

Proposed OOOOb & EG OOOOc OOOa

2022

LDAR & Equipment Requirements: Updates



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❖ June 3rd 2016 – OOOO_a

- Some legal entanglements (Stay).. Stay evacuated
- Very active conversations on the next changes almost immediately

❖ August 13, 2020 – Previous administration made some changes

❖ Policy Amendments

- Rescind methane-specific amendments
- Remove NG transmission and storage segment from source category

❖ Technical Amendments

- Low production wells are exempted – 15 BOE – Previously, no low production criteria
- Compressor stations semiannual OGI – previous OOOO_a was qly 2 months apart

- ❖ June 30, 2021 CRA – Current administration took advantage of a congressional process to rescind the Policy amendments but not technical amendments.
- ❖ Policy Amendments - Rescinded
 - Rescind methane-specific amendments
 - Remove NG transmission and storage segment from source category
- ❖ Technical Amendments – Not Rescinded
 - Gave guidance to follow the 2016 NSPS because they were going to propose another (new) rule to address the inconsistencies and additional control

0000_{a, b & c}: LDAR - Where We Are Going As it Relates to Upcoming Changes

2022

- ❖ Nov 2, 2021... it finally came out
- ❖ Summary of proposed action and clarifications for 0000_a
 - It is Codified
- ❖ Language summary of what they think will be proposed 0000_b
- ❖ Language summary of what they think will be proposed EG 0000_c –
Emission guidelines for states
 - Asking for feedback on many of the proposals

❖ Frequency for OGI Inspections

- Repeal exemption for Low Production well sites (15 boe) (Back to 2016)
- Repeal the change from quarterly to semiannual of compressor stations (Back to 2016)

❖ Minor Technical Amendments (Mostly related to adding methane)

❖ [Presenter “AMEL/AMT” comment](#) – 2020 Technical Rule - Philosophy:

We are “OPEN TO NEW STUFF”. ie. Bring in new, better, more efficient technologies But you need to have data. No begging allowed!

❖ [Presenter Comment:](#) Appendix K – **IS THE BIG DEAL!!!!!!**

❖ Fugitive Emissions from Well Sites and Compressor Stations

❖ Storage Vessels

❖ Pneumatic Controllers

❖ Well Liquids Unloading Operations

❖ Reciprocating Compressors

❖ Centrifugal Compressors

❖ Pneumatic Pumps

❖ Equipment Leaks @ NGPP

❖ Well Completions

❖ Oil Wells with Associated Gas

❖ Sweetening Units

❖ Centralized Production Facilities

❖ Recordkeeping & Reporting

“site-level baseline CH₄ emissions for well sites Not 15 BOE/day”

- ❖ Well sites w/ ≥ 3 tpy: Qtly OGI or M21 (Low Production well definition NOW)
 - Well Sites w/ ≥ 3 tpy & < 8 tpy: Semiannual OGI or M21 (Co-Proposed)
 - Well Sites w/ > 8 tpy: Quarterly OGI or M21 (Co-Proposed)
- ❖ Compressor Stations: Quarterly OGI or M21
- ❖ Alaska North Slope: Annual OGI or M21 w/separate initial time-table
- ❖ Alternative Screening Approach: Bimonthly advanced measurement technique (AMT) and Annual OGI or M21

- ❖ Proposed as “any component that has the potential to emit fugitive emissions of methane and VOC at a well site or compressor station”, including valves, connectors, PRDs, open-ended lines, flanges, all covers and closed vent systems, all thief hatches or other openings on a controlled storage vessel, compressors, instruments, meters, natural gas-driven pneumatic controllers or natural gas-driven pumps.
- ❖ However, natural gas discharged from natural gas-driven pneumatic controllers or natural gas-driven pumps are not considered fugitive emissions if the device is operating properly and in accordance with manufacturers specifications.
- ❖ Control devices, including flares, with emissions resulting from the device operating in a manner that is not in full compliance with any Federal rule, State rule, or permit, are also considered fugitive emissions components.

