

NSPS 0000a

FINAL RULE EFFECTIVE AUGUST 2, 2016

The final rule differs significantly from the proposed version released in fall of 2015.



Background

On June 3, 2016, the U.S. Environmental Protection Agency (EPA) published the final New Source Performance Standards (NSPS) Subpart OOOOa – Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources. The [final rule](#) differs significantly from the proposed version released in fall of 2015 and will become effective August 2, 2016. The NSPS includes both Volatile Organic Compounds (VOC) and Green House Gas (GHG) (methane) emission standards for certain new, modified, and reconstructed equipment, processes, and activities across the oil and natural gas source category.

OOOOa refers to facilities subject to this rule as “affected facilities.” OOOOa establishes emissions standards for control of VOC, methane, and sulfur dioxide (SO₂) emissions from affected facilities that commence construction, modification or

reconstruction after September 18, 2015. The definition of an “affected facility” for well sites includes the collection of fugitive emission components associated with any oil, gas, or injection well including the well pad. The “affected facility” for compressor stations comprises new, modified, and reconstructed natural gas compressors. The “affected facility” for well sites comprises a single well facility that conducts a well completion operation following hydraulic fracturing or refracturing. Well sites that contain only wellheads are exempt from fugitive emission requirements, as these sites do not have ancillary equipment and, as such, have extremely low fugitive emissions. For purposes of the fugitive emissions standards, “well site” also refers to a separate tank battery site collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water from wells not located at the well site. To determine applicability to the rule, reference 40 CFR §60.5365a.

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Fugitive Emission Requirements: Well Sites and Compressor Stations

The most significant change from the original proposed rule from fall 2015, is that fugitive emissions monitoring is required on a fixed schedule instead of the proposed semi-annual monitoring and performance based “skip period” rule. Compressor stations will require quarterly monitoring and well sites will require semiannual monitoring using optical gas imaging (OGI) as EPA defined in the best system of emission reduction (BSER). These quarterly and semiannual inspections will then require follow-up monitoring if fugitive emissions are not repaired during the initial survey. Follow-up monitoring is suggested to be completed using OGI, but Method 21 (including soap bubble testing) can also be used. The owner/operator has thirty days after detection to repair any fugitive emission leaks found and an additional thirty days from repair to re-monitor and verify repair.

In addition to quarterly and semiannual fugitive emission surveys, owners and operators are required to maintain a substantial amount of data both on field documents and in the form of monitoring plans. This information is to be kept for five years and submitted annually to the EPA. To cope with these recordkeeping requirements, Trihydro is developing a web-based software program designed to automatically track information for easy access, updates, recordkeeping, and annual EPA report submission for well site and compressor station fugitive emission inspections.

Originally, the proposed rule required corporate-wide and site-specific fugitive emission monitoring plans. The final rule requires owners or operators to develop a fugitive emission monitoring plan for a company defined area of well sites and separately for a company defined area of compressor stations. The final rule provided owners/operators some flexibility to group well sites or compressor stations that are located within close proximity, under



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common control within a field or district, or that are managed by a single group of personnel. This will also allow owners and operators within different basins the ability to adapt their plans to specific elements of the corresponding area. (i.e., geography, well site characterization, emission profile). As a result, the final rule requires owners and operators to develop a plan that generally describes the sites. This includes descriptions of equipment, plans for how they will monitor, etc.

The following records are required for each monitoring survey:

- Date of the survey.
- Beginning and end time of the survey.
- Name of operator(s) performing survey, including the training and experience of the operator.
- Monitoring instrument used.
- When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for monitoring, of each required survey being performed. The digital photograph must include the date the photograph was taken and the latitude and

longitude of the collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station embedded within or stored with the digital file. As an alternative to embedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.

- Fugitive emissions component identification when Method 21 is used to perform the monitoring survey.
- Number and type of components for which fugitive emissions were detected.
- Number and type of fugitive emissions components that were not repaired as required in §60.5397a(h).
- Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.
- The date of successful repair of the fugitive emissions component.

- Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.
- Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.
- Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
- Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

Other Changes with OOOOa

Other changes in the final rule:

- 95% reduction on wet seal centrifugal compressors (except those on wellsites).
- Rod packing has to be replaced on reciprocating compressors on or before 26,000 hours of operations or 36 calendar months or the facility route emissions through a closed vent system under negative pressure.
- Pneumatic controllers at natural gas processing plants have to have zero natural gas bleed rate.
- Pneumatic controllers at locations other than natural gas processing plants are to have natural gas bleed rates no greater than 6 SCFH.
- Pneumatic pumps at natural gas processing plants are to have zero natural gas emissions.
- Pneumatic pumps at well sites are to have 95% control if there is an existing control. 95% control not required if routed to an existing control that achieves less than 95 percent or it is technically infeasible to route to the existing control device or process (non-greenfield sites only).



- Well completions that are non-wildcat and non-delineation wells (subcategory 1) are to have Reduced Emission Completion (REC) in combination with a completion combustion device; venting in lieu of combustion where combustion would present safety hazards. The initial flowback stage will route to a storage vessel or completion vessel (e.g. frac tank, lined pit, or other vessel) and separator. The separation flowback stage will route all salable gas from the separator to a flow line or collection system, re-inject the gas into the well or another well, use the gas as an onsite fuel source or use for another useful purpose that a purchased fuel or raw material would serve. If technically infeasible to route recovered gas as specified above, recovered gas must be combusted. All liquids must be routed to a storage vessel or well completion vessel, collection system, or be re-injected into the well or another well. The operator is required to have a separator onsite during the entire flowback period.
- Well completions that are exploratory and delineation wells and low pressure wells (subcategory 2) do not require the operator to have a separator onsite. These completions will either route all flowback to a combustion device with a continuous pilot flame or route all flowback into one or more well completion vessels and commence operation of a separator unless it is technically infeasible for a separator to function. Any gas present in the flowback before the separator is not subject to control under this section. Capture and direct recovered gas to a completion combustion device with a continuous pilot flame. For both of these options, combustion is not required in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact tundra, permafrost or waterways.

Conclusions


NSPS OOOOa becomes effective August 2, 2016 and initial surveys will need to begin within 60 days of startup or June 3, 2017, whichever is later. This rule overlaps with several existing regulations, including Subpart W, which already requires annual fugitive emission detection surveys and reporting of GHG's for certain compressor stations and natural gas processing plants that exceed the 25,000 metric ton CO₂e threshold. However, Subpart W surveys only include GHG's on lines greater than ½-inch whereas OOOOa does not have a size requirement and includes all VOC's. Several compressor stations and upstream well production sites will now be required to conduct fugitive emission detection surveys that previously were not mandatory. Though an initial survey does not need to be conducted until the end of the 2017 second quarter, some companies may wish to consider preemptive inspections, especially at facilities with no previous leak detection requirements. Preemptive surveys will help clients discover and repair leaks before the stringent timeline, repair, and recordkeeping aspects of OOOOa become applicable.

If you would like further information on NSPS OOOOa or to request Trihydro's assistance in implementing, please contact:



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