
U.S. EPA'S MAY 12, 2016 ACTIONS AFFECTING THE OIL AND GAS INDUSTRY

On May 12, 2016, the U.S. Environmental Protection Agency (“EPA”) announced a number of new regulations and an information collection initiative that will affect the oil and gas industry. The regulations include the promulgation of amendments to New Source Performance Standards (“NSPS”) Subpart OOOO and new Subpart OOOOa. With these regulations, EPA aims to curb emissions of greenhouse gases (“GHGs”) (specifically methane), volatile organic compounds (“VOCs”), and toxic air pollutants from new, reconstructed, and modified oil and gas sources. Additional rulemakings include the Source Determination Rule applicable to air permitting in the oil and gas industry and a final federal implementation plan (“FIP”) applicable to minor new source review in Indian Country. The Agency also announced its intention to issue an information collection request (“ICR”) to require companies to provide information as a prelude to promulgating comprehensive regulations to reduce emissions from existing oil and gas sources and requested public comment on the ICR. In this alert, we address:

- I. Background of EPA’s Regulation of GHGs in the Oil and Gas Sector
- II. Summary of New NSPS Subpart OOOOa and Amendments to NSPS Subpart OOOO
 - A. Equipment Subject to the New Standards
 1. Centrifugal Compressors
 2. Reciprocating Compressors
 3. Pneumatic Controllers
 4. Pneumatic Pumps
 5. Well Completions Generally
 6. Wildcat, Delineation, and Low Pressure Wells
 7. Fugitive Emissions from Well Sites and Compressor Stations
 8. Equipment Leaks and Natural Gas Processing Plants
 9. Liquid Unloading Operations
 - B. Other Notable Amendments to NSPS Subpart OOOO
 - C. Recordkeeping and Reporting
 - D. Compliance Deadlines
- III. Source Determination Rule for Oil and Natural Gas Production and Processing Activities
- IV. FIP for True Minor Sources in Indian Country and Amendments to the Federal Minor NSR Program in Indian Country
- V. Draft Information Collection Request
- VI. Takeaways

I. Background of EPA's Regulation of GHGs in the Oil and Gas Sector

The new emission standards are the latest in a number of steps taken by the current administration to address methane emissions due to methane's role as a GHG. The Administration's first step in addressing GHGs was an action by EPA in 2009 to recognize six well mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) as gases which endanger both the public health and the public welfare of current and future generations by causing and contributing to climate change. In June 2013, the President announced a climate action plan to address emissions of GHGs more aggressively. In March 2014, the White House published the President's Climate Change Action Plan: Strategy to Produce Methane Emissions (the "Plan"). This Plan is intended to pursue the Administration's announced goal of cutting methane emissions from the oil and gas sector by 40 to 45 percent from 2012 levels by 2025. The announcement of the Plan was followed by the publication of a series of white papers identifying significant sources of methane emissions within the oil and gas sector. These papers, published in April 2014, were subject to peer review and formed the basis for the new emission standards announced in the May 12, 2016 regulations. The oil and gas industry was identified as the second largest stationary source of GHG emissions in the United States, second only to EPA fossil fuel electricity generation, due to the industry's status as a significant emitter of methane and methane's potency as a GHG. Methane has a 100-year global warming potential that is 28 to 36 times greater than carbon dioxide.

EPA cites Section 111 (b) of the Clean Air Act ("CAA") as its authority for the publication of the new rules. Section 111 (b) authorizes EPA to develop standards of performance for new sources. Such standards also apply to modification and reconstruction of such sources. The new source category for the oil and gas industry includes oil and natural gas production, processing, transmission, and storage. Through these new regulations, EPA for the first time has established GHG standards and imposed limitations on methane emissions throughout the oil and gas industry. Previously, methane was addressed only as a component of gases comprising VOCs, and its control was incidental to the control of VOCs. EPA is using this rule to specifically address methane and to emphasize its significance as a GHG. At the same time, many of the control methods employed to control VOCs are, in fact, the same methods used to control methane. As a result, no additional or different controls are anticipated.

In EPA's NSPS Subpart OOOOa rulemaking, EPA finalizes emission standards for GHGs in the form of limitations on methane and VOC emissions for new, modified, and reconstructed emission sources across the oil and natural gas source category. For some of the sources, the VOC emissions limitations are actually established in the 2012 NSPS Subpart OOOO regulations. For these sources, the Agency is now establishing GHG limitations to accompany the VOC standards.