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❖ OOOOb

- Monitoring frequency based on Site-level methane baseline emissions as opposed to production levels
 - ✓ Quarterly or Semiannual based emissions (seeking comments)
- OGI according to **Appendix K**. Initial inspection 90 days of startup
- Calculation: Combination of GHG & '95 protocol (Oil & Gas Leak/No Leak Factors)
 - ✓ owners or operators would calculate the site-level baseline methane emissions using a combination of population based emission factors and storage vessel emissions.
 - ✓ Update calculation when equipment added

TABLE 13. PROPOSED WELL SITE MONITORING FREQUENCIES BASED ON SITE-LEVEL BASELINE METHANE EMISSIONS

Site-level Baseline Methane Emissions Threshold	Proposed OGI Monitoring Frequency	Co-proposed OGI Monitoring Frequency
>0 and <3 tpy	No routine monitoring required	No routine monitoring required
≥3 and <8 tpy	Quarterly	Semiannual
≥8 tpy	Quarterly	Quarterly

Need to demonstrate actual emissions accounted for, so initial survey or AMEL required

❖ EG OOOOc

- ✓ “Presumptive Standard” same as BSER OOOOb

❖ OOOO_b

- Quarterly OGI
- OGI according to **Appendix K**. Initial inspection 90 days of startup, 2 months apart
- Seeking comments on subcategorizing based on throughput (ie. Monthly, quarterly, semiannually)

❖ EG OOOO_c

- “Presumptive Standard” same as BSER for OOOO_b

- ❖ OOOO_b
- ❖ Annual OGI according to **Appendix K**, 9 to 13 months apart.
- ❖ Initial inspection: startup between September and March within 6 months of startup or June 30th whichever is later.
- ❖ Initial Inspection: startup between April and August within 90 days of startup
- ❖ EG OOOO_c
 - “Presumptive Standard” same as BSER for OOOO_b

Alternative Screening Using Advanced Measurement Techniques

2022

OOOO_b & EG OOOO_c

- ❖ Bimonthly screening for large emission events using advanced measurement techniques (AMT)
- ❖ At least annual **Appendix K** OGI
- ❖ Use a Methane detection technology that achieves a minimum detection threshold of 10 kg/hr
- ❖ Follow up OGI survey of site within 14 days of AMT (same repair criteria as ground based OGI)
 - ❖ Can not use Method 21
- ❖ Follow up OGI survey can qualify for annual survey requirement
- ❖ Contains procedure for daily verification under field conditions (and other QA/QC requirements).
- ❖ **EPA SEEKING A LOT COMMENTS ON THIS** We will see what we get????
- ❖ Presenter Comment: Over the years industry has express concern or “complained” that EPA rules are written such that innovation is suppressed. Now, If you have some technology that is “better” ... generate the data to prove it.... YOU HAVE A PATH!!!!!!

❖ OOOOa - Current

- NSPS in OOOOa is to replace the “rod packing” on or before 26,000 hours of operation or 36 calendar months, or to route emissions from the rod packing to a process or control through a closed vent system under negative pressure. A reciprocating compressor located at a well site, is not an affected facility (ie. Exempt)

❖ OOOOb

- A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under the proposed rule for the NSPS OOOOb BUT, a Central Production facility is. ie. In the Oil production or Well site world Compressors at a Central Production facility are APPLICABLE – [SEE DEFINITION ON A LATER SLIDE](#)
- BSER is to replace the rod packing when, based on annual flow rate measurements, that if annual flow rate monitoring indicates a flow rate for any individual cylinder as exceeding 2 scfm, an owner or operator would be required to replace the rod packing. (Centralized production facilities are not exempt). Annual Hi Flow measurement

❖ EG OOOOc

- “Presumptive Standard” same as BSER for OOOOb

- ❖ CENTRALIZED PRODUCTION FACILITY: is “one or more permanent storage tanks and all equipment at a single stationary source used to gather, for the purpose of sale or processing to sell, crude oil, condensate, produced water, or intermediate hydrocarbon liquid from one or more offsite natural gas or oil production wells.”
- ❖ Definition Clarification for fugitives as well, but mainly for
 - 40 CFR 60 Subpart K, Ka or Kb
 - Standards that would apply to reciprocating and centrifugal compressors at these facilities

- ❖ Basically, Returned OOOO_a back to 2016 version, some changes.
- ❖ Appendix K (Biggest impact for Contractor and In-house Operators)
- ❖ Well site emissions calculated: Site-level methane baseline emissions
 - OGI frequency will be based on this calc
- ❖ Well Sites Semiannually to QTRLY & Compressor Stations still QTRLY
- ❖ Language to allow advanced measurement techniques (AMT)
- ❖ Reciprocating Compressors Rod packing vents: Annual Flow measurement
 - Understand definition of Central Production Facility
- ❖ NGPP OGI (Appendix K) now BESR, M21 allowed

Thank you!

Questions??????



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