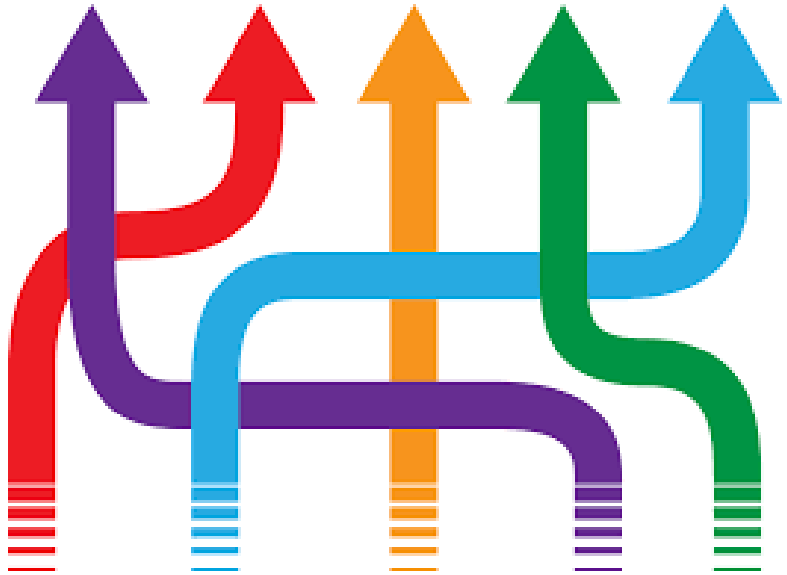
NTG ENVIRONMENTAL

Overview of Proposed New Source Performance Standards (NSPS) 40 Code of Federal Regulations (CFR) Part 60, Subparts OOOOa, OOOOb, and OOOOc

How did we get here?

- **2009** – EPA ruled greenhouse gases (CO_2, CH_4) could be regulated as pollutants under CAA
- **2010** – Greenhouse gas reporting rule for oil and gas industry (25,000 mtCO2e)
- **2012** – Subpart OOOO
- **2016** – Subpart OOOOa
- **2021** – Subpart OOOOa revision and OOOOb/c proposed
- **2022** – Inflation Reduction Act (IRA)
- **2022** – Subpart OOOOa/b/c supplemental proposed rule *
- **2023** – Subpart OOOOa/b/c final rule released in December
- **2024** – Subpart W revision expected to be finalized in August
- **2025** – Methane tax applied to RY2024 emissions



Rules are driven by the 2013 Climate Action Plan to reduce CO_2 and CH_4 emissions

Hot Topics

Greenhouse Gas	EPA calculating methane, NOx and N2O emissions Reportable if emissions exceed 25,000mtCO2e
Inflation Reduction Act	Waste Emissions Charge (WEC) on methane emissions >.2% of methane sales. First year will be 2025 for emissions during 2024.
NSPS OOOOa	EPA begins to control methane and VOC emissions
NSPS OOOOb	EPA efforts to place further controls on methane and VOC emissions Adding affected facilities and more stringent requirements
NSPS OOOOc	Under the State Implementation Plan (SIP) guided by OOOOc, all existing sites will be added that were previously not subject to OOOO, OOOOa or OOOOb.

New Source Performance Standards (NSPS) Subparts Applicability Dates

2012

NSPS OOOO

EPA sets standards for newly constructed, modified, or reconstructed sources from 8/23/2011 – 9/17/2015.

2016

NSPS OOOOa

EPA sets standards for newly constructed, modified, or reconstructed sources from 9/18/2015 – 12/5/2022.

2024

NSPS OOOOb

EPA sets standards for newly constructed, modified, or reconstructed sources on or after 12/6/2022.

2028/29*

NSPS OOOOc

After SIPs are finalized, all existing facilities will follow Emissions Guidelines under OOOOc.

