



November 7, 2023

**Review of CDPHE Undated Report. Review of quality permit modeling and cumulative impacts in response to July 12, 2022 Policy Memo request from Governor Polis to CDPHE, DNR, COGCC**

On July 12, 2022, Governor Polis directed the Colorado Department of Public Health and Environment (CDPHE), the Department of Natural Resources (DNR), and the Colorado Oil and Gas Conservation Commission (COGCC) to undertake further interagency coordination and collaboration in service of the State’s mission to improve air quality, reduce pollution, create a more efficient regulatory process, and protect the State’s most at-risk communities. The first step in implementing these directives is for CDPHE to provide the Administration and General Assembly with “an evaluation of cumulative impacts and air quality permit modeling.”

The Governor’s 2022 letter states:

The Report should include how the Air Pollution Control Division ([Air Division]) considers, models or doesn’t model, and evaluates the air quality impacts of a proposed major or minor source or activity, and the cumulative air quality impacts of the proposed source and other sources. The Report should also articulate the scientifically based and capacity-based criteria used to prioritize when to model sources for permitting purposes with limited resources.

**We recommend that the legislature request Environmental Protection Agency (EPA) audit CDPHE minor source permits issued since it issued its’ July 2022 EPA OIG report to determine if CDPHE has actually followed EPA’s recommendations and also to determine if CDPHE is evaluating the cumulative impacts of the sources in the area when issuing permits. This audit should look into the existence and adequacy of the analysis supporting a NAAQS compliance determination.**

CDPHE has been stating for years - and continues to do so in this document - that modeling is not the only mechanism to determine if a proposed source or activity will cause an exceedance of the National Ambient Air Quality Standards (NAAQS). However, it has never been able to explain what are the other mechanisms that exist nor has it been able to implement any technically or legally viable alternative mechanism to replace modeling.

For a full decade CDPHE relied on an erroneous policy, PS Memo 10-01, as an alternative to modeling to determine NAAQS compliance. However, the investigation conducted by the Office of the Colorado Attorney General, the “Troutman Report” and the EPA Region 8, “July 2022 Report”, Office of the Inspector General response clearly state otherwise. They concluded that the arguments provided in the memo do not withstand scrutiny and



lacked a justified means of satisfying the requirement in the Colorado SIP, Regulation 3, Part B for ensuring all permits do not allow an exceedance of the NAAQS. It also concludes that CDPHE's decision to rely solely on PS Memo 10-01 failed to ensure minor source permits would not exceed a NAAQS (See Troutman Report at pp. 28 - 32).

Furthermore, EPA has clearly established that "The impacts of new sources that do not yet exist, and modifications to existing sources that have yet to be implemented, can **only** be determined through modeling." (40 CFR 51 Appendix W §1.0.b 2017, emphasis added).

Having established that modeling is the only means to verify NAAQS compliance for new sources and modifications that have yet to be physically implemented (note that an air permit is legally needed prior to start operation of a new source or modification), any other mechanism used in lieu of modeling will either be a qualitative estimate based on professional judgement or will be simply inadequate –just as PS Memo 10-01.

By law, CDPHE must determine whether the construction or modification of minor sources will interfere with attainment of the NAAQS and prevent exceedances of the NAAQS, and while the regulations don't explicitly require modeling, in the absence of modeling, CDPHE must still satisfy its duty to ensure compliance with the NAAQS in some other way. (See Troutman Report at pp. 25 - 26).

To reduce the burden of modeling every single permit application while at the same time satisfying its legal duty of ensuring compliance with the NAAQS, CDPHE has historically relied on emissions thresholds that, in conjunction with other key factors, would help a subject matter expert make a qualitative determination on whether the project would comply with the applicable NAAQS. If such a determination could not be made, modeling would be required.

One of the key factors that would be assessed along with the emissions threshold was the existence of other emission sources at the project site or in the surrounding area, and that in combination with the permitted project could cause a NAAQS exceedance. Other relevant factors also included the existing air quality in the area (i.e. background concentrations), the dispersion conditions at the permitted source, the terrain in the area, and the meteorological conditions.

All these factors were included in the previous versions of the CO Modeling Guidelines, but the existence of nearby sources is not explicitly mentioned in the new 2023 version of this document. This indicates that CDPHE may be evaluating only the permitted source in isolation when making a determination of whether modeling is necessary and when making a qualitative assessment to support a conclusion that the source will not cause a NAAQS exceedance. There is no indication that CDPHE is taking into consideration the



potential cumulative impacts of the nearby sources when making these decisions and reaching NAAQS compliance conclusions without modeling.

In the past, CDPHE management prevented the assessment of cumulative impacts by allowing PS Memo 10-01 to supersede the recommendations of the CO Modeling Guidance and the requirements of the regulations. Now that PS Memo 10-01 has been retired, the new 2023 CO Modeling Guidance seems to be avoiding the assessment of cumulative impacts by ignoring the potential effect of nearby sources when doing qualitative analyses and deciding that modeling is not warranted.

Of all the permit applications received, only a small fraction are required to submit air quality modeling, for the rest, a qualitative analysis at best is relied upon to determine NAAQS compliance. Considering that there are many portions of the state where hundreds of existing facilities crowd small areas with no more than a 10 to 25 mile radius, it is a valid question of how CDPHE determines NAAQS compliance for new sources or modifications within those areas without conducting air quality modeling. One clear example of this situation is Weld County, where most of the oil and gas activity has been and continues to be concentrated and where the majority of the new sources and modifications to existing sources are permitted.

In its July 2022 report, the EPA OIG recommended that CDPHE:

"Ensure that all future Minor NSR permit records are complete and include sufficient documentation to support permit conditions and contain analyses that demonstrate that the permit conditions will not cause NAAQS violations." (See p. 28).

Based on this recommendation, every single air permit issued by CDPHE must include some type of technical analysis to support a NAAQS compliance determination. In a multisource situation where the cumulative impact of the emissions from all sources in the area have the potential to cause a NAAQS exceedance, the permit should include a modeling analysis simply because it becomes extremely difficult to make a defensible qualitative analysis that will support a conclusion of NAAQS compliance. And even such qualitative analysis would involve a great deal of complexity as it would have to assess multiple factors other than the mere emission rate. The 2023 modeling guidance doesn't seem to indicate that that is the case.

We recommend that the legislature request EPA audit CDPHE minor source permits issued since the July 2022 EPA OIG report to determine if CDPHE has actually followed EPA's recommendation referenced above, and also to determine if CDPHE is evaluating the cumulative impacts of the sources in the area when issuing permits. This audit should look into the existence and adequacy of the analysis supporting a NAAQS compliance determination.



Links:

<https://peer.org/epa-validates-colorado-air-whistleblowers-charge/>

<https://peer.org/colorado-ag-probe-confirms-air-pollution-failures/>

Troutman Report: Independent Investigation of Alleged Non-Enforcement of NAAQS by CDPHE, <https://coag.gov/app/uploads/2021/09/CDOL-Report-210922.pdf>

EPA July 2022 Report, EPA Report on Public Employees for Environmental Responsibility Hotline Complaint No. 2021-0188: <https://www.epa.gov/cao-permitting/epa-report-public-employees-environmental-responsibility-hotline-complaint-no-2021>