and-notices-about-oil-and-natural-gas#regactions