

step  compliance

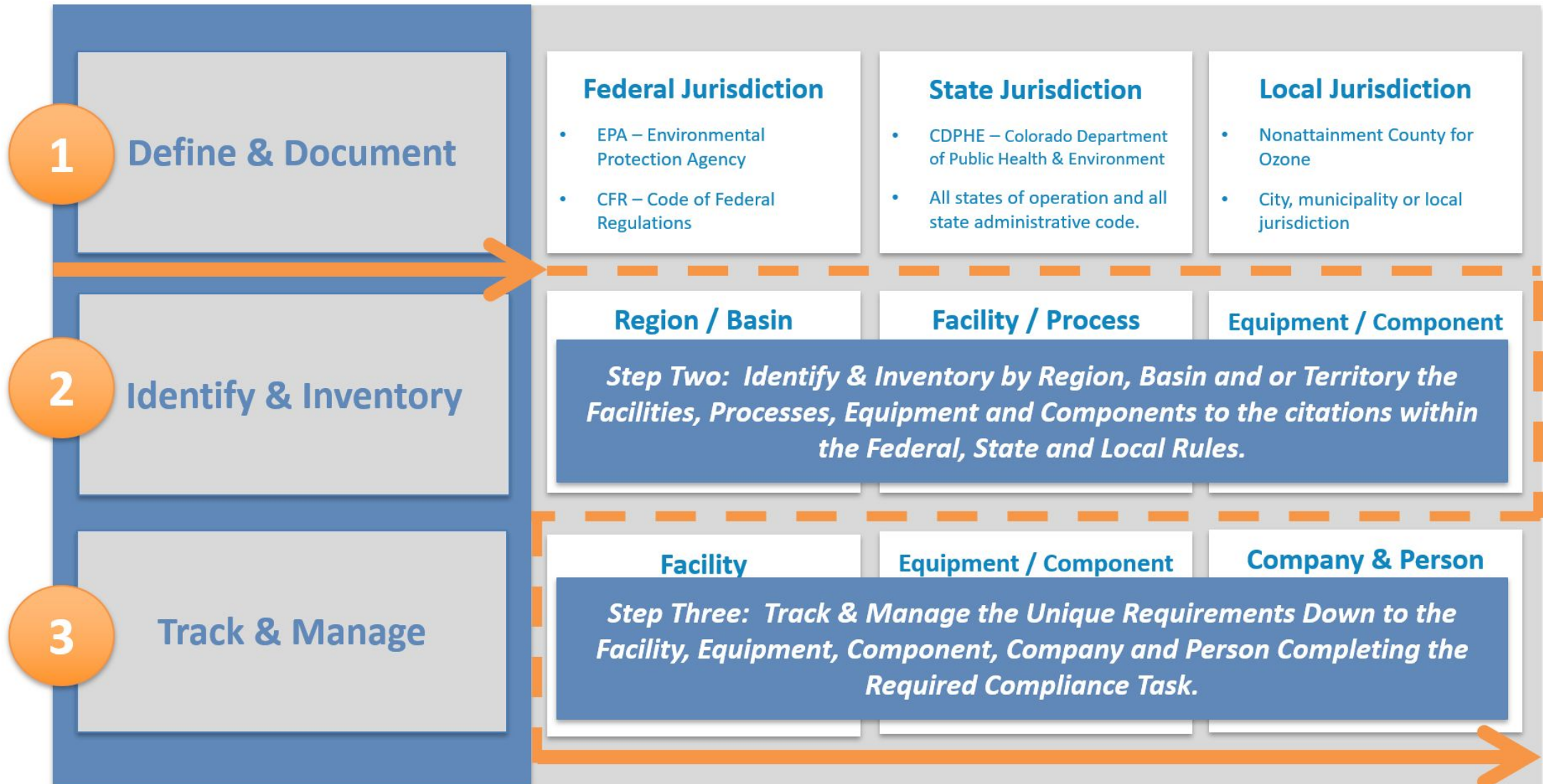
M³ Webinar

Introduction to Methane Intensity
Webinar will begin shortly...

Goal of this Webinar

- To help the oil & gas industry master the impact of:
 - The **Inflation Reduction Act** published in August of 2022
 - The **pending** publishing of **NSPS OOOOb/c** and **Appendix K** in 2023
 - The **pending** publishing of revisions to Subpart W in 2023
 - The **transformation** of **Subpart W** to **empirical measurement** due to the Inflation Reduction Act
 - The required compliance of **NSPS OOOO** and **NSPS OOOOa**
- We believe these regulations create a focus on **Methane Intensity** and further require a **Fugitive Emissions Management and Monitoring Strategy**.

Our Process & Foundation of Service



Rule Tracking & How We Stay Informed

We are tracking over 130 agencies and 1,300 rules

EPA Greenhouse Gas Reporting Rule Proposed Amendments to 40 CFR 98

On June 21, 2022 a second draft of the proposed amendments to 40 CFR 98 (Greenhouse Gas Reporting Rule) was published in the [Federal Register](#). These proposed amendments are in the public comment period through August 22, 2022.

