

Demystifying NSPS 0000b/c and Methane Reduction Strategies

OOGA 2024 Regional Meeting

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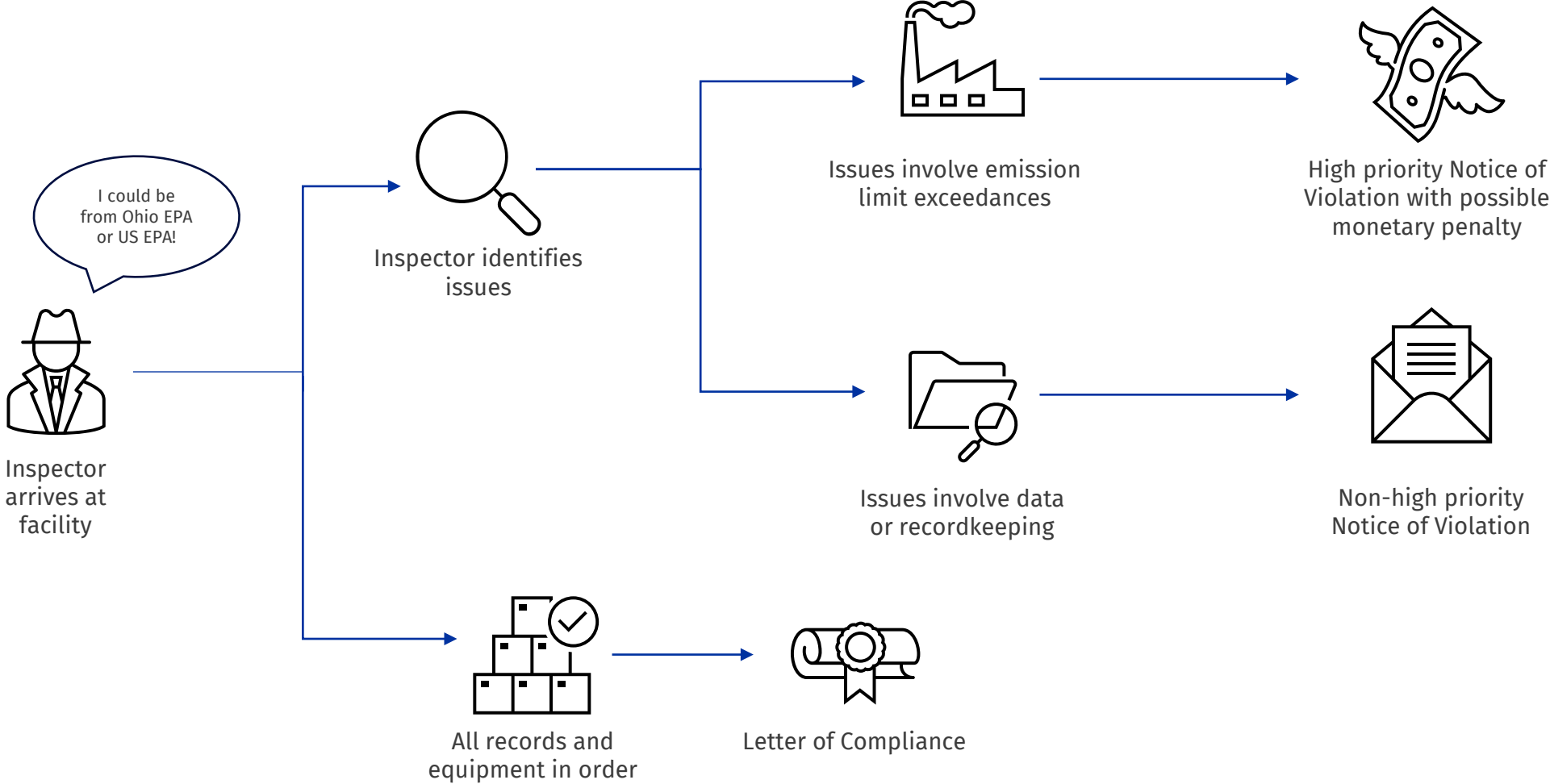




Agenda

- NSPS 0000b/c Summary
- State-specific Considerations
- Overlap with IRA and Subpart W

The Big Question: Regulatory Consequences



Flowchart represents possible scenarios. Inspections may not always strictly adhere to this process.

Brief Introduction to NSPS

NSPS 0000b is a New Source Performance Standard – What does that mean anyway?

