Update Presentation to the Southern Ute Indian Tribe/State of Colorado Environmental Commission

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October 29, 2025



Overview

- EPA Emissions Guidelines (EG) 0000c
- Other recent and upcoming Colorado rulemaking actions
- Endangerment finding
- Greenhouse gas reporting



Emissions Guidelines 0000c



EPA's Emission Guideline (EG) 0000c

- In March 2024, EPA finalized new rules for reducing methane emissions at certain oil and gas facilities and equipment: 40 CFR Part 60, Subpart OOOOc Emissions Guidelines for Greenhouse Gas Emissions from Existing Crude Oil and Natural Gas Facilities.
 - Proposed deadline extension for state plan submittal from March 2026 to January 2027.
 - EPA has also announced plans to reconsider some or all of the rule.
- States with oil and gas operations must adopt requirements for certain oil and gas "designated facilities" based on the Emission Guidelines.
 - Colorado has many existing requirements for designated facilities that align with or exceed the Emission Guidelines.
 - Colorado adopted requirements for pneumatic controllers and pumps (two designated facilities) in February 2025.

Natural Gas Industry

Upstream Natural Gas

Exploration and Production at Well Production Facilities





Raw gas

Raw gas

Midstream Natural Gas Gathering, Compression, and Processing





Compressor station(s)



Pipeline-quality gas

Natural Gas Transmission, Storage, and Distribution to End Users





What are "designated facilities"?

Equipment or process	Location	Summary of requirement	
Well liquids unloading	Well site	Best management practices to reduce emissions	
Associated gas		Recover and route gas to sales line, onsite fuel, reinjection	
Centrifugal compressor	Centralized production facility, natural gas	Maintain a volumetric flow rate	
Reciprocating compressor	processing plant, compressor station		<u> </u>

In EPA's 0000c, "designated facilities" are subject to emissions reductions requirements.



What are "designated facilities" (continued)?

Equipment or process	Location	Summary of requirement	
Process controller	Well site, centralized production facility, natural gas	Operate with zero emissions	
Pump	processing plant, compressor station		
Storage vessel		Reduce emissions by 95%	
Fugitive emissions		Periodic leak inspection and repair	

In EPA's 0000c, "designated facilities" are subject to emissions reductions requirements.



- Colorado is proposing revisions to the State's oil and gas rules to align with EPA's Emission Guideline OOOOc.
 - Regulation Number 7 already includes requirements for oil and gas equipment and operations, but not all align with the Emission Guidelines.
- The Division is evaluating revisions related to requirements for
 - Compressors.
 - Gas plants.
 - Transmission and storage segment equipment.
 - Wellhead-only production facilities.
- Additional proposals will be provided to the Air Quality Control
 Commission concerning enclosed combustion devices and closed vent systems.

Equipment	Location	Current Requirements	Potential Proposed Requirements		
Storage tanks with the potential to emit methane equal to or greater than 20 tons per year	Transmission and storage segment practices to reduce emission and compliance with a methane intensity target	management	Reduce emissions by 95%		
Fugitive emissions at compressor stations			with a methane	and compliance with a methane	Inspect for leaks quarterly
Compressors		intensity target	Maintain volumetric flow rates		
Natural gas-driven pneumatic controllers and pumps at compressor stations			Operate with zero emissions		

Equipment	Location	Current Requirements	Potential Proposed Requirements
Wet seal centrifugal compressors	Centralized production facility, natural gas processing	Reduce emissions from wet seal fluid degassing systems by at least 95%	Maintain volumetric flow rate at or below 3 scfm per seal
Dry seal centrifugal compressors	plant, compressor station	None	Maintain volumetric flow rate at or below 10 scfm per seal
Reciprocating compressors		Replace rod packing every 26,000 hours of operation or every thirty-six (36) months	Maintain volumetric flow rate at or below 2 scfm per cylinder

Department of Pu Health & Environ

Equipment	Location	Current Requirements	Potential Proposed Requirements
Fugitive emissions	Wellhead-only well site	Design, operate, and maintain to minimize emissions; inspect for leaks	Clarify leak inspections are based on frequencies for well production facilities
	Natural gas processing plant	Inspect specific equipment for leaks at variable frequencies based on older EPA rules (NSPS OOOO or OOOOa)	Inspect specific equipment for leaks at variable frequencies based on newer EPA Emission Guidelines

NSPS = New Source Performance Standards



Equipment	Location	Current Requirements	Potential Proposed Requirements
Vapor recovery units	Exploration and production operations, disposal well facilities, well sites, compressor stations, natural gas processing plants	None	Add standard certification, operation, inspection, and recordkeeping requirements



Recent and upcoming Colorado rulemakings



Adopted strategies maturing through 2032

- Colorado Clean Cars
- Advanced Clean Trucks/Low NOx Omnibus
- Greenhouse Gas Intensity Program for Upstream Oil and Gas Operators
- NOx Reduction Program for Upstream Oil and Gas Operators
- Midstream Fuel Combustion Equipment Rule
- Stationary Engine Standards
- Pneumatic Controller/Pump Retrofit Program
- Greenhouse Gas Emissions and Energy Management Program
- Energy and Carbon Management Commission Cumulative Impacts/Enhanced Standards and Practices Rules
- Vehicle Inspection/Maintenance Program Improvements