These amendments are extensive and have significant impact for those who are Subpart W reporters.

We have written a short summary of some of the key items that you can [read here](#).

If you have any questions or would like to discuss these rules with us, please don't hesitate to contact us.

Brian Kromer - bkromer@step2compliance.com
MaryBeth Clifford - mbclifford@step2compliance.com



Copyright © 2021 Step2Compliance. All rights reserved.

Our mailing address is:
4818 Snowdrift Circle, Fort Collins, CO 80528

Want to change how you receive these emails?
You can [update your preferences](#) or [unsubscribe from this list](#).



Greenhouse Gas Reporting Rule 40 CFR Part 98 PROPOSED AMENDMENTS

Draft Published: [6/21/2022 in the Federal Register](#)
Public Comment Period: 6/21/2022 – 8/22/2022

Summary

On June 21st the EPA published a second draft of the proposed amendments to the Greenhouse Gas Reporting Rule that contained adjustments based on stakeholder feedback from the initial draft's public comment period. This new draft will also go through a 60-day public comment period. There is not currently a public hearing scheduled. If one is requested the hearing will be held on July 6, 2022.

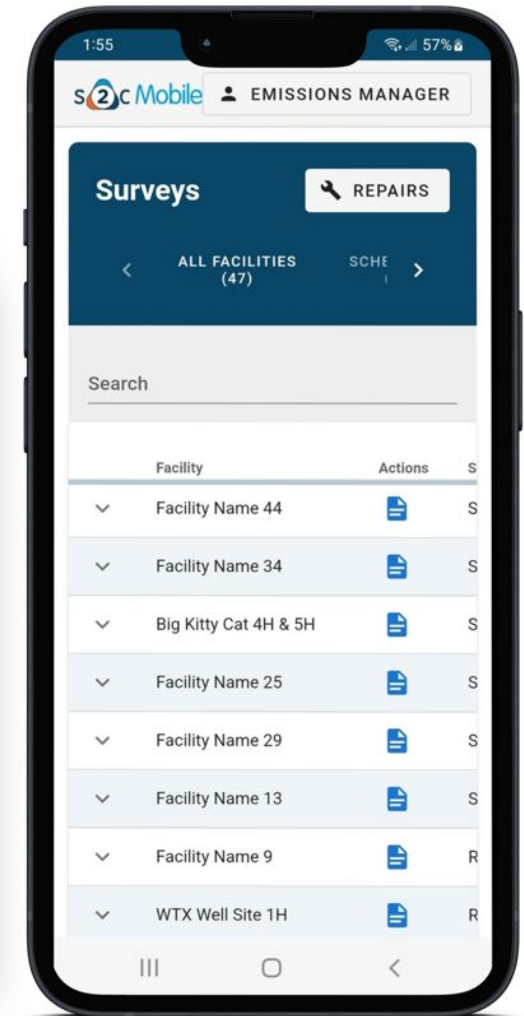
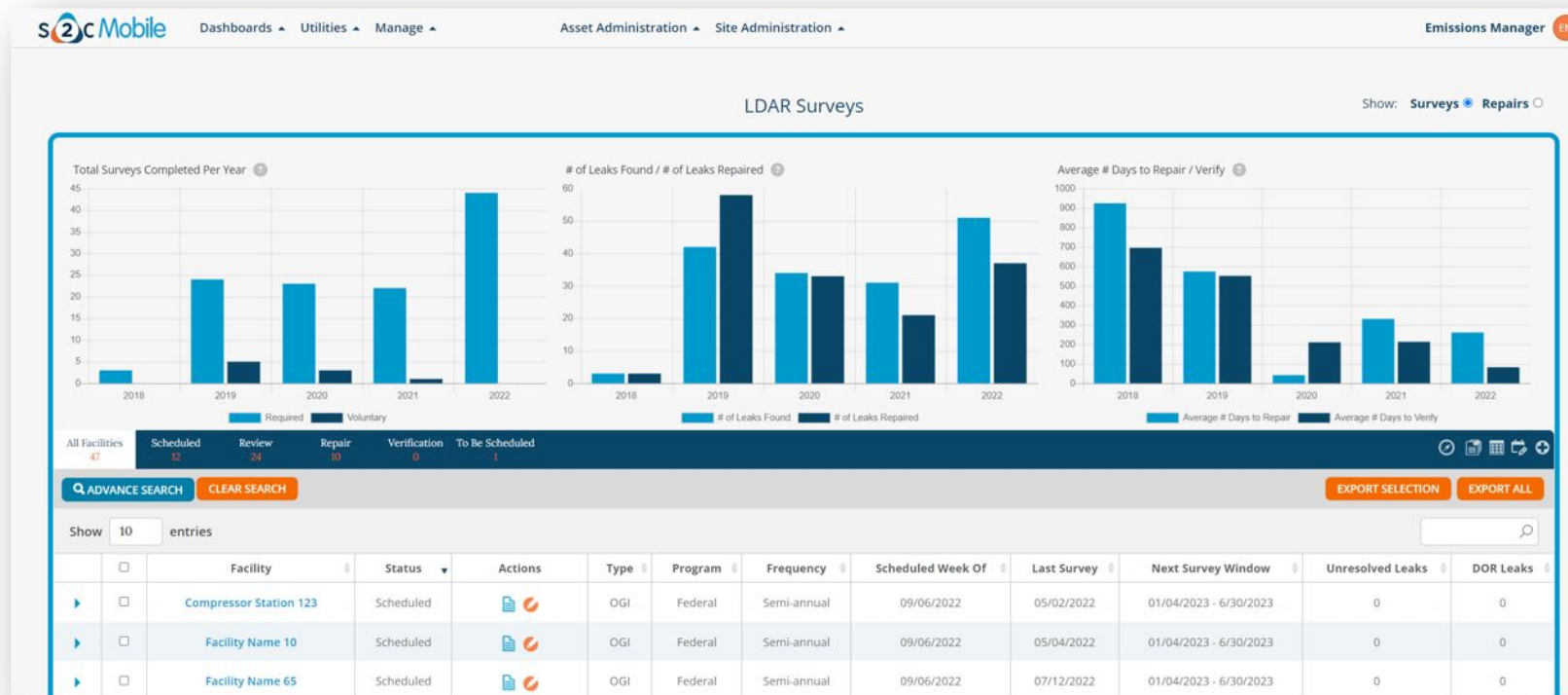
The amendments are extensive, touching on 23 different subparts within the rule. The lengthy preamble discusses in detail what the proposed changes are and is helpful to identifying more specifically what the amendments are within the proposed rule text. It is significant to note that the assessed impacts of these amendments outlined in section VII. of the preamble are largely associated with the oil and gas sector that report under Subpart W.

