



Oil And Gas Air Regulatory Update EPA Efforts to Curb Methane, Climate Change and More

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Overview

- New Rule to expand VOC reductions and new regulations to reduce methane (June 2016)
- BLM rule to reduce methane (October 2016)
- Control Technology Guidelines (October 2016)
- Information Collection Request (November 2016)
- New rules to define the scope of what is considered a “source” (June 2016)

Climate Change – Environmental Groups

- What the environmental groups say:
- “Reducing rampant methane pollution from the oil and gas industry is critical to combating climate change in the U.S.” NRDC
- “Methane Emissions From Onshore Oil and Gas Equivalent to 14 Coal Plants Powered for One Year” Eco Watch

Climate Change – Industry

- What industry says:
- “The industry is already leading the way on methane reductions because it is good for the environment and good for business,” “It doesn’t make sense that the administration would add unreasonable and overly burdensome regulations when the industry is already leading the way in reducing emissions.” API

Climate Change - EPA

- What the Obama Administration said:
 - “Methane is the second most prevalent greenhouse gas emitted in the United States from human activities, and approximately one-third of those emissions comes from oil production and the production, transmission and distribution of natural gas”

However there is a new administration . . .

NSPS Program

- Clean Air Act Section 111(b) - New Source Performance Standards
- New, modified/reconstructed sources – 111(b)
- Existing sources may be regulated – 111(d)
- Sets “standards of performance” that are the “best system of emission reduction” (BSER)
- Applicable to “stationary sources”

NSPS – Source Categories

- EPA identifies the list of categories of stationary sources
- Endangerment findings
- Criticism that an additional endangerment finding is required
- Reporting data shows that O&G operations are 2nd largest GHG emitter

2012 Subpart 0000 – VOCs

- Applies to below-listed facilities that constructed, modified or reconstructed:
- Natural gas well sites
 - Completions of hydraulically fractured wells, pneumatic controllers, and storage tanks
- Oil well sites
 - Pneumatic controllers and storage tanks

2012 Subpart 0000 - VOCs

- Production gathering and boosting stations
 - Compressors, Pneumatic controllers, and storage tanks
- Natural gas processing plants
 - Compressors, equipment leaks, pneumatic controllers, and storage tanks
- Natural gas compressor stations (transmission and storage)
 - Storage tanks

2016 Subpart 0000a

- Sets methane standards for equipment subject to Quad O
- Expands and sets methane and VOC standards for additional equipment not subject to Quad O including new leak detection and repair requirements to control fugitive emissions

Fugitive Emissions

- Fugitive emissions (i.e., leaks)
- New rule applicable to:
 - Natural gas well sites
 - Oil well sites
 - Production gathering and boosting stations
 - Natural gas compressor stations (transmission and storage)

Fugitive Emissions

- Leak monitoring plan
 - Leak survey using optical gas imaging or Method 21
 - Survey includes many components
 - Initial survey – w/in one year of publication or w/in 90 days of startup, whichever is later
 - After initial survey, conduct next surveys semiannually
 - Leaks must be repaired in 30 days (unless shut down required to repair)

Fugitive Emissions

- Equipment that vents natural gas as part of normal operations is exempt
- Sites that only contain wellheads (known as “Christmas trees”) are exempt
- No exemption for low producing wells (less than 15 barrels/day)
- Pathway for alternative monitoring available

Natural Gas Well Sites

- Pneumatic Pumps

- Route methane and VOC from the pumps to a control device or process within 180 days if control equipment is on-site
- Pumps that operate less than 90 days/year are exempt
- Lean glycol circulation pumps are exempt
- Natural gas-driven piston pumps are exempt
- Encourage pumps to use RE power sources

Natural Gas Well Sites

- Compressors
 - EPA did not promulgate standards b/c small and low emitting but they are part leak surveys
- Equipment covered by the 2012 rule (well completions, pneumatic controllers and storage tanks)
 - Methane standards for well completions and pneumatic controllers but no additional pollution controls required
 - No new standard for storage tanks

Oil Well Sites

- Completions of hydraulically fractured oil wells (category 1 wells)
 - Non-wildcat and non-delineation wells
 - Addresses natural gas in the “flowback”
 - Capture the natural gas through a process known as “reduced emission completion” or “green completion” - 95% reduction
 - If not feasible to get the captured gas to a pipeline then must use combustion