Upcoming strategy proposals and rulemakings

- Ozone state implementation plans (November 2025)
- Municipal solid waste landfill methane reductions (December 2025)
- Emission guideline OOOOc (February 2026)
- Air toxics
 - Monitoring and reporting
 - Priority toxic air contaminants
 - Emission control strategies (April 2026*)
- Use restrictions for summer-time lawn and garden equipment (May 2026*)



^{*} Pending Air Quality Control Commission approval of rulemaking request.

What is a State Implementation Plan?

A State Implementation Plan (SIP) is a document outlining the rules and actions a state takes to meet National Ambient Air Quality Standards (NAAQS) set in the federal Clean Air Act.

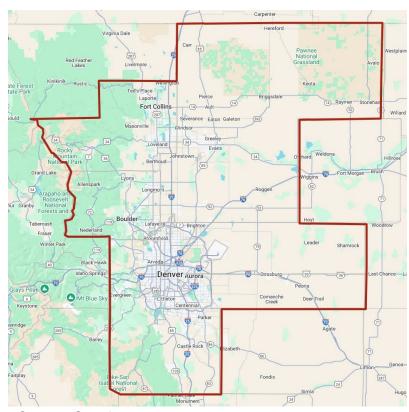
A state implementation plan includes three main sections.

- State-adopted control measures.
 - Statutes, regulations, or source-specific requirements
- State-submitted "non-regulatory" components.
 - Maintenance plans, emissions inventories, permitting programs, etc
- Additional requirements included in the federal Clean Air Act.

A new state implementation plan is required anytime a state's ozone nonattainment classification level changes.



Ozone nonattainment area



Source: Google maps

Nine counties

- Adams
- Arapahoe
- Boulder
- Broomfield
- Denver
- Douglas
- Jefferson
- Weld
- A portion of Larimer



Proposed revisions estimated to reduce emissions

Regulation No. 7:

- Major stationary source reasonably available control technology for transmission and storage operations.
- Separator maintenance restrictions.
- Extension of NOx intensity program.

Regulation No. 11:

Identification of high emitting vehicles

Regulation No. 25:

 Major stationary source reasonably available control technology for aerospace coatings.

Regulation No. 26:

- Expansion of reasonably available control technology for combustion equipment at major stationary sources.
- Major stationary source reasonably available control technology for industrial waste facilities.

Regulation No. 7 proposed revisions

Strategies for reducing pollution from oil and gas operations	Summary of revision
Extension of nitrogen oxides (NOx) intensity program	Reduce the amount of pollution that a facility is allowed to release, which is based on each facility's production level, to reach a target goal of 50% reduction in emissions by 2030.

Calendar year	Majority operator (tons NOx/kBOE)	Minority operator (tons NOx/kBOE)
2027	0.024	0.052
2028	0.021	0.047
2029	0.021	0.046
2030 +	0.017	0.037

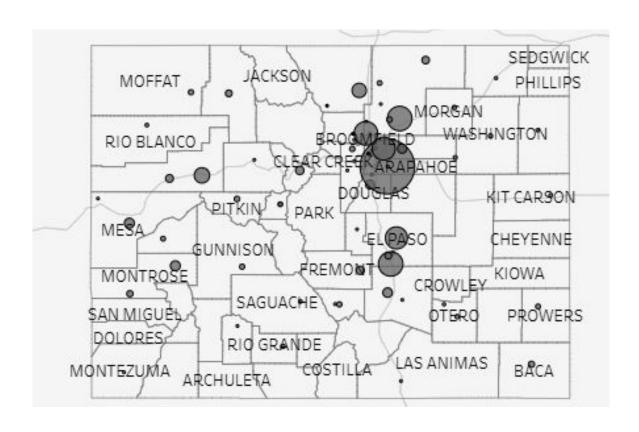
Landfill methane rule

Pursuing as part of the state's efforts to help achieve the 2030 greenhouse gas reduction target of 50% below 2005 levels established under House Bill 19-1261.

- Colorado's Greenhouse Gas Inventory reported that municipal solid waste (MSW)
 landfills emitted 1.445 million metric tons of carbon dioxide equivalent in 2020. That
 accounts for 1.12% of state-wide emissions excluding the Land Use, Land-Use Change
 and Forestry (LULUCF) sector (1.02% including LULUCF).
- Landfill gas consists primarily of methane and carbon dioxide. Landfill gas results from the breakdown of organic material, like food and paper. Methane is a greenhouse gas that is about 84 times more potent than carbon dioxide.
- The proposed rule would require
 - More MSW landfills in Colorado to control emissions based on the amount of waste currently deposited at a landfill (waste-in-place) and the amount of methane emissions produced.
 - Periodic surface emissions monitoring (SEM).
 - Phasing out open flares to require enclosed flares.