The amendments include a new subpart, Subpart VV – Geological Sequestration of Carbon Dioxide with Enhanced Oil Recovery Using ISO 27916, that is not anticipated to create any new reporters, but will be a different reporting option for those who have previously reported under Subpart RR or Subpart UU should they choose to utilize the new subpart VV.

In an effort to collect more accurate data, there is a proposed change for compressor driver engines to report

What We Do - LDAR Workflow as a Service

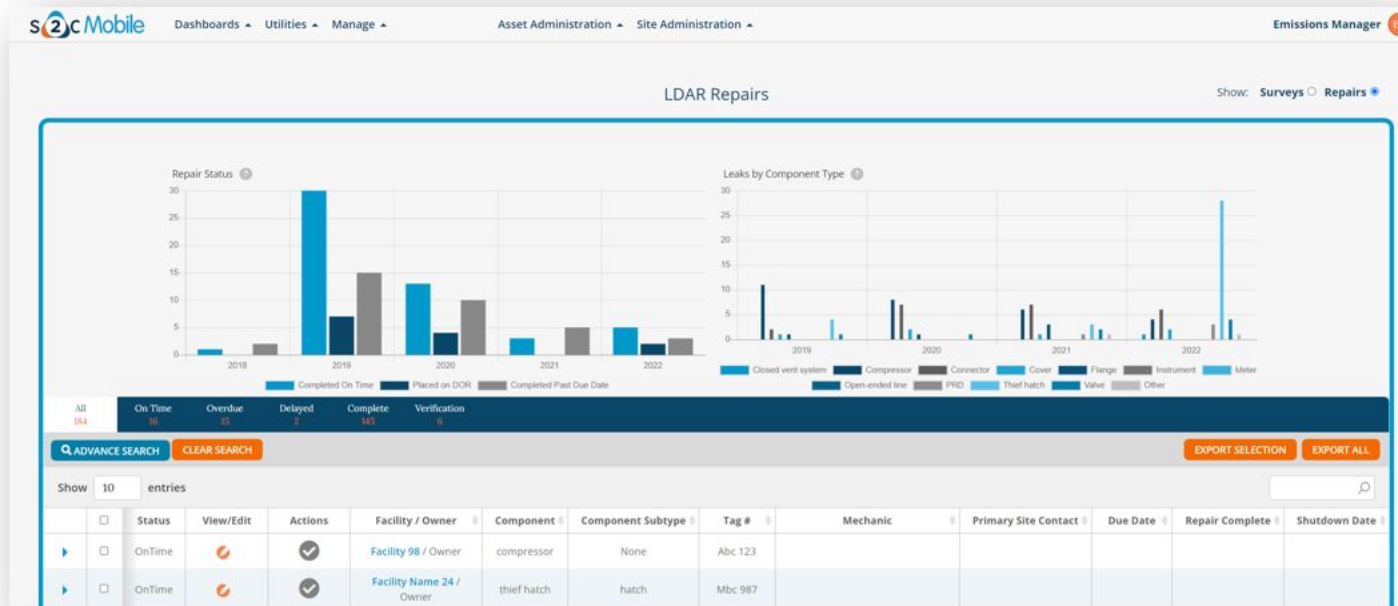
LDAR inspection and repair data is captured in the field and stored in a centralized database that allows for full management of the inspection and repair schedule. Data can be used as part of determining the overall compliance status of a facility.



