


Climate Change Advisory Committee Meeting

February 19, 2013

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NSPS Subpart OOOO

- Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution
- 40 CFR 60.5360 – 60.5430.
- Incorporated by Reference in 25 Pa. Code Chapter 122.
- Promulgated by EPA for the Oil and Gas Sector on August 16, 2012.
- Applicable to new sources that commence construction after August 23, 2011 and existing sources that commence modification or reconstruction after August 23, 2011.
- Regulates emissions of volatile organic compounds (VOC)and SO2 emissions from the Oil and Gas exploration, production, processing, and transportation facilities.

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Greenhouse Gas Emissions

- NSPS Subpart OOOO regulates VOCs and SO_2 emissions.
- Does not directly regulates Methane or CO2 emissions.
- Significant Collateral emission reduction of methane due to VOC emission controls or reduction of CO2.
- EPA estimated about **1.0 million tons of methane** reduction **(19 million tons of CO2e)** on a nation-wide basis.
- EPA considered co-benefit of methane reductions when assessing cost/benefits.

NSPS Subpart OOOO affected facilities

Well Site	NG Gathering/ Compression	NG Processing	NG Transmission /Compression	Underground NG Storage
Completion	Compressors	Compressors	Storage Vessels	Storage Vessels
Storage Vessels	Storage Vessels	Equipment Leaks		
Pneumatic Controllers	Pneumatic Controllers	Sweetening Units		
		Storage Vessels		
		Pneumatic Controllers		

NSPS for Gas Well Completions

NSPS requirements for New Hydraulically Fractured Wells (drilled after August 23, 2011

- **Phase 1:** (before January 1, 2015)
- Either use combustion device such as flare or capture the gas using a process called green completion also known as “reduced emission completions”.

- **Phase2:** (beginning January 1, 2015)
- Use green completions except for new exploratory (“wildcat”) and low-pressure wells.

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Green Completions

- **General Duty** to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery.

- EPA estimates the use of green completions (3-10 day flowback period) reduces 95% emission reduction.

- **Notification:** The owners or operators of these wells must notify the Department by no later than two days before the completion work begins.

- **Reporting:** Each year annual report must be submitted to the Department on the well completions.

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NSPS for New & Modified Compressors

- **Reciprocating Compressors**
  - Rod packing replacement every 3 years/26,000 hours
  - Less monitoring if every 3 years

- **Centrifugal Compressors**
  - 95% VOC Control for Wet Seal Equipped Units
  - Dry Seal Equipped Units not Covered

- **Co-benefit of methane emission reduction**

Pneumatic Controllers

- Automated instrument powered by pressurized natural gas and used to maintaining a process condition such as liquid level, pressure and temperature.
- Continuous bleed natural-gas driven controllers located **between wellhead and natural gas processing plant:**
  - **Natural gas bleed rate of less than 6 scfh**
  - 1 year phase in period (October 15, 2013)
- Continuous bleed natural-gas driven controllers at **natural gas processing plants:**
  - **Zero bleed**
- Not applicable to intermittent bleed and non-gas driven devices

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Equipment Leaks (LDAR)

Equipment leaks at Well Pad or Compressor Stations

- Storage Vessels: No detectable organic emissions (500ppm)

LDAR is not applicable to well heads and gas compressors.

LDAR is applicable to equipment leaks at natural gas processing plants:

- LDAR leak definition 500 ppm
- Does not apply to compressors

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Revised GP-5

- GP-5 is a General Plan Approval and/or General Operating Permit for the sources located at natural gas compression and/or processing facilities.
- GP-5 was issued on Feb. 1, 2013.
- An owner or operator may obtain an authorization to use the GP-5 to construct and operate the source(s).
- The GP-5 is applicable only to sources located at a non-major facility (non-Title V facility).
- The owner or operator must demonstrate to DEP that the source would comply with **all** the terms and conditions of the GP-5.
- The terms and conditions cannot be modified during the authorization.
- GP-5 includes the permitting requirements for existing engines and new engines.

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Wellheads (Proposed Exemption)

- The revised GP-5 is not applicable to wellheads.
- Wellheads and associated equipment are addressed in the proposed Exemption Category #38 as specified in the Permit Exemption list.
- DEP is re-proposing exemption criteria for oil and gas exploration, development, production facilities & associated equipment (Category No.38).
- Comments must be submitted to DEP by March 19, 2013.
- This is only an exemption from permitting and not an exemption from effectively controlling emissions from a well pad.

Leak Detection and Repair Requirements for Unconventional wellheads (Category No. 38)

- Leak detection and repair (LDAR) requirements for the entire wellhead and associated equipment rather than just storage vessels/storage tanks.
- Emissions for safety reasons or prevention of gas migration, from equipment designed to vent such as pneumatic controllers or to protect well integrity are not considered leaks.
- LDAR will ensure that necessary maintenance is performed to minimize fugitive VOC and methane emissions from the entire well pad on a continuing basis.

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Leak Detection and Repair Requirements (Category No. 38)

- The owner or operator shall conduct leak detection within 60 days after the completion of the well using forward looking Infrared (FLIR), a gas leak detector as previously defined or any other DEP-approved monitoring device or process.
- After initial evaluation, leak detection shall be conducted on an annual basis.
- If a leak is detected, the owner or operator of the facility shall quantify and repair the leak to operate with no detectable organic emissions consistent with 40 CFR Part 60 Subpart OOOO, or be less than a concentration of 2.5% methane as expeditiously as practicable, but no later than thirty (30) days after the leak is detected.
- DEP may grant an extension upon request for LDAR deadlines.


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Questions?