Clean Air Act – Section 111

- Authorized EPA to develop technology-based standards (from CAA 1970 amendments) which apply to specific categories of stationary sources – commonly referred to as New Source Performance Standards (NSPS)
- NSPS apply to new, modified, or reconstructed facilities – over 90 NSPS

40 CFR § 60.1 - Applicability

- Title 40 → Chapter 1 → Subchapter C → Part 60
- The provisions in 40 CFR 60 (NSPS) apply to the owner or operator, of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

0000/0000a/0000b/0000c

- ▶ NSPS 0000 was originally proposed on 8/23/2011 and finalized on 8/16/2012
- ▶ NSPS 0000a was originally proposed on 9/18/2015 and finalized on 6/3/2016
- ▶ NSPS 0000b/c was originally proposed on 11/15/2021 and finalized in **February ???**
- ▶ There have now been **nine revisions** to these various rules since they were originally implemented
- ▶ Applicability is based on:
 - Construction, modification, or reconstruction date
 - Type of affected facility
 - Location within the affected source category

Applicable Dates for Subparts

Subpart	Source Type	Applicable Dates
40 CFR 60 Subpart 0000	New, modified, or reconstructed sources	After August 23, 2011 , and on or before September 18, 2015
40 CFR 60 Subpart 0000a	New, modified, or reconstructed sources	After September 18, 2015 , and on or before December 6, 2022
40 CFR 60 Subpart 0000b	New, modified, or reconstructed sources	After December 6, 2022
40 CFR 60 Subpart 0000c	Existing sources	On or before December 6, 2022

Applicability dates are the same for all affected facilities, and these dates are different than the effective (initial compliance) dates. Effective dates can also vary for each affected facility.

b vs. c – What's the difference?

NSPS 0000b

- Strengthen the requirements under CAA Section 111(b) for methane and VOC emissions that commenced construction, modification, or reconstruction after December 6, 2022.
- Include standards for emission sources previously not regulated for this source category.

EG 0000c

- Specific revisions under CAA Section 111(d) to establish the first nationwide emission guideline (EG) for states to limit methane pollution from existing designated facilities.
- Designed to inform states in the development, submittal, and implementation of state plans required to establish standards of performance for GHGs.

What's a BSER?

Section 111(a) of the Clean Air Act requires that standards of performance under CAA Section 111(b) and presumptive standards under CAA Section 111(d) reflect:

*“the degree of emission limitation achievable through the application of the **best system of emission reduction (BSER)** which (**taking into account the cost** of achieving such reduction and any non-air quality health and environmental impacts and energy requirements) the Administrator determines has been adequately demonstrated.”*

So what does that mean for the NSPS?

- EPA evaluated new data made available and information from public comments to evaluate whether revisions to the original BSER (11/2021) should be considered.
- EPA considered a control measure's cost-effectiveness under a “**single pollutant cost-effectiveness**”, and “**multipollutant cost-effectiveness**” approach (i.e., VOC and Methane).
- EPA also compared:
 - The **capital costs incurred through compliance** with the standards against the industry's current level of capital expenditure
 - The **annualized costs** against the industry's estimated annual revenues.
- EPA arrived at the following cost-effectiveness values:

\$5,540/ton of VOC

\$2,048/ton of Methane

Requirements of NSPS 0000b/c

Key Items to Understand...

Affected Facility



Definition

Requirement



Monitoring

Recordkeeping

Reporting

Exemptions

NSPS 0000b Affected Facility	Well Sites	Gathering & Boosting	Gas Processing	Transmission & Storage
Wells (Completions/Gas Well Liquids Unloading/Assoc. Gas)	X			
Centrifugal Compressors	CPFs	X	X	X
Reciprocating Compressors	CPFs	X	X	X
NG-Driven Process Controller	X	X	X	X
NG-Driven Pumps	X	X	X	X
Storage Vessels	X	X	X	X
Fugitive Emissions	X	X	X	X
Sweetening Units	X	X	X	
All sources are covered by Super Emitter Program				

EG 0000c Affected Facility	Well Sites	Gathering & Boosting	Gas Processing	Transmission & Storage
Wells (Gas Well Liquids Unloading/Assoc. Gas)	X			
Centrifugal Compressors	CPFs	X	X	X
Reciprocating Compressors	CPFs	X	X	X
NG-Driven Process Controller	X	X	X	X
NG-Driven Pumps	X	X	X	X
Storage Vessels	X	X	X	X
Fugitive Emissions	X	X	X	X
Sweetening Units				
All sources are covered by Super Emitter Program				

Fugitives – Well Sites (Single Wellhead and Small Sites)

Requirement: AVO Inspections (thief hatches and dump valves explicitly called out)

Frequency: Quarterly

Notes: Small well sites are single wellhead well sites that do not contain more than one piece of major production/processing equipment and do not have any controlled storage vessels, control devices, process controller affected facilities, or pump affected facilities.

Fugitives – Multi-Wellhead Only Wellsites

Requirement: AVO Inspections and OGI Monitoring

Frequency: Quarterly for AVO and Semiannual for OGI

Notes: Sites cannot contain any major production or processing equipment. Semiannual surveys must be at least 4 months apart but no more than 7 months apart.

