



View of the San Juan Mountains in autumn.

Ozone Interim Committee

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November 8, 2023



COLORADO
Department of Public
Health & Environment

Agenda

- Background: PEER complaint on minor source modeling
- Independent Troutman Report
- U.S. EPA Office of Inspector General Report
- Today's enhanced minor source modeling program
- CDPHE's ongoing air quality work



U.S. EPA Major vs. Minor Source Requirements

Major

- Federal requirements regarding major source permits are clear
- The source must demonstrate they will not exceed the NAAQS
- Extensive guidance provided for modeling in issuing permits
- Expressly requires modeling for Major New Source Review



Minor

- Modeling for Minor New Source Review is discretionary
- Federal modeling guidance is unclear
- The Clean Air Act leaves states to develop regulatory programs for minor sources
- Does **not** require minor sources to demonstrate through modeling they won't exceed NAAQS



Background: A 2010 Change in NO₂ and SO₂ NAAQS

- A significant factor leading to the PEER complaint was a lack of clarity and guidance from the EPA relating to modeling requirements for minor sources following the 2010 adoption of new 1-hr NAAQS for NO₂ and SO₂.
- In the absence of further guidance from EPA, the Division's Permitting Unit and Modeling Unit each developed separate policies on when to model minor sources.
- The Permitting Unit's policy relied upon EPA's existing emission thresholds for major sources--the guidance for Prevention of Significant Deterioration (PSD)--to determine when to require modeling as part of the NAAQS permitting evaluation process. The rationale was that minor sources should not be regulated more stringently than major sources. This guidance was documented in the "PS Memo 10-01" and used by the Permitting unit within the Division.
- The two policies has longed caused confusion and so in March 2021, management in the Air Pollution Control Division decided that the PS MEMO 10-01 would be the sole policy used by the division. Shortly after this action, the complaint was filed.
- At that point, CDPHE Executive Director Jill Hunsaker Ryan reached out to the Attorney General to request they look into the allegations. The AGO contracted with Troutman Pepper Hamilton Sanders LLP to conduct an independent investigation.



Troutman Report (September 2021)

“The issues raised in (PEER’s) letter to the EPA OIG arise in the context of a highly technical and complex facet of air permitting for stationary sources of air pollutants: the use of computer generated simulations known as “air quality models” to predict whether a source or project emitting air pollutants will violate the NAAQS.”



Troutman Report Findings

1. **Modeling of minor sources is discretionary:** However, the Clean Air Act requires that state permitting authorities have a justified and enforceable means of ensuring all sources comply with EPA's health-based NAAQS.
2. **There is no federal guidance on modeling for minor sources:** There is a lack of EPA guidance on when and how to model minor sources.
3. **The Air Pollution Control Division had two conflicting policies: Both arose in 2010 as a result of changes to the NO₂ and SO₂ standards.** The Permitting Unit used a threshold for major sources, commonly used in other states. The Troutman report said it was not a “well supported policy to ensure minor sources would not exceed the NAAQS.” The Modeling unit used “a well-supported technical analysis.” The Troutman report called it “overly conservative.”
4. **The decision to use the EPA's threshold for existing major sources to determine whether to model minor sources, was not motivated by an intent to circumvent the law, but rather to resolve the conflict of having two policies.**



Troutman Report Findings

5. CDPHE issued permits with unaddressed NAAQS modeling exceedances, but modeled exceedances don't necessarily indicate that a permitted minor source has violated or will violate the NAAQS.
6. **Issues with the Cripple Creek & Victor Gold Mine (CC&V) Permit:**
 - a. Claims that CDPHE suppressed information or falsified data in the context of one the CC&V permits were unsubstantiated.
 - b. Although the modeling analysis for CC&V contained errors, CDPHE used direct air monitoring to demonstrate compliance with the NAAQS.
 - c. There was a potential conflict of interest between the permittee and a division leader, which was resolved before issuing the final permit.
7. **The complaint raised valid concerns, but some were “overstated.” The complaint is “incorrect” in alleging that the Air Division must conduct air quality modeling for all minor source permits. However, the policy was inadequate to ensure minor sources would not exceed the NAAQS. Even so, the Division’s policy did not necessarily result in NAAQS exceedances.**

EPA Office of Inspector General Report (July 2022)

- Acknowledged CDPHE was already taking voluntary measures to address concerns, such as enhancing coordination between minor source modeling and permitting teams.
- Provided recommendations for improving minor source modeling program, including:
 - Increasing transparency and ensuring proper documentation
 - Affirming NAAQS through clear language in permits
 - Review of 11 minor source permits
 - Regular meetings between EPA and CDPHE to provide status updates
- EPA recommendations aligned with those provided by the subject matter expert panel CDPHE convened after the Troutman report.