II. Summary of New NSPS Subpart OOOOa Regulations and Amendments to Subpart OOOO

The new regulations build upon EPA's previous efforts to expand regulation of the oil and gas industry through the publication of NSPS Subpart OOOO. The OOOO regulations, initially promulgated in 2012, address VOC emissions from sources in the oil and gas sector. In addition to adding methane as

an additional pollutant to be controlled by equipment regulated by the original 2012 regulations, the new regulations named additional equipment to be controlled for both methane and VOCs. The 2012 NSPS Subpart OOOO rules required “green completions” or reduced emission completions (“RECs”) during completion of gas wells but not oil wells. The new rules extend these regulations to oil wells and address not only VOCs but also the methane emissions that occur during the completion phase for both oil and gas wells. The new regulations will also require owners and operators to find and repair leaks which result in fugitive emissions of both VOCs and methane. Below we summarize the new standards for equipment used in oil and gas operations that are subject to the regulations.

A. Equipment Subject to the New Standards

1. Centrifugal Compressors. The new regulations add requirements to both the VOC and GHG standards for new, modified, or reconstructed wet seal centrifugal compressors located across the oil and natural gas source category. The agency did not establish requirements for such compressors at well sites. EPA observed that the standard can be achieved by capturing and routing the emissions using a closed vent system to a control device that achieves 95 percent reduction.

2. Reciprocating Compressors. The Agency also finalized new requirements for both VOCs and GHGs for new, modified, or reconstructed reciprocating compressors. Similarly, the Agency did not establish requirements for reciprocating compressors at well sites. The regulations afford operators two choices: (1) to either replace the rod packing based on usage; or (2) route the rod packing emissions to a process by a closed vent system under negative pressure. The rod packing must be replaced before 26,000 hours of operation or every 36 months.

3. Pneumatic Controllers. The agency finalized new regulations to establish requirements for both VOC and GHG standards for new, modified, or reconstructed pneumatic controllers. The new standards require the use of low bleed controllers in place of high bleed controllers at all locations within the source category except for natural gas processing plants. For natural gas processing plants, pneumatic controllers must have a zero natural gas bleed rate. This means for those such plants, the controllers must be operated by means other than natural gas.

4. Pneumatic Pumps. New, modified, and reconstructed natural gas diaphragm pumps located at well sites are to be reduced by 95 percent if either a control device or the ability to route to a process is available on site unless it is technically infeasible at sites other than new developments. The regulations do not require the instillation of new control equipment at well sites but do require the use of existing control equipment even if the emission reduction achieved is less than 95 percent.

5. Well Completions Generally. The regulations finalize GHG standards for well completions of hydraulically fractured gas wells which were previously subject to VOC standards from the 2012 regulations. The new regulations go on to require control of GHG and VOC

emissions for well completions of hydraulically fractured oil wells. As the methane emissions will be controlled together with the VOC standards, the emission controls required by this new standard are essentially the same as those required for completion of gas wells and promulgated in the 2012 NSPS Subpart OOOO. As with the 2012 NSPS, exceptions were made for wildcat and delineation wells.¹ These wells are not subject to REC requirements, but are subject to combustion requirements. The new standards for all other wells require a combination of RECs and combustion. EPA recognizes two distinct stages of the completion process. These two stages are the “initial flowback stage” and the “separation flowback stage.” The regulations require that the flowback be routed to a separator as soon as the separator is able to function. The gas and the flowback prior to feasibility of separation is not controlled. During the separation flowback stage, owners or operators must: (1) route all saleable quality gas from the separator to the gas flow line of collection system; (2) reinject the gas into the well or another well; (3) use the gas as an on-site fuel source; or (4) use the gas for another useful purpose that a purchased fuel or a raw material would serve. If none of these four options is technically feasible, the owner or operator may route the gas to a completion combustion device with a continuous pilot flame (*i.e.*, a flare). The owner or operator must document the technical infeasibility in a manner provided by the rule. No direct venting of gas is allowed during the separation flowback stage. The owner or operator is required to have a separator onsite at non-wildcat and non-delineation wells during the entirety of the flowback and is required to document the stages of completion and maintain records. The records are required to reflect: (1) the date and time of onset of flowback; (2) the date and time of each attempt to route flowback to the separator; (3) the date and time of each occurrence in which the operator reverted to the initial flowback stage; (4) the date and time the well was shut in; and (5) the date and time that temporary flowback equipment was disconnected. The owner or operator must also document the total duration of venting combustion and flaring over the flowback period.

6. Wildcat, Delineation, and Low Pressure Wells. Wildcat and delineation wells are subject to an operational standard requiring either the routing of all flowback directly to a completion combustion device with a continuous pilot flame or, at the option of the owner or operator, providing the flowback to a well completion vessel and sending the flowback to a separator as soon as the separator will function and then directing the separated gas to a completion combustion device.