Strictly confidential | © Step 2 Compliance LLC. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for intellectual property rights.

What We Do - LDAR Workflow as a Service

Leaks can be managed from their own dashboard within the LDAR workflow. All data will roll up into reports for OOOOa, GHG reporting, voluntary programs or any other report needed.



LDAR Report

Report Type:

All

All

General

Leak Details

EPA NSPS OOOOa- Site Information

EPA NSPS OOOOa- Fugitive Survey

EPA NSPS OOOOa- Fugitive Found

Survey Dashboard Report

Repair Dashboard Report

No Selection

Include Inactive Facilities. ☐

Export To CSV

Clear

Methane Intensity

Understanding the Pieces of the Puzzle

Understanding Federal Methane Intensity Regulations



Inflation Reduction Act

Methane Monetization

Places
Methane
limits and a
Methane Fee

Methane Measurement

MRR Subpart W

Measures the
Amount of All
GHG
Emissions
Including
Methane

M³

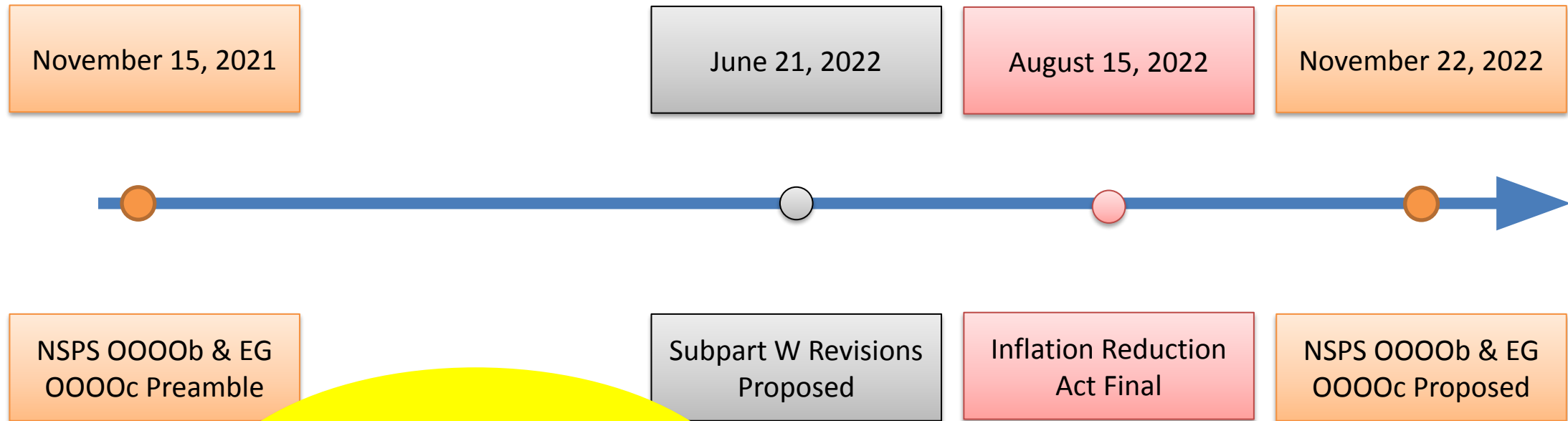
ABC's of NSPS
OOO

Methane Management

Reduces Methane
Emissions & Drives
Inspections/Repairs

These three separate rules
are connected together in
the same methane puzzle

Methane Intensity Timeline of Change



Over 1,000,000 comments to NSPS changes but less than 100 to Subpart W

The Inflation Reduction Act

The Methane Fee

Inflation Reduction Act

Waste Emissions Charge or Methane Fee:

- 2024 - \$900 / mT
- 2025 - \$1,200 / mT
- 2026 - \$1,500 / mT

Methane Intensity Target

- Onshore/Offshore Gas
 - 0.20% of Gas Sent to Sale
- Onshore/Offshore Oil
 - 10 Metric Tons per Million Barrels
- Gathering, Boosting, Gas Processing & LNG
 - 0.05% of Gas Sent to Sale
- Compressor, Pipelines & Storage
 - 0.11% of Gas Sent to Sale

Emissions are 8
times to 25 times
higher today

Inflation Reduction Act High Level Overview

- Very little room for any exemptions.
 - Provisions for stranded gas if pipelines are not approved.
 - Once ALL STATES have adopted EG OOOOoc and you are in compliance with EG OOOOoc.
- Targets those who have been reporting GHG emissions under Subpart W since 2011.
- Transforms GHG reporting from factors and estimates to empirical measurement.

Part 98 GHG Mandatory Reporting Rule

Subpart W - Petroleum & Natural Gas Systems Existing & Pending Legislation

What is the Mandatory Reporting Rule for GHG's?