Fugitives – Well Sites and CPFs

Requirement: AVO Inspections (thief hatches and dump valves explicitly called out) and OGI Monitoring

Frequency: Bimonthly for AVO and Quarterly for OGI

Notes: Category includes well sites and centralized production facilities that have: (1) One or more controlled storage vessels, (2) One or more control devices, (3) One or more natural gas-driven process controllers or pumps, or (4) Two or more other major production and processing equipment. What about treater stations?

Fugitives – Compressor Stations

Requirement: AVO Inspections and OGI Monitoring

Frequency: Monthly for AVO and Quarterly for OGI

Notes: Quarterly monitoring should occur at least 60 days apart. Quarterly monitoring may be waived when monthly average temperatures are below 0 degrees °F for two of three consecutive calendar months of a quarterly monitoring period.

Modification for Fugitives

- ▶ Well Site
 - New well is drilled
 - Existing well is hydraulically fractured/refractured
- ▶ Centralized Production Facility
 - Same as well site
 - Well feeding CPF is modified
 - Well feeding CPF becomes a wellhead-only site
- ▶ Compressor Station
 - Additional compressor installed
 - Overall compressor horsepower increases

Alternative Monitoring Option

- ▶ For well sites, CPFs, compressor stations, covers, and CVS, operators may choose to demonstrate compliance using periodic screening for any approved Alternative Test Method.
- ▶ Frequency of monitoring is dependent on the minimum aggregate detection threshold of the screening method.
- ▶ Must develop monitoring plan.

Storage Vessels

Affected Facility: A Single Storage Vessel or Tank Battery with...

- 0000b: PTE \geq 6 tpy VOC or PTE \geq 20 tpy methane
- 0000c: PTE \geq 20 tpy methane

Requirement: Capture and reduce VOC and methane emissions by 95%

Note 1: If uncontrolled actual emissions are less than 4 tpy VOC and 14 tpy methane as determined monthly for 12 consecutive months, controls are no longer required

Note 2: EPA defines a tank battery as a group of all storage vessels that are ***manifolded together for liquid transfer***

Storage Vessels

- ▶ Applicability now based on 6 tpy VOC or 20 tpy methane per tank **or tank battery** (can account for **legally & practically enforceable limit**)
 - How does this affect applicability when replacing a single tank within a battery?
 - How does this affect lower-emitting tanks within a battery (e.g., produced water tanks or tanks without flashing emissions)?
 - How do recent AP-42 Chapter 7 changes affect emissions, especially for produced water tanks? Benefits of liquid level data?
 - How does this affect whether a tank is reconstructed?
 - How are you going to calculate methane emissions?

Storage Vessels

- ▶ EPA defines “legally and practicably enforceable limit” as having:
 - Quantitative operational limit, or both production and operational limit.
 - Averaging time period for the limit equal to or less than 30 days.
 - Established parametric limits for the production/operational limit.
 - **Initial compliance demonstration for control device.**
 - Ongoing monitoring of parametric limits.
 - **Recordkeeping & periodic reporting showing continuous compliance.**
- ▶ Are you still able to obtain LPE limits with the current permitting options within your state?
- ▶ Does your existing permit limit adequately limit methane?
- ▶ If current permits do not meet criteria, how will you show compliance for sites constructed, modified, or reconstructed after 12/6/22 since EPA is not allowing a phase-in period?

Modification for Storage Vessels

- ▶ New definition of modification
 - Addition of tank to existing battery.
 - Replacement of tank that increases battery capacity.
 - For well sites and CPFs, increasing throughput to existing tank from actions such as adding a new well, refracturing, etc.
 - For other sites, increasing throughput such that it exceeds throughput used in most recent PTE determination.

Process Controllers

Affected Facility: A process controller affected facility is defined as the collection of all natural gas-driven process controllers (does not include compressed air/electric/solar or emergency shutdown)

Requirement: Zero emissions of VOC and methane (non-emitting)

Note 1: All controllers are considered modified if an additional natural gas-driven process controller is installed

Note 2: Can comply with the standard by collecting and routing emissions via a closed vent system to a process. Can also comply by using self-contained controllers, which is a natural gas-driven process controller that releases gas into the downstream piping and not to the atmosphere.

Pumps

Affected Facility: A pump affected facility is defined as the collection of all natural gas-driven pumps

Requirement: Zero emissions of VOC and methane (non-emitting). Sites with no access to electricity and < 3 diaphragm pumps can route emissions to control or vapor recovery if already onsite.

Note 1: Can comply with the standard by collecting and routing emissions via a closed vent system to a process.

Note 2: Installation of a control device or VRU solely to comply with pump requirements is not mandatory, but consider whether such devices will be installed for other affected facilities (e.g., tanks).

Compressors (not located at well sites)

Affected Facility: Standards apply to wet and dry seal centrifugal compressors and reciprocating compressors.