Low pressure oil wells (wells with a gas-to-oil ratio less than 300 scf of gas per stock tank barrel of oil produced) can be excluded from the well completion requirements, but the owner or operator must maintain records of the low gas-to-oil ratio and a claim of the exclusion that includes a certification by the certifying official.

¹ A wildcat well is a well drilled outside known fields or as the first well drilled in an oil and gas field where no other oil and gas production exists. The delineation well is a well drilled to determine the boundary of the field or process producing reservoir.



7. Fugitive Emissions from Well Sites and Compressor Stations. The new regulations also finalize emission standards to control fugitive emissions of GHGs and VOCs at well sites and compressor stations. The new standards include semi-annual monitoring and repair of fugitive emission components at well sites and quarterly monitoring and repair at compression stations. Monitoring is to be conducted with optical gas imaging (“OGI”) or Method 21, which relies upon an organic vapor analyzer. Owners or operators can also propose the use of emerging technologies to monitor the leaks following a demonstration of the effectiveness of these technologies required to obtain approval from EPA. Repairs are required if any visible emissions are identified using OGI. If Method 21 is utilized, fugitive emissions must be addressed at an instrument reading of 500 ppm or greater. Repairs must be made within 30 days of finding fugitive emissions and a resurvey of the repair to the component must be made within 30 days after the repair. Fugitive emission monitoring plans for well sites and compressor stations are to be developed for company-defined areas (as opposed to, for example, corporate-wide or on a site-specific basis).

8. Equipment Leaks and Natural Gas Processing Plants. EPA also finalized standards for control of GHGs (methane) from equipment leaks at new, modified, or reconstructed natural gas plants. These are the same requirements as the agency adopted in the 2012 New Source Performance Standard for VOCs.

9. Liquid Unloading Operations. The agency notes that liquid unloading is a significant source of emissions of both GHGs and VOCs. An effort was made to obtain additional information about techniques that could reduce emissions from liquid unloading events. The Agency did not receive sufficient information to help identify a best system for emission reduction. The Agency announced its intention to continue to gather information on this subject through its planned ICR, discussed in more detail below.

10. Other Notable Amendments to NSPS Subpart OOOO

- Exempting from affected facility status storage vessels used for water recycling in both NSPS OOOO and OOOOa if the capacity of the storage vessel has a capacity of more than 10,000 gallons and the water being stored has been through 2-stage separation.
- Specifying that owners and operators have a general duty to minimize emissions under both OOOO and OOOOa.
- In the context of determining whether a change to a facility is considered a modification, defining the term “capital expenditure” to reflect the calendar year of the NSPS OOOO proposal and a B value (the applicable basic annual asset guideline repair allowance) of 4.5 for NSPS OOOO.

B. Recordkeeping and Reporting

The new regulations establish recordkeeping and reporting requirements necessary to both confirm compliance with the standards and record efforts to assure continued compliance. An example is the requirement to submit an initial notification for well affected facilities no later than two days prior to starting a well completion operation. Owners and operators will also be required to prepare an annual report demonstrating their compliance and documenting any instances of noncompliance with the rules.

C. Compliance Deadlines

The amendments to NSPS Subpart OOOO regulations become effective 60 days after the date of publication in the Federal Register.

Compliance with NSPS OOOOa is generally required 60 days after the date of Federal Register publication or upon startup, whichever is later. Wells not considered to be wildcat or delineation wells must employ RECs if technically feasible no later than 180 days after the date of Federal Register publication. Prior to that date, combustion is required during well completion for those wells as well as for wildcat, delineation, and low pressure wells. Initial monitoring surveys for fugitive emissions must be performed within one year after the date of Federal Register publication or within 60 days after startup of production or modification, whichever is later. The initial annual report is due no later than 90 days after the end of the initial compliance period, defined as one year after initial startup of an affected facility or one year after the date that is 60 days after the date of Federal Register publication, whichever is later.

III. Source Determination Rule for Oil and Natural Gas Production and Processing Activities

In its source determination rule for oil and natural gas production and processing activities (which EPA refers to in the preamble as “oil and gas operations”), EPA clarifies which oil and natural gas extraction activities under common control will be considered a single source for purposes of CAA Title V Operating Permit, Prevention of Significant Deterioration, and Nonattainment New Source Review applicability by defining the term “adjacent” for these activities. Specifically, oil and natural gas operations under common control will be considered a single source if they are located either on the same surface site or within ¼ mile of one another and share equipment. The term “surface site” means “any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.”² Examples of shared equipment include produced fluids storage tanks, phase separators, natural gas dehydrators, or emissions control devices. Notably, EPA has chosen not to require state and local permitting programs to revise their EPA-approved programs to be consistent with these new source determination criteria; instead, EPA will only apply these criteria in permitting decisions over which it has primary jurisdiction for permits being issued. These criteria will be applied in source determinations made as of 60 days after the date of publication of

² 40 C.F.R. §63.761 (Subpart HH—National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities).

the rule in the Federal Register. Thus, unless states or local permitting authorities choose to modify their permitting rules to reflect these same source determination criteria for onshore oil and natural gas operations, these criteria will not affect how states currently implement their approved air permitting programs.