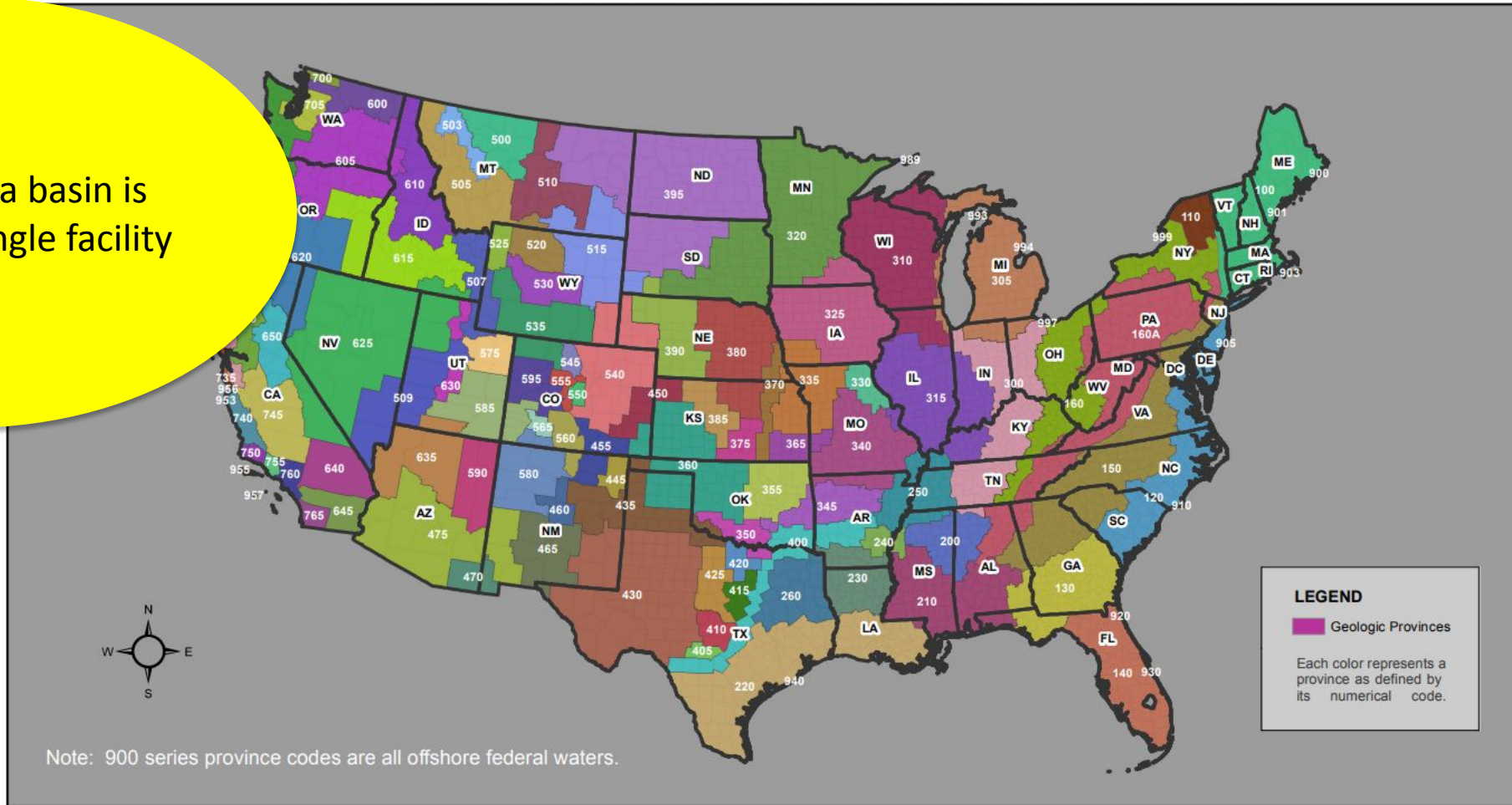
MRR (Mandatory Reporting Rule)

- Purpose: To gather and centralize data on GHG emissions from stationary sources nationwide (no emission control provision)
- “Facility” reporting threshold is set at 25,000 mT CO₂e/yr
- Subpart W for Petroleum & Natural Gas Systems finalized Nov 2010
- Data collection for Subpart W started 1/1/2011

That's only 1,000
mT/yr of Methane

Hydrocarbon Basins Used to Define Oil and Gas Production "Facilities" 40 CFR Part 98 Mandatory Reporting Rule for Greenhouse Gases

All activity in a basin is defined as a single facility



Notes:

1. "Basin" means geologic provinces as defined by the American Association of Petroleum Geologists (AAPG) Geologic Note: AAPG-CSD Geologic Provinces Code Map: AAPG Bulletin, Prepared by Richard F. Meyer, Laure G. Wallace, and Fred Wagner, Jr., Volume 75, Number 10 (October 1991) (incorporated by reference, see 98.7) and the Alaska Geologic Province Boundary Map, Compiled by the American Association of Petroleum Geologists Committee on Statistics of Drilling in Cooperation with the USGS, 978 (incorporated by reference, see 98.7).