CDPHE's Response to the Troutman and OIG Reports

1. **Combined the Permitting Unit and Modeling Unit:** This improved coordination between the air division's permitting and modeling teams.
2. **Extensive engagement with scientific experts and public:** Reviewed best practices among model states; convened an outside panel of subject matter experts to help revise minor source modeling and permitting standards, then sought public input (2022).
3. **Updated and published new minor source modeling guidelines:** These include more protective thresholds in the non-attainment area as well as in disproportionately impacted communities. (2023)
4. **Improved the general permit program to require individualized NAAQS analyses:** Minor sources now need to determine whether modeling is required prior to submission of an application and submit that documentation as part of their permit application.
5. **Improved the documentation of permit analyses:** Implemented processes to ensure future minor source permit records are complete and properly document NAAQS compliance – including pre-permit modeling determinations. This documentation is now more robust and transparent than other states.
6. **Hold regular meetings with PEER and the EPA.**
7. **Reviewing 11 permit records in response to the EPA OIG report.**



Correcting Information Previously Shared with Committee

Misleading or incorrect previous testimony:

The state’s permitting program is “inadequate to ensure minor sources would not exceed the NAAQS.”

- This quote is directly from the Troutman report, however the paragraph directly following, says “APCD’s inadequate policy regarding minor sources did not necessarily result in actual NAAQS exceedances” and “the state of Colorado remains in attainment for the NAAQS that are the primary focus of the letter to EPA—the 1-hour NO₂ and SO₂ NAAQS”

“In July 2022, the EPA responded to the whistleblowers’ complaint, validated many of their allegations, found that the state’s permitting risks harm to air quality and public health, and confirmed that permits identified in the whistleblowers’ complaint were issued illegally, despite modeled NAAQS violations.”



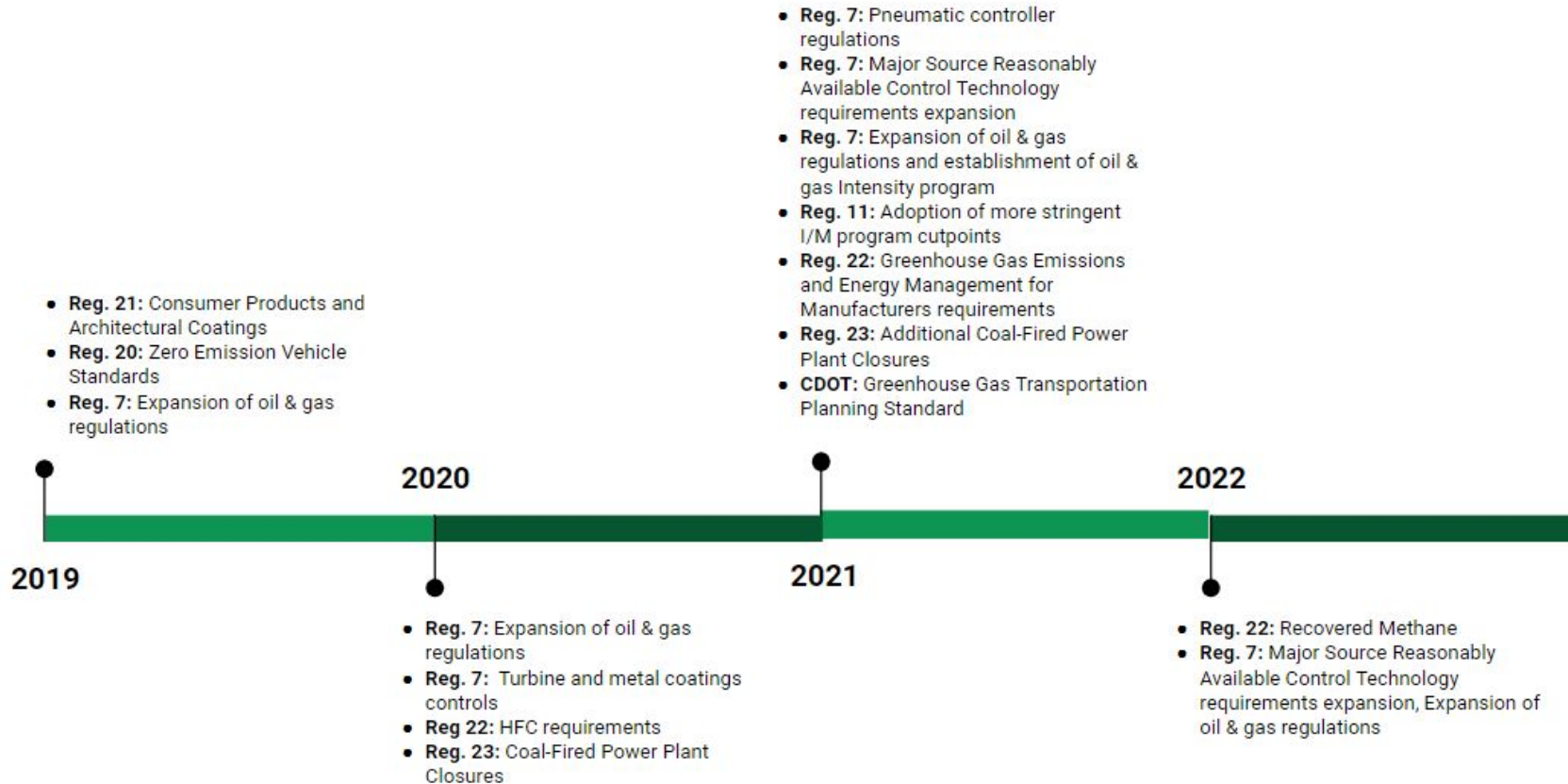
CDPHE's Ongoing Work in Minor Source Permitting