IV. FIP for True Minor Sources in Indian Country and Amendments to the Federal Minor NSR Program in Indian Country

EPA has finalized the FIP for true minor sources and minor modifications to existing true minor sources in the oil and gas production and natural gas processing segments of the oil and gas sector located in Indian country designated as attainment, unclassifiable, or attainment/unclassifiable. Rather than requiring these sources to obtain a site-specific minor source permit, the FIP establishes preconstruction authorization of these sources if the sources complete a two-part registration, comply with eight existing federal regulations (with limited exceptions), and provide documentation of assessment of endangered and threatened species and historic properties. Part 1 of the registration process must be submitted at least 30 days prior to the start of construction and Part 2 must be submitted within 60 days after the startup of production. Alternatively, sources may seek a site-specific permit or, where emissions from a source could cause or contribute to a National Ambient Air Quality Standard or Prevention of Significant Deterioration increment violation, EPA may require the source to obtain a site-specific permit. The eight federal regulations with which a source must comply as part of its preconstruction authorization under the FIP include five NSPS and three National Emission Standards for Hazardous Air Pollutants. A table published by EPA summarizing these eight regulations is available at this [link](#). In addition to the FIP, EPA amended the Federal Minor New Source Review (“NSR”) Program in Indian Country for consistency with the FIP. A key compliance date for these rules is October 3, 2016.

V. Draft Information Collection Request

Pursuant to the draft ICR, EPA will seek information on the following sources of methane emissions through an operator survey and facility survey:

- Pneumatic controllers (including intermittent pneumatic devices)
- Tanks (including uncontrolled tank flashing)
- Equipment leaks
- Liquids unloading
- Pumps
- Reciprocating compressors
- Centrifugal compressors
- Blowdowns
- Associated gas venting
- Closed vent system and control malfunctions

If the IRC is adopted in its proposed form, industry will be required to provide information with respect to these sources about equipment descriptions and configuration; well information (*e.g.*, age, production, and workover schedules); availability of electricity, generating capacity, and gathering lines;



information on manned and unmanned operations and frequency of onsite personnel; availability of monitoring equipment; baseline levels of control and applicable requirements; information on maintenance and non-routine events such as blowdowns and malfunctions; design information for separators, flares, combustors, vapor recovery units, separator towers, closed vent systems, and monitoring approaches; and cost information. The Agency has proposed to collect this information in two parts. All known oil and gas production well operators would be required to respond to Part 1 (the “Operator Survey”), while certain facilities in the onshore production, gathering and boosting, processing, compression/transmission, pipeline, natural gas storage, and liquefied natural gas storage and import/export segments would be selected to respond to Part 2 (the “Facility Survey”). Certain facilities may also be asked to provide specific data, such as separator/storage vessel flash analyses.

Comments on the draft ICR are due to EPA 60 days after the date of publication of the draft ICR in the Federal Register. A second draft of the ICR will be published for public comment following both EPA’s revision of the draft ICR in response to the first set of comments received and submittal to the Office of Management and Budget for review and approval.

VI. Takeaways

Many requirements in the new NSPS regulations apply within 60 days after the rules are published in the Federal Register. Start preparing now by developing a program to manage these new compliance obligations. For example, the significant recordkeeping obligations established under the new NSPS OOOOa rules will likely necessitate development of a system or expansion of existing systems to collect the requisite data, maintain required records (which may include significant amounts of data such as digital photograph or video images), and manage reporting requirements. These efforts will take time to implement. Additional time will be required to train personnel on these obligations.

As discussed above, we expect the new source determination rule to have little impact in areas other than those where EPA is the permitting authority.

If you operate or are planning to construct oil and gas operations in Indian Country that are considered to be true minor sources, we suggest reviewing how these operations may be subject to EPA’s FIP and Minor NSR Rule for such sources and developing a compliance plan to manage applicable regulatory requirements.

If you have questions about these EPA actions or how they specifically apply to your operations, please contact the Thompson & Knight attorneys with whom you regularly work or one of the attorneys below.

CONTACTS:



James C. Morriss III
512.469.6130
James.Morriss@tklaw.com



Ashley T. K. Phillips
512.469.6135
Ashley.Phillips@tklaw.com

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