

Clean Air Act Advisory Committee -CAAAC-

April 4, 2024



Agenda

Introductions

MEPA

Regulatory Update

Methane, PM NAAQS, MATS, Power Plant Rule
Affirmative Defense

Inspection Season

Air Quality Bureau Updates

Organizational Chart
IBR
Emission Inventories

CAAAC

Introductions

Name and Affiliation

In the room

On Teams





Montana Environmental Policy Act

<https://deq.mt.gov/about/MEPA>

Regulatory Update

Methane from Oil & Gas Sources

PM-2.5 NAAQS

Mercury & Air Toxics Standards (MATS)

Power Plant Rule (GHGs from EGUs)

Affirmative Defense – Title V Permits

Methane from Oil & Gas Facilities

Three Actions:
Regulatory Revision
Super Emitter Program
Waste Emissions Charge

NSPS 0000

Facilities constructed, modified, or reconstructed between August 23, 2011 – September 18, 2015

Methane and VOC

NSPS 0000a

Facilities constructed, modified, or reconstructed between September 18, 2015 – December 6, 2022

Methane and VOC

NSPS 0000b

Facilities constructed, modified, or reconstructed after December 6, 2022

Methane and VOC

Effective May 7, 2024

EG 0000c

Facilities that were constructed, modified, or reconstructed on or before December 6, 2022

Methane

Plan is due March 9, 2026

Compliance due 3 years after plan is submitted (March 9, 2029)



Oil and Natural Gas Sources Covered by EPA's Final New Source Performance Standards (NSPS) and Emissions Guidelines, by Site

Location and Equipment or Process Covered	Required to Reduce Emissions under EPA Rules	Rules that Apply			
		2012 NSPS for VOCs (0000)	2016 NSPS for Methane & VOCs (0000a)	2023 Final NSPS for Methane & VOCs (0000b)	2023 Final Emissions Guidelines for Methane (0000c)
Oil and Natural Gas Well Sites					
Completions of hydraulically fractured wells	✓	●	●	●	
Compressors at centralized tank batteries	✓			●	●
Fugitive emissions	✓		●	●	●
Liquids unloading	✓			●	● ¹
Process controllers	✓	●	●	●	●
Process pumps	✓		●	●	●
Storage vessels	✓	●	● ¹	●	●
Sweetening units	✓	● ²	● ²	● ²	● ²
Associated gas from oil wells	✓			●	●
Natural Gas Gathering and Boosting Compressor Stations					
Compressors	✓	●	●	●	●
Fugitive emissions	✓		●	●	●
Process controllers	✓	●	●	●	●
Process pumps	✓			●	●
Storage vessels	✓	●	● ³	●	●
Sweetening units	✓	● ²	● ²	● ²	● ²
Natural Gas Processing Segment					
Compressors	✓	●	●	●	●
Fugitive emissions	✓		●	●	●
Process controllers	✓	●	●	●	●
Process pumps	✓		●	●	●
Storage vessels	✓	●	● ³	●	●
Sweetening units	✓	● ²	● ²	● ²	● ²
Transmission and Storage Segment					
Compressors	✓		●	●	●
Fugitive emissions	✓		●	●	●
Process controllers	✓		●	●	●
Process pumps	✓			●	●
Storage vessels	✓	●	● ³	●	●

Methane from Oil & Gas Facilities

Leak detection and repair at well sites and compressor stations

- Inspection frequency – more source types and more frequent.
- Leak repair timelines – audible, visual, and olfactory (AVO) inspections, 15 days for initial + 15 days for final. Optical gas imaging (OGI) inspections, 30 days for initial + 30 days for final.
- Use of alternative detection technologies – onsite sensor networks, aerial flyovers, continuous monitoring systems.
- Well closure requirements – required until closure of the well, final OGI required, well closure plan to EPA.

Flaring restrictions

- Limits flaring of natural gas from new oil wells except in emergencies.
- Existing oil wells that emit above 40 tpy and modified/reconstructed oil wells at any emissions level, flaring is only permitted if there are no available sales lines and alternative to routing flaring are not feasible.
- Routing flaring is only permitted at existing oil wells at or below the 40 tpy emissions threshold.
- Flares that are permitted to be used are subject to a variety of standards and work practices to ensure they achieve a 95% reduction in methane emissions.

Standards for equipment

- Zero-emissions standards for most pneumatic pumps and controllers.
- Non-well site compressors (dry, wet, reciprocating) are subject to volumetric flow rate standards.

Regulating venting during oil and gas operations

- Liquids unloading – must “minimize or eliminate venting of emissions”. Facilities have the option of adopting a numeric emissions reduction standard of 95% by routing to a control device.
- Well completions – must route all flowback to a storage or completion vessel and separator and use any recovered gas onsite. If not technically feasible, recovered gas should be combusted.