Requirement: Routed to control device or routed to a process with 95% reduction OR the applicable work practice standard below:

Wet seal fluid degassing system – maintain flow rate at or below 3 scfm per seal for self-contained compressors or those with mechanical seal.

Dry seal – maintain flow rate at or below 10 scfm per seal.

Reciprocating – Maintain emissions at or below 2 scfm per cylinder.
Replace rodpacking if there is non-compliance.

Note 1: Can comply with the standard by collecting and routing emissions via a closed vent system to a process.

Associated Gas

Requirement: Recover the associated gas and route to sales, use as onsite fuel, some other useful purpose that purchased fuel would serve, or reinject

Frequency: Upon startup and at all times

Notes: Delayed compliance schedule. **Flaring is allowed** for malfunction (24 hr/incident), repair/maintenance (24 hr/incident), production tests (24 hr/incident), interruptions in service of gas pipeline (30 days/incident), and when composition does not meet pipeline spec (72 hr/incident). OOOOc also allows flaring if methane ≤ 40 tpy **Venting is allowed** for safety purposes (12 hrs/incident), bradenhead monitoring (30 min/incident), and/or packer leakage testing (30 min/incident) [max 24 hr/yr in OOOOb]

Liquids Unloading

Requirement: If a gas well liquids unloading operation vents methane and VOC, either employ BMP to minimize venting (and develop/maintain BMP plan) or reduce methane and VOC emissions by 95%

Frequency: Upon startup and throughout operation

Notes: Operations with no emissions must still maintain records and report. Must comply with requirements if unplanned venting occurs.

Control Devices

Enclosed combustion devices (thermal/catalytic incinerator, boiler, process heater, etc.), flares, condensers, and carbon adsorption systems.

Requirement: Control devices must demonstrate they meet the 95% requirement. More parametric monitoring requirements (e.g., NHV, flow rate, etc.)

Note 1: Only applies to units that are used to comply with the requirements of the subpart.

Covers and Closed Vent Systems (CVS)

Applies to: Wells (associated gas), centrifugal compressor, reciprocating compressor, process controller, pump, storage vessel, and process unit equipment affected/designated facilities.

Requirement: Each CVS must be designed and operated to capture and route all gases, vapors, and fumes to a process or to a control device and comply with an emissions limit of no identifiable emissions.

Note 1: Initial and continuous compliance of the no identifiable emissions standard would be demonstrated through OGI monitoring and AVO inspections conducted at the same frequency as the fugitive emissions monitoring for the type of site.

Note 2: Design must be certified by an engineer. If the CVS is equipped with a bypass (to atmosphere), the bypass must include a flow monitor and sound an alarm to alert personnel that a bypass is being diverted (or with a car-seal or lock-and-key).

Super Emitter Program

- ▶ Super emitter events may be submitted to EPA for review
 - Event defined as > 100 kg/hr of methane
 - Events must be detected by **certified** third parties through satellite detection, remote-sensing equipment on aircraft, or mobile monitoring platforms
 - Owner/operator must initiate investigation within 5 calendar days and completed within 15 days of receiving notice **from EPA**
 - If fugitive release is confirmed, must complete repairs in accordance with rule
 - Follow-up report required for investigation and follow-up actions
- ▶ Overlap with other reporting (deviation, inventory, Sub W, etc.)?

EG 0000c

- ▶ Affected facilities are those in the crude oil and natural gas source category that commenced construction **on or before December 6, 2022.**
- ▶ Includes presumptive standards that state agencies can use for developing their own plan submissions:
 - States have flexibility to develop their own standards that are generally as strict.
 - States can take remaining useful life of sources into consideration.
- ▶ **States have 24 months after [FR Date] to develop a plan, and these plans must require compliance no later than 36 months after the plan submittal deadline.**

EG 0000c

- ▶ All standards are identical to 0000b except for:
 - Storage vessel applicability based on 20 tpy methane (including W/B)
 - Wet seal centrifugal compressors maintain flowrate < 3 scfm
 - No standards for well completions
 - Associated gas allowance for flaring based on 40 tpy methane threshold
- ▶ Considerations for older facilities:
 - Replacement parts for leak repairs available?
 - Certifying existing closed vent system?
 - Additional time needed for retrofitting certain equipment?
 - LPE criteria apply to these sites as well

NSPS 0000a Revisions Also Finalized

- ▶ Affected facilities are those in the crude oil and natural gas source category that commence construction, modification or reconstruction after September 18, 2015, **and on or before December 6, 2022**
- ▶ Updates the rule to reflect the disapproval of the 2020 Policy Amendment
 - **Applicability remains for transmission & storage sector**
 - **Methane remains a regulated pollutant**
 - **Under the Congressional Review Act, it's as if the Policy Amendment was never in effect**
- ▶ Rescinds parts of the 2020 Technical Amendment (e.g., 15 boe/day exemption)