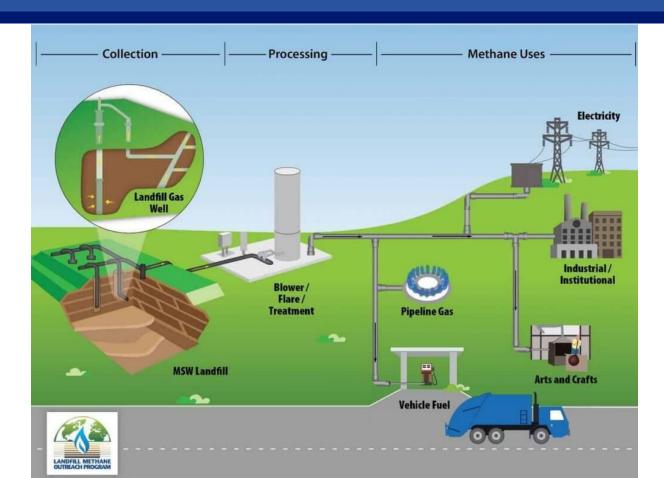


Locations of MSW landfills in Colorado





Landfill gas collection and control systems





Air toxic contaminants

- HB 22-1244
 - New monitoring stations (began operating in 2025).
 - Reporting (expanded reporting to begin in 2027).
 - Five priority toxic air contaminants (PTAC) identified.
 - Benzene
 - ethylene oxide
 - Formaldehyde
 - hexavalent chromium
 - hydrogen sulfide
 - Chronic health-protective benchmarks for the PTAC identified (being provided to the General Assembly for approval).
 - Air toxics permitting needs assessment (being provided to the General Assembly in December 2025).
 - Emission control strategies to reduce PTAC emissions being proposed to the Air Quality Control Commission for adoption in April 2026.



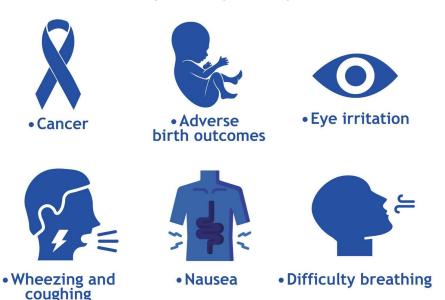
Upcoming Schedule for Priority Air Toxics





Potential health risks from priority air toxics

- Many air toxics were evaluated. These 5 priority air toxics were estimated to have some of the highest health risks in certain areas of the state.
- Extended or prolonged exposure to air toxics can cause issues such as:



Air toxics can impact your health, but whether they harm you depends on:

- What you're exposed to.
- How you're exposed.
- How much, how long, and how often you are exposed.

Not all people have the same risk. Age, gender, genetics, lifestyle, and other factors also play a role.



Five priority air toxics and where they come from

- 1. Benzene
 - Vehicle exhaust, oil & gas operations, and residential wood burning.
- 2. Hydrogen sulfide
 - Waste disposal, such as wastewater treatment and landfilling, petroleum refining, and natural gas processing.
- 3. Ethylene oxide
 - Medical equipment sterilization facilities and other sterilization processes.
- 4. Hexavalent chromium compounds
 - Coal fired power plants, diesel fueled equipment, metal work.
- 5. Formaldehyde
 - Vehicle exhaust and industrial sources.



Regulation 29 - lawn and garden

- Currently only impacts local, state, and federal entities and their contractors
- Use restriction on gas-powered, handheld lawn and garden equipment during higher ozone months (June 1 August 31).
 - 10hp and under for local and federal entities.
 - 25hp and under for state entities.
- Begins this year (2025), with reporting of equipment use due in 2026.
- Evaluating similar use restrictions for equipment used by commercial lawn and garden service providers in the ozone nonattainment area.
 - String trimmers, blowers, edgers, hedge trimmers, push lawn mowers.
 - Target 90% transition to non-gasoline powered equipment by 2032.



EPA's endangerment finding



EPA proposal

- EPA proposed to rescind the 2009 greenhouse gas endangerment finding, which found that the six greenhouse gases were air pollution that may endanger public health and welfare.
 - EPA would also repeal all greenhouse gas emission standards for lightduty, medium-duty, and heavy-duty vehicles.
 - Rescission could have impacts on rationale for regulating power plant or aircraft engine greenhouse gas emissions.
- Federal administration has also rescinded California's waivers allowing California to set its own vehicle emissions standards.
- Colorado adopted vehicle standards in Regulation Number 20 based on California's vehicle standards and waiver.



Greenhouse gas reporting programs



EPA proposal

- EPA proposing to end the federal greenhouse gas reporting program.
 - Program requires 47 source categories to annually report their greenhouse gas emissions to EPA.
 - Information currently collected by the federal electronic greenhouse gas reporting tool (e-GGRT).
 - Collecting comments on the proposal through November 3.
- Colorado uses the reported emissions information to develop strategies and evaluate progress to meeting Colorado's climate goals.