2. Part 98 GHG Mandatory Reporting - Definitions for Subpart W Petroleum and Natural Gas Systems:

"Facility" under the Part 98 Subpart W GHG reporting rules for onshore oil and natural gas production means all petroleum or natural gas equipment on a well pad or associated with a well pad and CO₂ EOR operations that are under common ownership or common control including leased, rented, or contracted activities by an onshore petroleum and natural gas production owner or operator and that are located in a single hydrocarbon basin as defined in 98.238. Where a person or entity owns or operated more than one well in a basin, then all onshore petroleum and natural gas production equipment associated with all the wells that the person or entity owns or operates in the basin would be considered ONE facility.

3. Geographic shapefiles provided courtesy of the American Association of Petroleum Geologists (AAPG), AAPG Bulletin Volume 75, No. 10, October 1991 (see note 1).

Subpart W Proposed Changes Highlighted

- Changes emissions factors.
- Increased emissions factors for OGI.
- Changes reporting approach from region and component to major equipment.
- Brings a new focus to methane slip for engine combustion.
- Has reporting requirements for 2023 even if not final yet.

Subpart W has pending revisions as of 2023 that were proposed in 2022

Subpart W will transform to empirical measurement by 2025 per IRA

The ABC's of NSPS OOOO

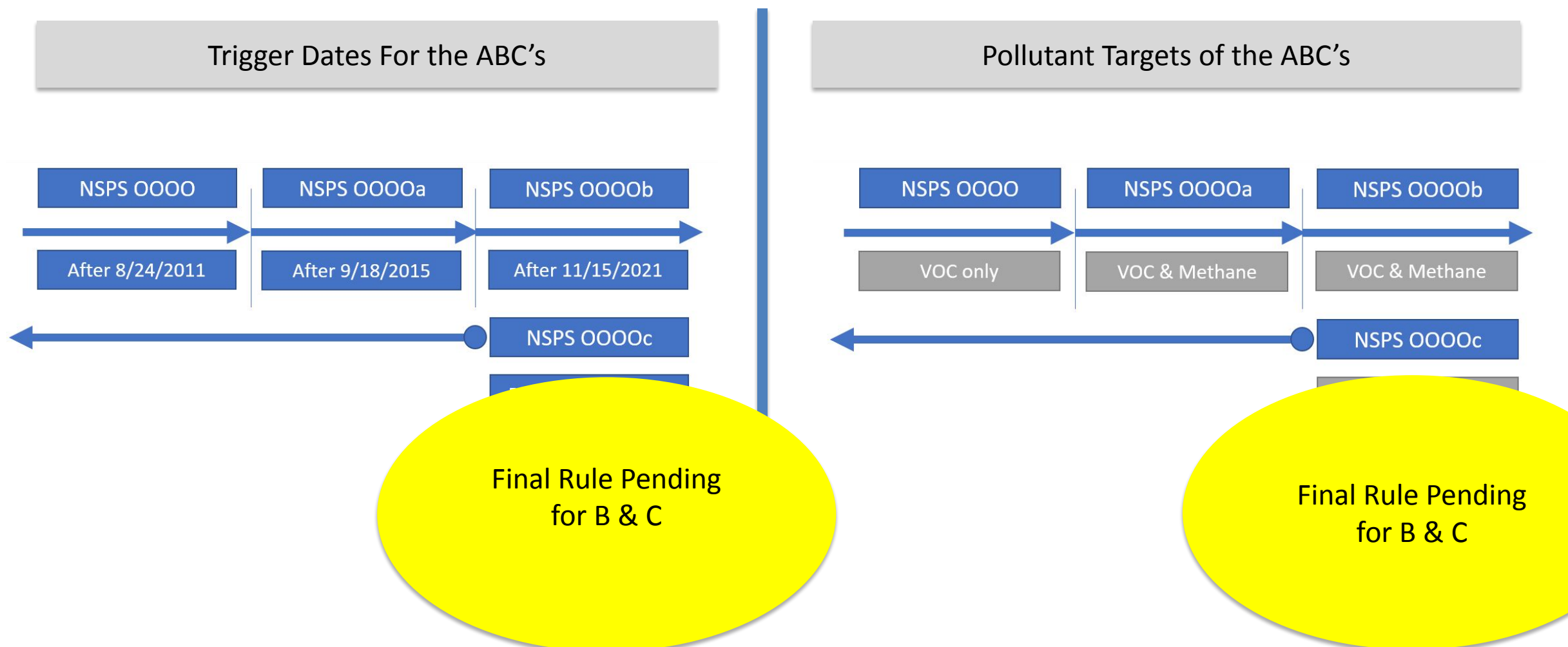
Existing & Pending Federal Legislation Targeting Oil & Gas

A brief history of the OOOOs

- ❑ **NSPS OOOO** originally adopted 8/16/2012. Amended in 2016 in conjunction with the adoption of OOOOa. Amended again in 2020 along with OOOOa amendments.
- ❑ **NSPS OOOOa** originally adopted 6/3/2016. Amended in 2018. Amended in 2020 with the Policy and Technical Amendments. In 2021 the CRA rescinded the Policy amendments. November 2021 there were new proposed amendments that are not yet adopted.
- ❑ **NSPS OOOOb** was initially proposed in November 2021. Supplementary rule text was proposed in November 2022. This proposed rule is still in public comment and expected to be adopted in 2023.
- ❑ **EG OOOOc** was initially proposed in November 2021 along with NSPS OOOOb. It also had supplementary rule text proposed in November 2022. The public comment period is the same as for NSPS OOOOb and this rule is also expected to be adopted in 2023.