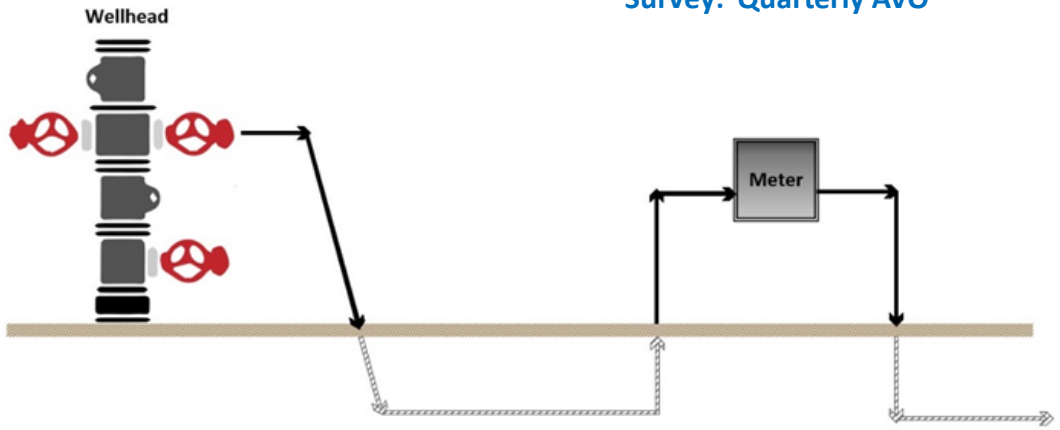
Subpart OOOOa, OOOOb, OOOOc Comparison

Affected Facility	OOOOa	OOOOb	OOOOc
Hydraulically Fractured Wells	Newly constructed, modified or reconstructed between 9/18/2015 through 12/5/2022	Newly constructed, modified or reconstructed on or after 12/6/2022	Include all existing prior to 12/6/2022.
Fugitives: LDAR Frequency	LDAR: Semi-annual Repair within 30 days; Re-inspect within 30 days of fix Initial survey w/in 60 days from start of production	Site Types introduced LDAR: Quarterly Added yard piping, idle, unplugged & abandoned wells Repair within 30 days; Re-inspect within 30 days of fix Initial survey w/in 90 days from start of production	Site Types introduced LDAR: Quarterly Idle, unplugged and abandoned wells included Repair within 30 days; Re-inspect within 30 days of fix Initial survey w/in 90 days from start of production
AVO Inspections	Monthly only for Storage Vessels w/ >4tpy VOC	Monthly / Bimonthly / Quarterly depending on site type	Monthly / Bimonthly / Quarterly depending on site type
Super Emitters	Not a part of OOOOa rule, but OOOOa sites can become OOOOb if a Super Emitter was detected (and all existing sites).	3rd Parties can use remote technology to notify operators a super emitter was detected. 100kg/hour methane. 10 days to fix. Posted to public website.	3rd Parties can use remote technology to notify operators a super emitter was detected. 100kg/hour methane. 10 days to fix. Posted to public website.
Storage Vessels	VOC emissions from each storage vessel must be <6tpy or control device required	The collection of storage vessels (tanks) must be <6tpy VOC and <20tpy Methane. Modification or reconstruction of older sites makes the tanks an affected facility.	The collection of storage vessels (tanks) must be <6tpy VOC and <20tpy Methane. Modification or reconstruction of older sites makes the tanks an affected facility.
Compressors	Compressors located at a well site are not affected facilities; regularly changing the rod-packing.	Compressor(s) not at a well site. Reciprocating: flow rate <2scfm Centrifugal: reduce methane and VOC by 95% through control device or process; flow rate <3scfm	Compressor(s) not at a well site. Reciprocating: flow rate <2scfm Centrifugal: reduce methane and VOC by 95% through control device or process; flow rate <3scfm
Pneumatic Controllers	Individual pneumatic controller is an affected facility; no high-bleed pneumatics.	Collection of pneumatics must be zero emissions. No natural gas driven pneumatics or routed thru process.	Collection of pneumatics must be zero emissions. No natural gas drive pneumatics or routed thru process
Pneumatic Pumps	Individual pneumatic pump is an affected facility; must tie pump into a control device, if available.	Must use non-natural gas driven pumps at all sites	Must use non-natural gas driven pumps at all sites
Flares	Must achieve 95% reduction VOC and methane.	Must achieve 95% reduction VOC and methane and have pilot lit at all times. Associated gas must be routed to a sales line; no routine flaring.	Must achieve 95% reduction VOC and methane and have pilot lit at all times. Associated gas must be routed to a sales line; no routine flaring.

Attachment A – Well Site Types

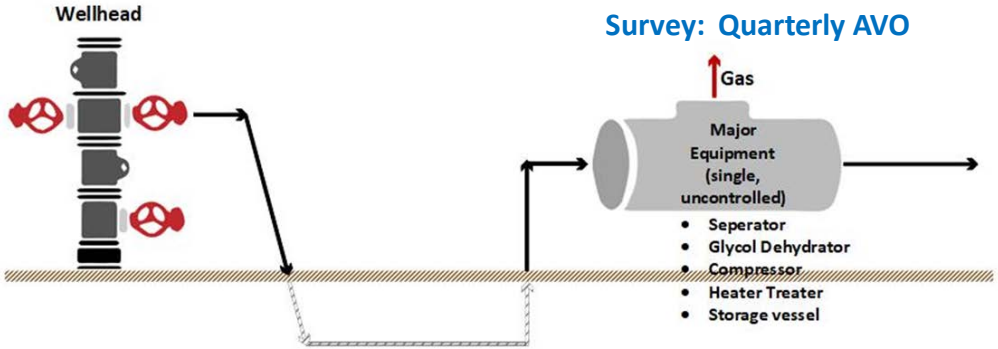
Example of: Single Wellhead Only Well Site

