

NSPS 0000 & Fracking Air Quality Rule Updates

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Robert Keatley, PE

Senior Engineer/Supervisor
DEP – Division of Air Quality

NSPS 0000

- * **New Source Performance Standard (“NSPS”) 0000 - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution**
- * **Published August 16, 2012**
- * **Amended September 23, 2013**
- * **Compliance Date - Flowback October 15, 2012**
- * **Compliance Date - Pneumatic Controllers October 15, 2013**
- * **Compliance Date- Storage Vessels April 15, 2014 and April 15, 2015**

NSPS 0000 Affected Facilities

- * Natural gas wells (“not oil wells”) – hydraulically fractured
- * Centrifugal Compressor – using wet seals
- * Reciprocating Compressor
- * Pneumatic Controllers - continuous bleed
- * Each Storage Vessel (PTE 6 tpy VOCs) – crude oil, condensate, produced “water”, & intermediates
- * Natural Gas Processing Plants – LDAR
- * Sweetening Plants

Well Completions

- * Applies to each hydraulically fractured/refractured gas well drilled (commenced construction, modification, or reconstruction) after **August 23, 2011**
- * Hydraulically fractured/refractured includes wells fractured w/ Water, Nitrogen, and/or Carbon Dioxide

Well Completions

- * Each well drilled after **8/23/11** and **before 1/1/2015** must:
- * Flowback Operations - reduce VOC emissions with a completion combustion device (typically a flare) on or after **October 15, 2012**
- * **Completion Combustion Devices must be equipped with a “reliable continuous ignition source”**
- * Sources have a general duty to safely maximize resource recovery and minimize releases to the atmosphere

Completion Combustion Devices (aka Flares)



Well Completions

- * Gas Wells drilled **on or after January 1, 2015**
- * **“Green Completions”** - route recovered liquids into storage vessels or re-inject the liquids into the well or another well and route recovered gas into a gas flow line, collection system, re-inject into the well or another well, or use as fuel, **“with no direct release to the atmosphere”**
- * Salable quality gas must be routed to the flow line

Well Completions

- * **Two (2) day Notification** - prior to commencement of each gas well completion beginning **October 15, 2012**
- * Electronically Notify DEP and EPA by using DEPOilandGasSector@wv.gov and r3wellcompletion@epa.gov
- * Instructions and form available on DAQ's website www.dep.wv.gov/daq

Well Completions

- * Must maintain a **daily log** for each gas well completion operation (digital photo alternative)
- * Records of duration of flow into a line; duration of combustion; duration of venting (digital photo alternative)
- * Specific reasons for venting in lieu of capture or combustion
- * Digital photographs w/ Lat. & Lon. of all the equipment used during flowback with specific location (alternative)

Well Completions

- * **Annual report - for each gas well and equipment** the report must provide a list of all well completions and any deviations where well completion operations or equipment (storage vessels, etc) were not performed in compliance
- * Must be certified by the responsible official
- * Must submit initial report within 90 days may arrange a common schedule for annual reporting

Storage Vessels

- * **Group 1 Storage Vessels** - installed **after 8/23/11** and on or before **4/12/2013** with potential VOC emissions of **six (6) tons/year or greater (each vessel)** determined by **10/15/2013** and that are located at the well site more than 180 consecutive days
- * **Group 2 Storage Vessels** – installed after **4/12/2013** with potential VOC emissions of **six (6) tons/year or greater (each vessel)** determined by **April 15, 2014 or within 30 days of startup** (whichever is later) and that are located at the well site more than 180 consecutive days
- * Vapor Recovery Units (VRUs) can be used to limit PTE provided they comply with the cover and closed vent system design requirements of NSPS OOOO “vented to the process”
- * DAQ’s permitting threshold is **6 lbs VOC/hr (144 lbs/day)** for the entire well site **“Potential Emissions Not Actual Emissions”**
- * **Exemption less than 4 tpy VOC “Actuals” without controls (12 consecutive months, then monthly) – VRUs not considered control devices for NSPS OOOO**
- * **VRUs “do not” count toward reduction in PTE for Rule 13 permitting**