Compliance Timeline

- ▶ NSPS 0000a - Already in effect
 - Compliance with 0000c is compliance with 0000/a (except tank threshold)
- ▶ NSPS 0000b - Initial compliance date is [60 days after FR] or upon startup, except:
 - Storage vessel timeline varies based on site/trigger (startup or within 30 days)
 - Compressor timeline varies but generally within 8,760 hours of most recent compliance date
 - Gas plant leak monitoring within 180 days of startup of process unit
 - Process controllers and pumps within [425 days after FR]
 - Associated gas compliance required after [790 days after FR]
 - ◆ Flaring required prior to compliance date
 - ◆ Flaring indefinitely allowed for wells constructed between 12/6/22 and [60 days after FR] if technically infeasible to capture (update demonstration annually)
- ▶ NSPS 0000c – Initial compliance no later than early 2029
- ▶ Don't forget annual reports!

What should I do now?

- ▶ Review all new/modified sites since 12/6/22
 - Pay attention to new modification definitions
 - Create compliance management system or checklist?
- ▶ Determine availability of necessary equipment and staff (controllers, certified combustors, OGI cameras, etc.)
- ▶ Understand overlap with IRA methane fee and Subpart W
- ▶ Stay updated
 - EPA O&G Website (fact sheets, summaries, presentations)
 - Federal Register (rule text, response to comments, supporting technical documentation)
 - Trinity O&G eNews, OOGA updates, etc.

Ohio EPA's Strategy

- ▶ Ohio EPA has discussed 0000b/c during recent industry outreach events
- ▶ Described as “huge additional workload for industry including small producers”
- ▶ Unclear whether sites subject to 0000b/c qualify for O&G General Permits 12.1, 12.2, 14.01-14.10
- ▶ Unclear whether O&G General Permits 12.1, 12.2, 14.01-14.10 meet US EPA's criteria for LPE

Additional Notes/Changes

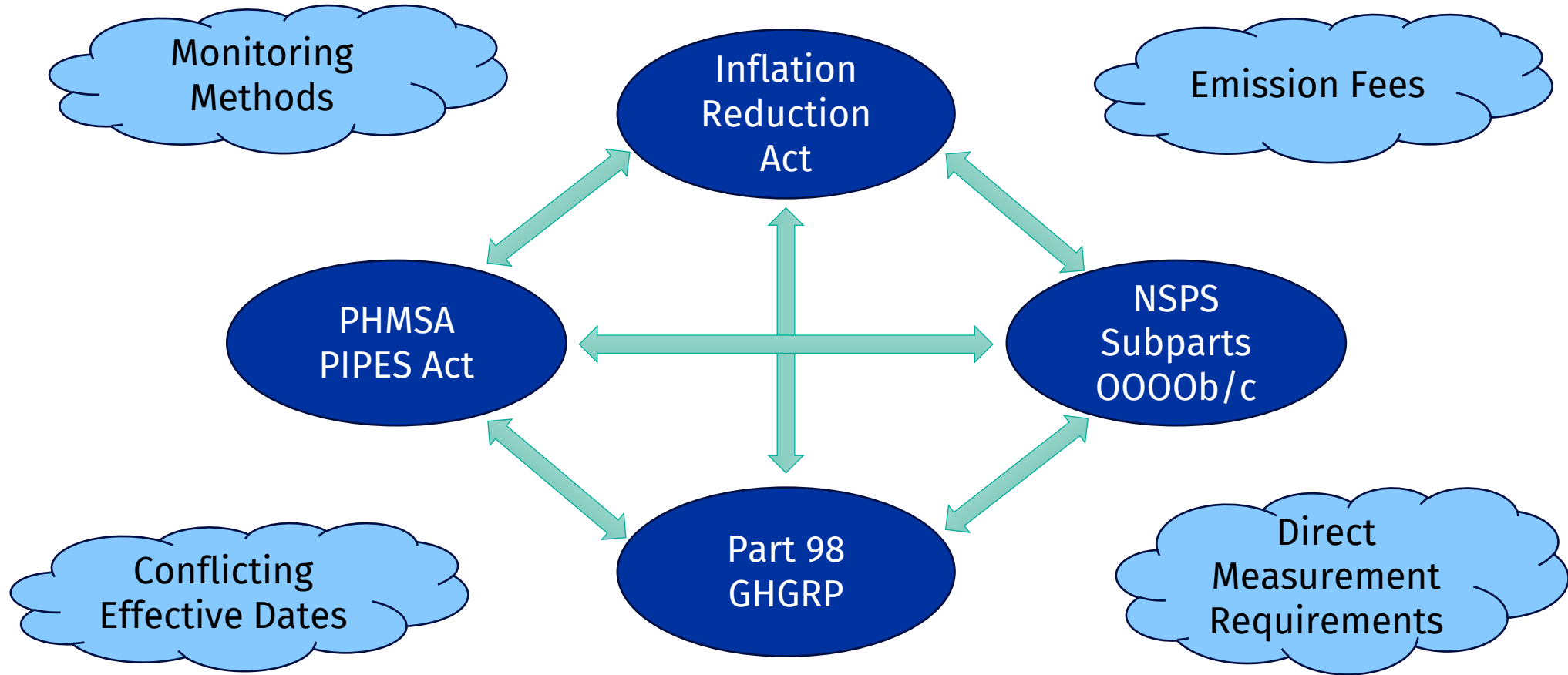
- ▶ No changes to standards for completions and sweetening units
 - Sweetening unit applicability expanded with OOOOa update.
- ▶ **Equipment leaks for gas plant process units** can now use bimonthly OGI monitoring (Appendix K) or continue to use Method 21.
- ▶ Removal of “in VOC service” exemption threshold of 10 wt%.
- ▶ No provisions finalized for abandoned wells, pigging operations, or truck loading operations.
- ▶ Simplified reconstruction definition for process controllers, pumps, and storage vessels.