NSPS OOOO “ABC’s” Timeline & Targeted Pollutants

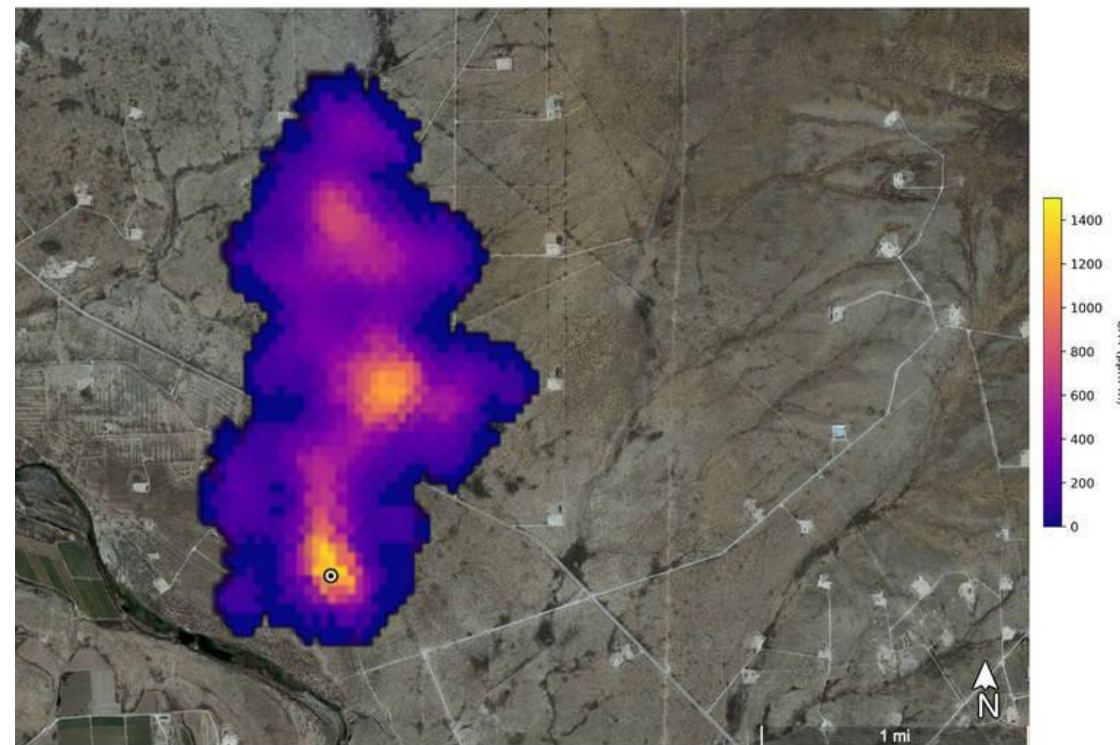


What Does Each Rule Regulate?

NSPS OOOO	NSPS OOOOa	NSPS OOOOb	EG OOOOc
<i>Constructed, Reconstructed or Modified Sources</i>			<i>Existing Sources</i>
after August 23, 2011 and on or before September 18, 2015	after September 18, 2015	after November 15, 2021	on or before November 15, 2021
VOCs	VOCs and GHGs	VOCs and GHGs	GHGs
Effective since 2012	Effective since 2016	If adopted 4/1/2023 Eff. 5/31/2023 If adopted 7/1/2023 Eff. 8/30/2023 If adopted 10/1/2023 Eff. 11/30/2023	If adopted 4/1/2023 SIP due 10/1/2024 Compliance due before 10/1/2027 If adopted 7/1/2023 SIP due 1/1/2025 Compliance due before 1/1/2028 If adopted 10/1/2023 SIP due 4/1/2025 Compliance due before 4/1/2028

Super-Emitter Events

- Defined as a quantified emission rate $>100\text{kg/hr}$ of methane.
 - 3rd Parties can participate (satellites, planes, mobile detection, etc.)
 - Notification is provided to the owner/operator and the EPA and made publicly available on a special website.
 - Within 5 days initiate a root cause analysis (likely using OGI)
 - Within 10 days fix the problem or complete initial corrective action
- Within 15 days after completing corrective actions, submit a report
 - Reports will be made publicly available on the special website





