

Alphabet Soup: Quad 0000

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The Basics

- ▶ NSPS 0000 - 0000c
- ▶ Issues
 - ▶ No rule language
 - ▶ Effective Date for New, Modified and Reconstructed for Proposed Rules
 - ▶ Effective Date for New, Modified and Reconstructed for Supplemental
 - ▶ Timing for Emissions Guideline Implementation
 - ▶ EPA allocates no cost until 2026
 - ▶ Anticipate phase in for certain sources

Affected/Designated Facility

- ▶ Storage Vessels/Batteries
- ▶ Fugitives (well sites, centralized production batteries, compressor stations and gas plants)
- ▶ Pneumatic Controllers
- ▶ Pumps
- ▶ Well Unloading
- ▶ Pigging and Blowdowns (potential)
- ▶ Truck Loadout (potential)
- ▶ Associated gas venting
- ▶ Compressors
- ▶ Control Devices
- ▶ Others (sweetening units, abandoned wells)

Uh-oh!! Fugitive Emissions

- ▶ Well sites with baseline emissions methane 3 tpy or greater
- ▶ **Baseline emission threshold = de facto site specific methane inventory**
- ▶ Baseline emissions may include malfunctions
- ▶ **Emissions from CVS require repair as soon as practicable and may be a violation of no detectable emissions standard**
- ▶ **Control device malfunctions or operational upsets potential violations**
- ▶ Repair or root cause analysis
- ▶ EPA proposed OGI protocol (Appendix K)
- ▶ Quarterly OGI or EPA Method 21 (well production > 3 tpy methane/compressor stations)
 - ▶ Alternate: 3 to 8 tpy methane semi-annual for well sites
- ▶ Tiered repair deadlines based on severity of the leaks
- ▶ Alternative screening technologies
 - ▶ Bi-monthly screening surveys/annual OG/Method 21
- ▶ Mechanisms for third parties to identify emissions events
- ▶ Expanded fugitive emissions component definition
 - ▶ Pneumatic controllers
 - ▶ Emissions from control devices

Oh No! Storage Tank Batteries

- ▶ Storage tank battery
 - ▶ Vapor or liquid manifolded
 - ▶ Adjacent
- ▶ 6 ton per year battery VOC threshold
 - ▶ 20 ton per year methane threshold
- ▶ Modification
 - ▶ Single vessel or battery modified when physical or operational change are made to the storage vessel or tank battery that results in increase in potential methane or VOC emissions.
 - ▶ Includes addition of storage vessels, increase in storage capacity, or vessel that receive additional oil, condensate, produced water throughput (refracturing, adding a well)
 - ▶ Unclear what compare emissions increase against (especially given move from tanks to battery)
- ▶ Legally and practically enforceable
 - ▶ Quantitative production limit and quantitative operational limits
 - ▶ Averaging time for production equal to or less than 30 days
 - ▶ Parametric limits
 - ▶ Monitoring of parametric limits to demonstrate continuous compliance
 - ▶ Recordkeeping and reporting

Wait a Minute!

Pneumatic Controllers

- ▶ Each pneumatic controller is affected facility
- ▶ All new, modified, reconstructed controllers have zero emissions
- ▶ Includes self-contained, instrument air, electric
- ▶ Maintain documentation not an affected facility
- ▶ No exclusions for allowing natural gas driven pneumatics for safety or process or other considerations
- ▶ Proposed existing source guidelines to require zero emitting pneumatic controllers

Say What?? Well Liquids Unloading

- ▶ Requires liquids unloading with zero methane or VOC emissions unless not technically feasible or safe
- ▶ Unclear whether limited to gas wells
- ▶ In such case, use BMPs
- ▶ Option 1: affected facility defined as every well that undergoes liquids unloading (including non-emitting)
 - ▶ Maintain records of number of unloads (even if do not emit)
- ▶ Option 2: Affected facility is every well that undergoes unloading using a method that is not designed to totally eliminate venting
- ▶ Suggests that non-venting well unloading is common practice
- ▶ Each well liquids unloading event is a modification

Oh Heck!

Control Device Performance

- ▶ Control Devices
 - ▶ Control efficiency 98%
 - ▶ Additional flare performance measures
 - ▶ Monitoring of flow, pilot flames, visible emissions
 - ▶ OGI continuous flame imaging systems

Well There You Have It!

Compressors and Pumps

▶ Reciprocating Compressors:

- ▶ Monitor rod packing emissions annually using flow measurement; replace rod packing when monitoring indicates a flow rate for any individual cylinder exceeds 2 scfm
 - ▶ or route to process via closed vent system under negative pressure
- ▶ Applies to centralized tank batteries

▶ Pumps

- ▶ Includes natural gas driven piston pumps in addition to diaphragm pumps

Okay I Quit!

The Rest

▶ Associated Gas Flaring

- ▶ Requires routing associated gas to a sales line
- ▶ Affected facility - any oil well that produces associated gas
- ▶ Flare requirements for 60.18

▶ Pigging

- ▶ Controls, elimination of gas venting, reduction of pigging frequency
- ▶ Liquids management techniques

▶ Truck Loadout

Next Steps

- ▶ Comments
- ▶ State Rules Existing Sources/Relationship to Existing and Pending Rules
 - ▶ Existing state rules
 - ▶ Pending state rules
 - ▶ Options for your state
 - ▶ Timing
- ▶ QUESTIONS