Appendix K for OGI

- ▶ Outlines camera requirements and procedures.
- ▶ Operators must create an operating envelope for all potential operating configurations.
- ▶ Operator Training Requirements.
- ▶ Senior OGI Operator has “conducted OGI surveys for a minimum of 1,400 survey hours over career, including at least 40 in past 12 months”.
- ▶ Quarterly Performance Audits.
- ▶ Survey Requirements – Examples include:
 - Minimum 10 second video of any leaking component
 - Minimum 5 second dwelling time per angle on each component
- ▶ **Only required for gas processing plants.**

Implications

Intersection of NSPS 0000b/c with...



Subpart W Proposed Changes

- ▶ Applicable to Petroleum and Natural Gas Systems (40 CFR 98)
- ▶ Subpart W Rule changes first proposed in June 2022
- ▶ Latest proposal published in August 2023 is a complete overhaul of Subpart W (supersedes June 2022 version)
- ▶ Aim of proposed changes:
 - To ensure GHG calculations reflect latest empirical data and research
 - To address EPA's mandate under the Inflation Reduction Act, i.e., to accurately reflect methane emissions subject to waste emissions charge under IRA's Methane Emission Reduction Program (MERP)
 - *Rulemaking information found here:*
<https://www.federalregister.gov/documents/2023/08/01/2023-14338/greenhouse-gas-reporting-rule-revisions-and-confidentiality-determinations-for-petroleum-and-natural>

Subpart W Overview per Industry Segment

Source Type	Reportable Pollutants			Industry Segment									
	CH ₄	CO ₂	N ₂ O	Offshore Production	Onshore Production	Gas Processing	Transmission Compression	Underground Storage	LNG Storage	LNG Import/Export	Distribution	Gathering & Boosting	Transmission Pipeline
	§98.232(b)	§98.232(c)	§98.232(d) & (k)	§98.232(e) & (k)	§98.232(f) & (k)	§98.232(g) & (k)	§98.232(h) & (k)	§98.232(i)	§98.232(j)	§98.232(k)	§98.232(l)	§98.232(m)	
Pneumatic Devices	✓	✓	-		✓	+	✓	✓			+	✓	
Pneumatic Pumps	✓	✓	-	✓	✓							✓	
Acid Gas Removal Vents	-	✓	-		✓	✓			+	+		✓	
Nitrogen Removal Units	✓	-	-		+	+			+	+		+	
Dehy Vents	✓	✓	-	✓	✓	✓	+	+				✓	
Liquids Unloading	✓	✓	-		✓								
Completions & Workovers with Fracking	✓	✓	-		✓								
Completions & Workovers without Fracking	✓	✓	-		✓								
Mud Degassing	-	✓	-		+								
Blowdowns	✓	✓	-		+	✓	✓	+	+	✓	+	✓	✓
Hydrocarbon Liquids Storage Tanks	✓	✓	-	✓	✓		✓	+				✓	
Produced Water Storage Tanks	✓	✓	-		+	+						+	
Well Testing Venting & Flaring	✓	✓	-		✓								
Associated Gas Venting & Flaring	✓	✓	-		✓								
Flare Stacks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	
Centrifugal Compressor Venting	✓	✓	-		✓	✓	✓	✓	✓	✓		✓	
Reciprocating Compressor Venting	✓	✓	-		✓	✓	✓	✓	✓	✓		✓	
Crankcase Venting	-	✓	-		+	+	+	+	+	+	+	+	
Equipment Leaks	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	+
Other Large Release Events	✓	✓	-	+	+	+	+	+	+	+	+	+	+
EOR Injection Pumps	✓	-	-		✓								
EOR Hydrocarbon Liquids Dissolved CO ₂	✓	-	-		✓								
Combustion Sources	✓	✓	✓		✓	Subpart C	Subpart C	Subpart C	Subpart C	Subpart C	✓	✓	