Super emitter response program

- Allows 3rd parties to use remote sensing technologies to monitor for leaks of methane of over 100 kg/hour or more (super-emitter events).
- 3rd parties, EPA, owner/operator – no state involvement

Waste Emissions Charge

HOW IT WORKS

1

GHGRP Reporting

Operator reports annual CO₂e emissions from a facility under the GHGRP
If < 25,000 metric tons (mt) CO₂e, WEC not applicable
If > 25,000 mt CO₂e it becomes an “applicable facility”

2

Determine Methane Emissions “Threshold”

Determine the facility’s methane emission “threshold” for the industry segment

3

Determine Facility “Applicable Emissions”

Reported methane emissions from subpart W (in mt) less the emission threshold = “facility applicable emissions”

4

Determine Facility “Waste Emissions”

LESS Facility exemptions → EQUALS “Waste Emissions” for the facility

5

Determine “Net” WEC Emissions of Methane

An operator can “net” waste emissions from multiple facilities, summing total waste emissions

6

Determine “Waste Emissions Charge”

Cost per metric ton of Methane:

\$900 in 2024

\$1,200 in 2025

\$1,500 in 2026 and beyond

Subpart W Sources

Onshore petroleum and natural gas production

Offshore petroleum and natural gas production

Onshore petroleum and natural gas gathering and boosting

Natural gas processing

Gas transmission compression

Natural gas transmission pipeline

Underground natural gas storage

Liquefied natural gas import and export equipment

Liquefied natural gas storage

Oil & Gas Outreach

Survey

Still under development

Oil & Gas Meetings

June 25-27, 2024

Shelby

Billings

Sidney

PM2.5 NAAQS

National Ambient Air Quality Standard

- PM2.5 - Particulate Matter less than 2.5 um in diameter – wood combustion → **smoke**
- Annual standard is being lowered from 12.0 ug/m³ to 9.0 ug/ m³
- Currently reviewing data to determine what values are exceptional events and should be removed from the regulatory data set.
- We will provide recommendations to EPA with what parts of state are nonattainment, attainment, or unclassifiable based on data from 2021-2023, EPA will use 2022-2024 data.
- Primary areas of concern: Libby, Frenchtown
- Secondary areas of concern: Columbia Falls, Helena

FEBRUARY 7, 2024

Revised PM2.5
NAAQS
Promulgated by
EPA

SEPTEMBER/
OCTOBER 2024

Initial area
designation
recommendations
and technical
support document
posted; public
hearing
announced and
comment period
begins

OCTOBER/
NOVEMBER 2024

Comment period
ends and public
hearing held

JANUARY 7, 2025

Final area
designation
recommendations
and response to
comments
submitted to
Governor

FEBRUARY 7, 2025

Governor submits
recommendations
to EPA

FEBRUARY 7, 2026

EPA designations
are made final

MATS

Mercury and Air Toxics Standards

April 24, 2023 - Proposed Rule

1. Tighten the surrogate filterable particulate matter (fPM) standard for demonstrating compliance with the emissions limits for non-mercury metal hazardous air pollutants (HAPs) from 0.03 lb/MMBtu to 0.010 lb/MMBtu.

2. Require continuous emissions monitoring systems (CEMS) for demonstrating compliance with the fPM standard.

→ Draft final rule is currently at EPA's Office of Management and Budget for interagency review and expected to go final in **April 2024**.

Power Plant Rule

GHGs from EGUs

NSPS for GHG Emissions from New and Reconstructed EGUs; EG for GHG Emissions from Existing EGUs; and Repeal of the Affordable Clean Energy Rule

May 23, 2023 – Proposed Rule

1. NSPS for new gas units
2. EG for existing coal units
3. EG for existing gas units over 300 MW that ran more than 50% of the time

February 29, 2024 – EPA Announcement

1. Strengthen NSPS for gas units and EG for existing coal units
2. Remove EG for gas units will be removed from the current proposal.

March 26, 2024 – Nonregulatory Docket Opens

1. EPA is pursuing a suite of rulemakings to address GHG emissions, air toxics, and emissions of nitrogen oxides from natural gas turbines in the power sector.
2. <https://www.regulations.gov/docket/EPA-HQ-OAR-2024-0135>, closes May 28, 2024.

April 2024 – Final rule expected

Removal of Title V Emergency Affirmative Defense Provisions

Background:

- These provisions established an affirmative defense that sources could have asserted in enforcement cases brought for noncompliance with technology-based emission limitations in operating permits, provided that the exceedances occurred due to qualifying emergency circumstances.
- July 21, 2023, EPA published a final rule repealing the affirmative defense provisions because they are inconsistent with EPA's interpretation of the enforcement structure of the Clean Air Act.
- It is necessary for states whose Title V programs contain affirmative defense provisions to submit revisions to EPA to remove such provisions from their EPA-approved Title V programs.