The air division continues improving the minor source permitting process by:

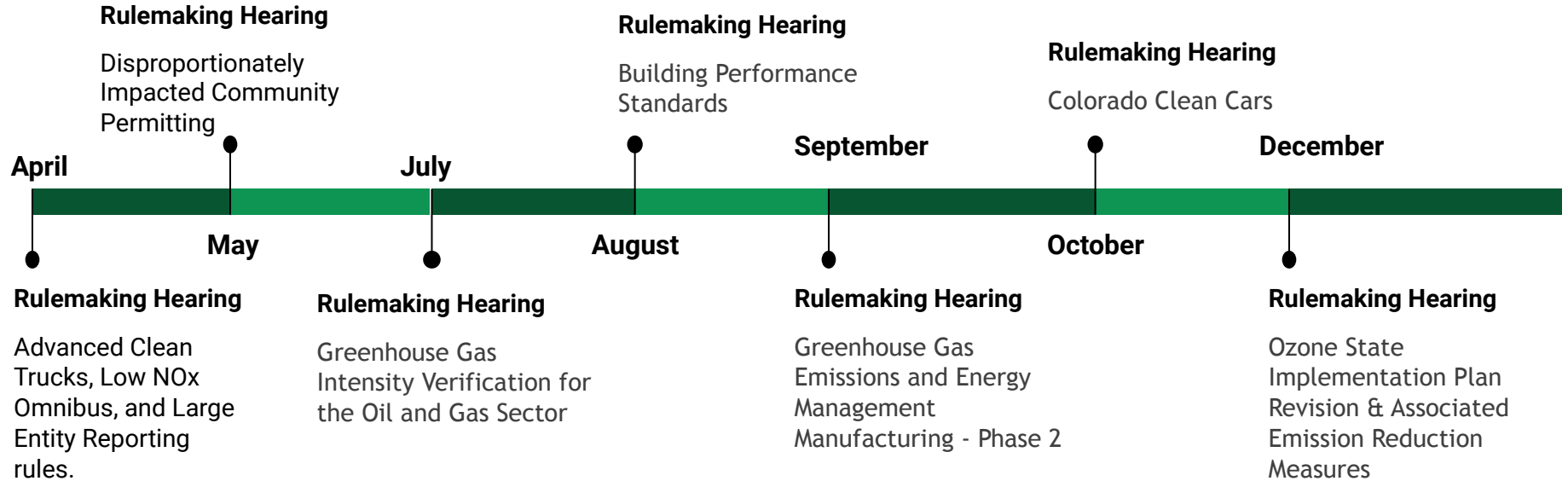
- Enhancing transparency and accessibility, including for new and historic records.
- Prioritizing data modernization and a continuous quality improvement approach.
- Committing to evaluating modeling thresholds for EPA's other criteria pollutants.
 - In particular, PM_{2.5}, which was raised as a concern by CDPHE's subject matter expert panel and associated public comments.
- Committing to continue reevaluating nitrogen oxides and sulfur dioxide thresholds in the future based on emerging research.



