

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the page, framing the central white area where the text is placed.

# 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