Survey: Quarterly AVO



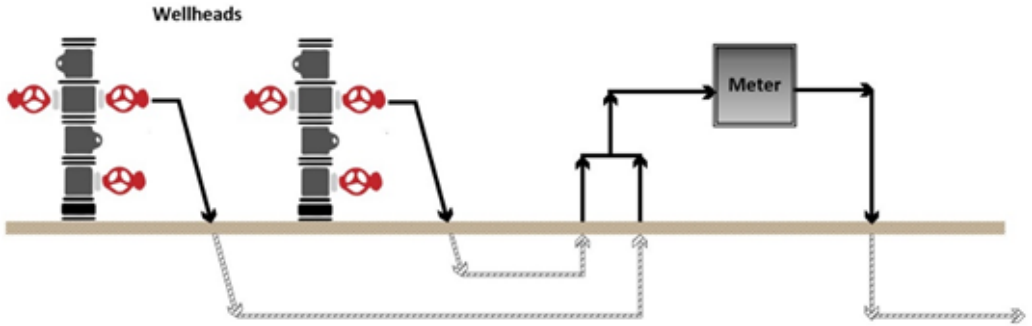
Example of: Small Well Site

Survey: Quarterly AVO



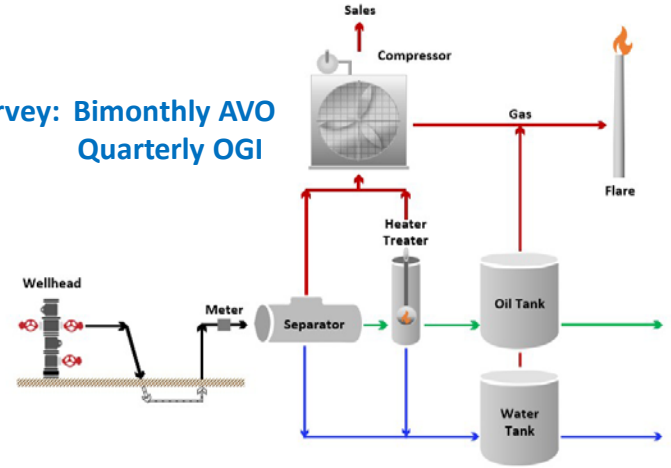
Example of: Wellhead Only Well Site with Two or More Wellheads

Survey: Quarterly AVO
Semiannual OGI



Example of: Well Site and Centralized Production Facility with Major Production and Processing Equipment

Survey: Bimonthly AVO
Quarterly OGI



Super Emitter Response Program

The EPA established a **NEW** Super-Emitter Response Program to quickly identify large leaks known as “super emitters” for mitigation.

The EPA defines a super-emitting event as emissions **≥ 100 kilograms (220.5 pounds) of methane per hour**.

Approved third parties using approved remote detection technologies will notify the EPA when a super emitter is detected.

HOW OPERATORS WILL RESPOND:

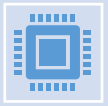
Operator must conduct a root-cause analysis within **five days of receiving the notification to determine the cause of the event the notification identified.**

If the event is caused by a malfunction or abnormal operation, owners and operators have **10 days to take corrective action.**

If fully mitigating a super-emitter would take longer than 10 days, owners and operators would have to **develop a corrective action plan, including a schedule for addressing the event, and submit it to the EPA or the state agency.**

- Super emitter events will be published on a public website for easy access.
- The owners’ and operators’ response, along with any corrective actions taken, if needed, will also be available online.

Pneumatic Controller - Subpart OOOOb Definition



A pneumatic controller affected facility is the collection of natural gas-driven controllers at a site.

The EPA is defining zero-emissions controllers as those that are not driven by natural gas, whose natural gas driven emissions are collected and routed to a process, and/or are self-contained natural gas pneumatic controllers

Modification: Occurs if one or more pneumatic controllers is added to the site, such addition constitutes a modification and the collection of pneumatic controllers at the site becomes a pneumatic controller affected facility. This is because the addition of a controller represents a physical change to the site and would result in an increase in emissions from the collection of controllers.

Reconstruction: Occurs when the fixed capital cost of the new pneumatic controllers exceeds 50 percent of the fixed capital cost that would be required to replace all the pneumatic controllers at the site. The ‘‘fixed capital cost of the new pneumatic controllers’’ includes the fixed capital cost of all pneumatic controllers which are or will be replaced pursuant to all continuous programs of component replacement which *are commenced within a 1-year rolling period.*

OOOOc: State Implementation Plans

- OOOOc will bring sites constructed or modified before 12/6/2022 into affected facilities and require those sites follow the SIP approved by the EPA.

- The EPA will require **state plans be submitted to the EPA for review within 18 months after the final OOOOc Emissions Guidelines are published in the Federal Register.**

- States would be required to impose a compliance deadline on existing sources that is **no later than 36 months after the state plan is due to the EPA**.

- Provides criteria for determining whether existing state programs can be considered equivalent to the presumptive OOOOc standards (ie, New Mexico).

OOOOb/c Impacts

- Replace natural gas driven pneumatics with zero-emissions alternatives
- Flares monitored for the presence of a flame when gas is present
- LDAR survey frequency increase requires additional manpower or new technology
- Super Emitters influence reputation
- Equipment availability limitations
- Increase of recordkeeping requires additional personnel and systems