Storage Vessels Cont'd

- * Group 1 & 2 Storage Vessels shall reduce VOC emissions by 95%
- * Group 2 must achieve emission reductions by **April 15, 2014**
- * Group 1 must achieve emission reductions by **April 15, 2015**
- * May install “practically enforceable” controls to reduce PTE
- * **“Once In Always In”, but may remove controls if actuals below 4 tpy VOC**

Storage Vessels Cont'd

“Non-Manufacture” Tested Controls

- * **Enclosed Combustion Devices** (aka flares) must operate with no visible emissions for periods not to exceed a total of 1 minute during any 15 minute period – Monthly Method 22 VE checks for a minimum of 15 minutes
- * Enclosed Combustion Devices must have continuous burning pilot flame installed and operated and maintain the device to be leak free
- * Annual visual/smell LDAR of closed vent systems
- * Must operate control device at all times vapors are vented

Storage Vessels Cont'd

“Manufacturer” Tested Controls

- * Combustion Controls “Enclosed Combustors” must be operated with no visible emissions (VE), except a total of 2 minutes during any hour
- * Method 22 VE must be performed each calendar quarter for 1 hour
- * Continuously monitor the inlet gas flow rate to demonstrate the flow is equal to or less than the max. specified by manufacturer
- * Continuously monitor for pilot flame at all times

Storage Vessels Cont'd

Performance Testing Controls

- * Control Device “exempted” from performance testing, if performance test conducted by manufacturer in accordance with NSPS 0000
- * Boiler or process heater vent stream introduced with the primary fuel is exempt from performance testing
- * Performance testing required for non-manufacturer tested controls to demonstrate compliance with 95% reduction within 180 days





Storage Vessel –
Combustor Control Device
“Thermal Vapor
Incinerator”

(aka Enclosed Flare)



07/30/2012

Pneumatic Controllers

- * Pneumatic controllers - installed after 8/23/2011 (extraction) & 10/15/2013 (wellhead to extraction) – each pneumatic controller must be tagged with month & year of installation
- * Reduce VOC emissions at wells to extraction plants (6 scf/hr or less bleed rate) and at extraction plants (zero bleed rate) by using a low bleed or no bleed design by **October 15, 2013**
- * **Exemptions** for less than or equal to 6 scfh continuous bleed and based on functional needs, including but not limited to response time, safety and positive actuation



PNEUMATIC
CONTROLLER



ANTIFREEZ

Compressor Engines after 8/23/2011

- * Reciprocating compressors before extraction - reduce emissions by the replacement of rod packing (**every 26,000 hours of operation or 3 years**) *well site engines are exempt
- * Centrifugal compressors (Wet Seal) - required to install air pollution control equipment to reduce emissions by 95% and to monitor this equipment *well site engines are exempt



Other Big Changes

- * **MACT Subpart HH – Dehydration Unit Updates**
 - ***Annually** update Wet Gas Analysis and GLYCalc determination ; if the station's actual emissions are greater than 50% of major source thresholds (storage vessels included, not engines)
 - *Updated samples and GLYCalc determinations by **October 12, 2012** or within one year prior
 - *Must use the **maximum** designed glycol pump recirculation rate when determining major source status
 - *Must include storage vessels in determining major source status of HAPs (excludes surge control vessels and knockout vessels)

Other Big Changes

- * **NSPS KKK Replaced with NSPS OOOO**
- * LDAR requirements at Extraction Plants that commenced construction, modification, or reconstruction after August 23, 2011
- * Requires LDAR in accordance with NSPS VVa, which has lower leak definitions

MACT ZZZZ RICE Engines Rule Updated

- * Compliance dates have changed
- * Non-road Engines are not subject to this rule
- * New exemption for existing area source engines defined as “Remote” stationary RICE
- * Remote RICE exempt from emission testing requirements
- * Must evaluate the status of their “Remote” stationary RICE every 12 months
- * Non-remote 4SLB & 4SRB engines > 500 HP must have a catalyst installed by Oct. 19, 2013 (unless granted an extension)

Questions?

Robert Keatley, PE
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Phone: 304-926-0499 ext. 1695
E-mail: Robert.L.Keatley@wv.gov