Fugitive Emissions Monitoring Monitoring Frequencies Compared

Facility Type	OOOO		OOOOa		OOOOb		OOOOc	
	AVO	OGI	AVO	OGI	AVO**	OGI	AVO**	OGI
Well Site* (OOOO/OOOOa definition)	N/A	N/A	N/A	Semiannual				
Single wellhead or small site					Quarterly	N/A	Quarterly	N/A
Wellhead with two or more wellheads					Quarterly	Semiannual	Quarterly	Semiannual
Well site with major production/processing equipment					Bimonthly	Quarterly	Bimonthly	Quarterly
Centralized production facility					Bimonthly	Quarterly	Bimonthly	Quarterly
Compressor Station	N/A	N/A	N/A	Quarterly	Monthly	Quarterly	Monthly	Quarterly

* **Well site** means one or more surface sites that are constructed for the drilling and subsequent operation of any oil well, natural gas well, or injection well. For purposes of the fugitive emissions standards at [§ 60.5397a](#), well site also means a separate tank battery surface site collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water from wells not located at the well site (e.g., centralized tank batteries).

** Conduct an inspection using auditory, visual, olfactory, **OR any other detection method after the initial survey.**

Comparison of Pneumatic Requirements

Facility Type	0000	0000a	0000b	0000c
	Pneumatic Controllers			
Natural Gas Processing Plant	Zero VOC emissions	Zero VOC emissions	Zero methane & VOC emissions	Zero methane & VOC emissions
All other facility types	<6 scf/h VOC emissions	<6 scf/h VOC emissions	Zero methane & VOC emissions	Zero methane emissions
	Pneumatic Pumps			
Natural Gas Processing Plant	N/A	Emission rate of zero	must not be powered by natural gas	must not be powered by natural gas
Well Sites	N/A	Reduce emissions by 95%	must not be powered by natural gas	must not be powered by natural gas
Compressor Stations	N/A	N/A	must not be powered by natural gas	must not be powered by natural gas
Transmission & Storage	N/A	N/A	must not be powered by natural gas	must not be powered by natural gas

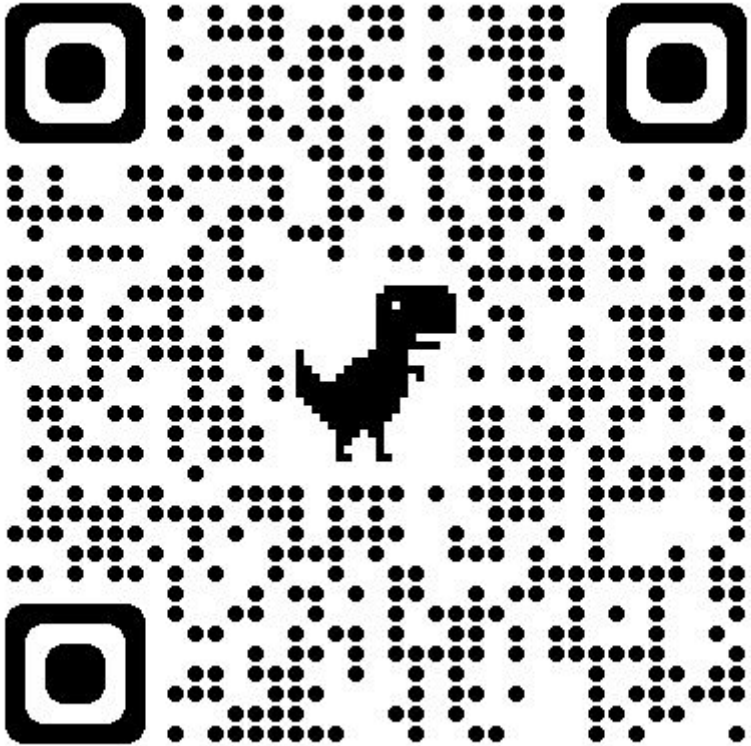
Comparison of Compressor Requirements

Facility Type	0000	0000a	0000b	0000c
Well sites (as defined in 0000/a)	N/A	N/A		
Well sites (as defined in 0000b/c)			N/A	N/A
Centralized Production Facility			Annual flow rate measurement*	Annual flow rate measurement*
Compressor Station	Replace rod packing every 3 years of 26,000 hrs	Replace rod packing every 3 years of 26,000 hrs	Annual flow rate measurement*	Annual flow rate measurement*

* Leak rate of ≥ 2 scf/m requires that the rod packing be replaced.



Access Free Additional Resources



- **OOOOa** – History and requirements
- **OOOOb** – Overview and requirements
- **ABCs of OOOO** – Comparison of the different OOOO rules
- **MRR** – Subpart W proposed amendments
- **Subpart W amendments redline document**
- **Complimentary audit to know how these new rules will impact your business**

Upcoming Webinars

1-The ABC's of NSPS OOOO

2-The History of Fugitive Emissions Regulations

3-Subpart W Deep Dive

And much more...



Got Questions?

Brian Kromer

970-227-5935

bkromer@step2compliance.com

MaryBeth Clifford

mbclifford@step2compliance.com

716-938-0103

step  compliance