CDPHE's Ongoing Work to Address Ozone and Other Pollutants: Recent Rulemakings (2019-2022)



CDPHE's Ongoing Work to Address Ozone and other Pollutants: Recent Rulemakings (2023)



Air Quality Vision: To be a modern, state-of-the-art air quality division, recognized as a national leader

- **185 new FTE hired since April 2022 including many ozone related positions:**
 - 8 new permit modelers (only 2 in Jan of 2022)
 - 20 new oil and gas program staff
 - 13 new air toxics and ozone precursor monitoring staff
 - 20 new compliance and enforcement staff
 - 7 new mobile sources program staff
- Significant investments in data modernization including updating our 30+ year old permitting database to a multi-million dollar data management and visualization platform
- Embedding Environmental Justice initiatives into all our programs and decisions
- Implemented one of the most comprehensive minor source modeling program in the country.
- Made significant investments in building out our new mobile monitoring systems



MARMOT - Solar module trailer



MOOSE - Community
Monitoring and O&G



CAMML - Deployed between communities and
pre-production O&G



EMU & CAT - Community
Monitoring of 4 fence line
monitoring facilities



CDPHE 2024 Legislative Agenda Item

Air Quality Cumulative Impacts and Environmental Justice 2.0

- Perform up to two “Environmental Equity and Cumulative Impact Analyses”
- Propose a refinery-specific rulemaking and hire a refinery expert to develop the refinery regulation and perform increased oversight
- Establish a two-person rapid response team for additional community engagement capacity during and after emissions exceedance events
- Empower local governments to limit new or increased emissions of pollutants with health impacts



CDPHE FY 2024-25 Budget Requests

- Increased staff for inspections by air pollution, hazardous waste, and water quality divisions focused on Disproportionately Impacted (DI) communities (3.0 FTE)
- New community engagement staff in air pollution and water quality divisions to engage DI communities about CDPHE enforcement activities (2.0 FTE)
- New Spanish translation specialist for CDPHE to translate information about enforcement actions, inspection reports, other related materials (1.0 FTE)
- Implementing Environmental Justice Action Task Force recommendations (3.5 FTE)
 - Interagency environmental justice coordination
 - Develop measurable goals for eliminating environmental health disparities
 - Create policies and guidelines on best practices for community engagement

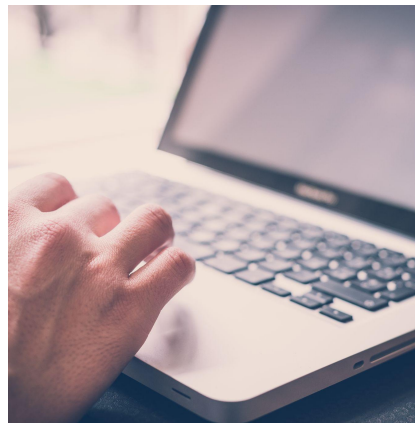


Emissions
reductions

Environmental
justice
advancements

Nation-leading
standards

Enhanced
Modeling



Community
Engagement



Data
Modernization





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Questions?



References

- **Troutman Report:**
<https://coag.gov/app/uploads/2021/09/CDOL-Report-210922.pdf>
- **OIG Report:**
https://www.epa.gov/system/files/documents/2022-07/EPA_Region8_CDPHE_NSR_Complaint_Report.pdf
- **Additional EPA Documents:**
<https://www.epa.gov/caa-permitting/epa-report-public-employees-environmental-responsibility-hotline-complaint-no-2021>
- **CDPHE Report to EPA on the 11 Permits Subject to the Complaint:**
https://urldefense.proofpoint.com/v2/url?u=https-3A_oitco.hylandcloud.com_cdphermop_docpop_docpop.aspx-3Fclienttype-3Dactivex-26docid-3D17098742&d=DwMFaQ&c=sdnEM9SRGFuMt5z5w3AhsPNahmNicq64TgF1JwNR0cs&r=gDGgzrOgvLMuROoXm_NaTyOkGwnbTBd2qnkjXrhF7cw&m=SJsLRkXOdsbaW6m7qQSeHzeC-QWoRn0dLTDJqCGDt_KAaH2eyR0ae6l0F0NQCCcX&s=ulQeC1gnRksH_vlq-RDa0F_AEWTK25iTtw-FkF4zxSNM&e=