Oil Well Sites

- Category 2 oil wells (wildcat and delineation wells)
 - Combustion or route flowback to a well completion vessel
- Low-pressure wells
- Wells with a gas-to-oil ratio of less than 300 standard cubic feet of gas per barrel

Oil Well Sites

- Refractured and recompleted wells
 - Are not considered “modified” if green completions are implemented
 - Benefit for industry is that these sources will not trigger state permitting requirements

Oil Well Sites

- Pneumatic pumps (gas-driven diaphragm pumps)
 - Route methane and VOC from the pumps to a control device or process within 180 days if control equipment is on-site
 - Pumps that operate less than 90 days/year are exempt
 - Natural gas-driven piston pumps are exempt
 - Encourage pumps to use RE power sources

Oil Well Sites

- Compressors
 - EPA did not promulgate standards b/c small and low emitting but they are part leak surveys
- Equipment covered by the 2012 rule (pneumatic controllers and storage tanks)
 - Methane standards for pneumatic pumps but no additional pollution controls required
 - No new standard for storage tanks

Production Gathering and Boosting Stations

- Pneumatic pumps –
 - No standard finalized
- Equipment covered by the 2012 rule (compressors, pneumatic controllers and storage tanks)
 - Methane standards for pneumatic controllers and compressors but no additional pollution controls required
 - No new standard for storage tanks

Natural Gas Processing Plants

- Pneumatic pumps (gas-driven diaphragm pumps)
 - Zero emission limit for natural gas-driven diaphragm pumps (use available electric source to power pumps – not gas)
 - Notification of any modifications as part of annual report
 - Natural gas-driven piston pumps are exempt
 - Lean glycol circulation pumps are exempt

Natural Gas Processing Plants

- Equipment covered by the 2012 rule (compressors, pneumatic controllers, equipment leaks and storage tanks)
 - Methane standards for pneumatic controllers and equipment leaks (i.e., fugitives) but no additional pollution controls required
 - No new standard for storage tanks

Gas Transmission Compressor Stations

- Compressors (Centrifugal and Reciprocating)
- Reciprocating
 - Replacement of rod packing systems (every 26,000 hours of operations or 36 months) or route and recycle to process
- Centrifugal
 - Wet seal systems must be captured and vented to an emission control with 95% reduction control or captured the gas and route back to a process
 - Dry seal systems are exempt

Gas Transmission Compressor Stations

- Pneumatic Pumps – Not covered
- Pneumatic Controllers
 - Continuous bleed, gas driven controllers must meet a low gas bleed limit of 6 standard cubic feet of gas per hour at an individual controller
 - Low bleed controllers used at compressor stations (as defined above) are not subject
- Storage tanks covered by the 2012 rule – no new standard

BLM Regulations

- Finalized in October 2016
- Subject to potential revocation pursuant to the Congressional Review Act
 - Prohibits venting, Updated royalties related to flaring, LDAR (wells and compressors), Low-bleed or no-bleed pneumatic controllers, VOC controls (storage vessels), Liquid unloading prohibitions, Capture or flare gas during drilling and completion operations

Control Technology Guidelines

- Finalized October 2016
- For determining the reasonably available control technology (RACT) to apply in certain areas that do not attain the Ozone NAAQS (classified as “moderate”)
- Currently 11 northeastern States
- Storage tanks, pneumatic controllers and pumps, compressors and equipment leaks
- Similar to the new NSPS

Methane ICR for Existing Sources

- EPA issued a draft ICR for the O&G sector
- First step to develop regulations for existing sources under CAA Section 111(d)
- Includes production, gathering, processing, transmission and storage
- Two part survey – one that will go out to all onshore oil and gas production facilities and second more focused representative sample of facilities (concurrent)

Source Determination Rule

- Applies only to the oil and gas sector
- EPA clarifies what pieces of equipment EPA can aggregate for purposes of determining whether major source construction permitting programs apply under the:
 - New Source Review construction permitting program
 - Title V operating permitting program

New Source Determination Regulation

- Final Rule:
 - Equipment under common control is adjacent if they are located near each other (within the same surface site to within $\frac{1}{4}$ mile) AND have a relationship that meets the “common sense notion of a plant”
 - EPA will include “shared equipment necessary to process or store oil or natural gas”
 - Narrower than either option proposed

Questions?



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