Our Plan:

- We will remove "Section F" from Title V operating permits as we process renewals and unrelated, significant permit modifications.
- We will remove ARM 17.8.1214(5) – (8) from our rules.

2024 Inspection Season

Permitted Facilities

Registered Oil and Gas

Registered Portables

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Permitted Facilities

- Federal Fiscal Year (October – September)
- “A” Sources 2-year cycle
- “Mega” Sources 3-year cycle
- “Synthetic Minor” Sources 5-year cycle
- 32 Federal inspections planned for 2024
- 29 State inspections planned for 2024

Registered Oil & Gas

- Approximate 5-year inspection cycle
- Focus on sites that have not been seen in 5+ years
- Minimum of 200 site inspections for 2024

Registered Portables

- Will begin in April
- Focus:
 - Dust control
 - Opacity requirements
 - Asphalt plant particulate emissions
- 61 site inspections planned

Air Quality Bureau Updates

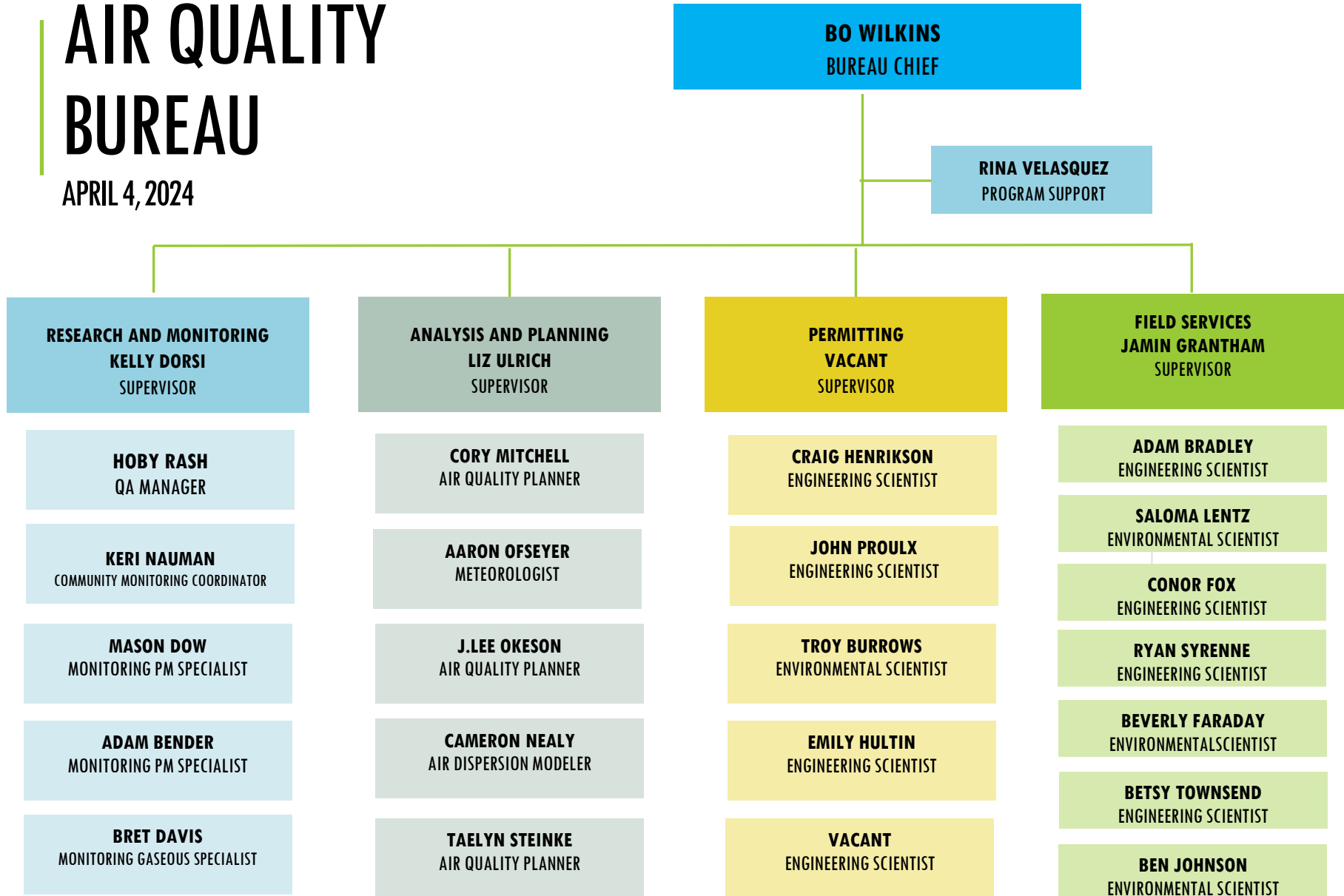
Organizational Chart & Staffing

Incorporation By Reference (IBR)

Emission Inventories

AIR QUALITY BUREAU

APRIL 4, 2024



Questions?

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