Existing Reportable Sources under Current Subpart W

✓

New Reportable Sources under 2023 Proposed Rule Changes

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Subpart W Calculation Method Types

Subpart W Calculation Method Types

	Pneumatic Devices	Pneumatic Pumps	Acid Gas Removal	Dehydrators	Liquids Unloading	Completions & Workovers with HF	Completions & Workover without HF	Blowdown Vents	Hydrocarbon Liquids and Produced Water Storage Tanks	Condensate Storage Tanks	Well Testing	Associated NG	Flare Stacks	Centrifugal Compressors	Reciprocating Compressors	Equipment Leaks	EOR Injection Pumps	EOR CO ₂ in Hydrocarbon Liquids	Other Large Release Events	Combustion Equipment
Direct Emissions Measurement	✓	✓	✓					✓		✓		✓		✓	✓	✓			✓	✓
Measurement + Engineering Calculations			✓		✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓	✓
Engineering Calculations			✓	✓	✓	✓		✓	✓		✓	✓	✓				✓			✓
Emission Factors	✓	✓		✓			✓		✓					✓	✓	✓				✓

EOR = Enhanced Oil Recovery; HF = Hydraulic Fracturing; NG = Natural Gas

✓ indicates that the proposal includes a calculation methodology in a new calculation method category for that source type (e.g., direct measurement option proposed where Subpart W currently requires the use of an emission factor).

✓ indicates that the proposal would add a second type of calculation methodology in this category (e.g., adding a leaker emission factor option to the "Emission Factors" category for a source type that currently has population emission factors).

Recap of Important Timelines

Rulemaking	Applicable Changes	Effective Date	First Due Date
June 2022 Proposal	Various GHGRP Subpart Updates*	Jan 1, 2023	April 1, 2024 [RY2023 Report]
May 2023 Proposal	GWP Amendments	Jan 1, 2024	March 31, 2025 [RY2024 Report]
May 2023 Proposal	Various GHGRP Subpart Updates	Jan 1, 2025	March 31, 2026 [RY2025 Report]
August 2023 Proposal	All proposed changes except below	Jan 1, 2025	March 31, 2026 [RY2025 Report]
August 2023 Proposal	Data reporting for plugged and abandoned wells	Jan 1, 2024	March 31, 2025 [RY2024 Report]
IRA MERP (2022)	Methane Fee	Jan 1, 2024	2025 [RY2024 Report]

*Note that some of these are superseded by 2023 proposals.

Intersection of NSPS 0000b/c with The Inflation Reduction Act

Methane Emission Reduction Program (MERP)

- ▶ Congress passed the Inflation Reduction Act (IRA) in August 2022
- ▶ IRA includes the framework for a Methane Emission Reduction Program (MERP), which will apply to facilities that emit > 25,000 mt CO₂e/yr under Subpart W
- ▶ On January 12, 2024, EPA issued its proposed Waste Emissions Charge (WEC) rule which establishes methane emissions thresholds for each applicable segment of the oil and gas sector on an emissions intensity basis:
 - 0.2% - upstream production
 - 0.05% - non-production
 - 0.11% - transmission & storage
 - 0.05% - LNG import, export, storage

Waste Emissions Charge (WEC)

- ▶ The methane fee will begin in 2024*
 - ◆ \$900/mt for 2024
 - ◆ \$1,200/mt for 2025
 - ◆ \$1,500/mt for 2026 and beyond
- ▶ Allows for netting of emissions across all Subpart W applicable facilities under common ownership/control
- ▶ Provides for three exemptions:
 1. Methane emissions caused by “unreasonable delay” in permitting of gathering or transmission infrastructure
 2. Plugged wells that have been permanently shut in
 3. Facilities subject to and in compliance with NSPS 0000b/c under certain statutory conditions

*This is 1 year before the proposed Subpart W changes go into effect.

WEC Proposal Status

- ▶ WEC filing will be due by March 31st of each year for the prior calendar year
 - Based on Subpart W reporting data
 - Supplemental information will be required
 - To be submitted electronically
- ▶ Examples of fee calculations have been provided
- ▶ Proposed rule has yet to be published in the Federal Register
 - Comments will be due 45 days from publication
- ▶ [Waste Emissions Charge | US EPA](#)

Key Industry Information: Infographics

Methane Emissions Reduction Program IRA

17 Oct 2023

How does the IRA Methane Emission Reduction Program's Waste Emissions Charge Impact the Oil & Gas Industry?

Adjusting to regulatory changes is a challenge for the oil and gas industry. And although the IRA Methane Emissions Charge may appear daunting at first glance, organizations can view this as an opportunity to improve their environmental performance and demonstrate their commitment to sustainability.

Oil and gas companies whose methane emissions exceed the threshold are subject to a waste charge.

A fee is calculated based on the amount of methane emitted (as a % of gas sold) that is above the threshold amount.

Who's included?
 Production and Natural Gas Pipeline Reporting Areas (2023) and Oil and Gas Reporting Areas (2024)

Who's left out?
 Natural Gas Distribution

What's the goal?
 Reducing U.S. GHG emissions by 40% by 2030, with a 90% methane flow rate

What are the charge amounts?

Category	Oil Production	Natural Gas Production	Transmission	Oil Refining	Non-production
Charge Amount	\$1.75 per MCF	\$1.75 per MCF	\$1.75 per MCF	\$1.75 per MCF	\$0.50 per MCF

What's the next step?
 What makes the IRA most challenging is that applicability and compliance are intertwined with other emissions and reporting requirements. This adds complexity and uncertainty to oil and gas operations who may be trying to maintain their status and facilities under the program.

Questions about your organization's future impact under IRAs? Reach out to Trinity Consultants at 888.228.6828.

Trinity Consultants

Expansions on Subpart W Emissions Tracking

24 Oct 2023

Expansions on Subpart W Emissions Tracking

The latest revisions to Subpart W are aimed at improving the completeness and accuracy of GHG emissions reported by the oil and gas sector. These changes are being implemented by the EPA and will be effective starting in 2024. The changes include:

- Expanding the scope of the program to include more sources.
- Improving the accuracy of emissions data.
- Enhancing the monitoring and reporting requirements.

New Reportable Source Categories

- Production and Refining Processes
- Production and Refining Processes
- Production and Refining Processes

Expanded Applicability of Existing Source Categories

- Production and Refining Processes
- Production and Refining Processes
- Production and Refining Processes

Revisions to Existing Monitoring, Calculation Methods, and Emission Factors

These changes throughout Subpart W are proposed. Some of the most important ones are highlighted below:

- Monitoring:** Significant increases in default monitoring methods for methane emissions.
- Calculation:** Significant increases in default calculation methods for methane emissions.
- Emission Factors:** Significant increases in default emission factors for methane emissions.

Compliance: Significant increases in default compliance methods for methane emissions.

Reporting: Significant increases in default reporting requirements for methane emissions.

Recordkeeping: Significant increases in default recordkeeping requirements for methane emissions.

Trinity Consultants

15 Nov 2023

Prepare for the IRA: How to Get the Most Out of Your Data Infographic

Prepare for the IRA: How to Get the Most Out of Your Data

The IRA methane emissions reduction program and associated waste emissions fee will drive companies to implement methane emissions reduction measures. Companies will need to rely on direct measurement and empirical data to comply and to calculate their methane emissions. However, using a 3rd party expert can help you to ensure your data is accurate and reliable.

Automation is the key to improvement

Accurate measurement programs help you obtain clean-up the data for the best reporting performance.

Complete data effectively means maintaining a library of methane emission data and ensuring it is available for all different data points. Automation can help ensure compliance with Subpart W is added to the mix, while maintaining efficiency and cost-effectiveness. Reporting automation can also help companies identify opportunities for equipment, software, and best practices to improve their reporting. Technology, such as AI and emissions management solutions, helps play out these solutions to make more informed decisions with accuracy and efficiency.

Plan ahead to stay compliant

Staying compliant and consistent in a low-carbon economy requires making changes to how the organization is run. This includes the way you collect, analyze, and report data. What about a methane tracking your goal achievement?

Identifying methane and liquid reporting requires an increase in the frequency of calculations along with reporting of metrics. Do you have the required internal resources and capabilities? What about a methane tracking your goal achievement?

Mitigation Strategies Checklist

1. Implement a methane tracking system
2. Implement a methane tracking system
3. Implement a methane tracking system

Exemptions ahead

In addition to improving data accuracy and efficiency, investing in technology also allows you to monitor actual methane levels and regulatory compliance at a low cost to take advantage of the data benefits of large workforces.

- GHG reporting: Significant increases in default reporting requirements for methane emissions.
- Recordkeeping: Significant increases in default recordkeeping requirements for methane emissions.
- Compliance: Significant increases in default compliance methods for methane emissions.

Next step: support

We're here to help you meet compliance and plan for your future with Trinity Consultants.

We can offer help in navigating the rapidly changing regulatory landscape, ensuring compliance with all applicable laws and regulations. Through our extensive data collection and analysis, we can help companies identify areas for improvement and develop the actionable strategies we need today to reduce methane emissions and improve their data.

Questions about your organization's future impact under IRAs? Reach out to Trinity Consultants at 888.228.6828.

Trinity Consultants

The background of the image shows several hands in business attire pointing upwards. The hands are in various shades of skin tones and are wearing dark-colored sleeves. The background is dark with some bokeh light effects. On the right side, there is a vertical blue gradient bar.

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