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September 10, 2020

Jill Hunsaker Ryan
Executive Director
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South, APCD-SS-B1
Denver, Colorado 80246-1530

RE: Request To Revoke PS Memo 10-01.

Dear Executive Director Ryan:

In light of the deteriorating air quality situation in the Denver Metro/North Front Range ozone nonattainment area as well as dangers to public health and welfare throughout the rest of the state, Public Employees for Environmental Responsibility (PEER), the Colorado Latino Forum, the Sierra Club Colorado Chapter, Physicians for Social Responsibility (PSR) Colorado, and the Center for Biological Diversity (Center) are writing to ask you to revoke PS Memo 10-01 and require sources of air pollution which are receiving minor source permits to establish that they will not cause or contribute to violations of the national ambient air quality standards (NAAQS), especially the 1-hour NO_2 and SO_2 NAAQS. The PS Memo 10-01 rule is not only hindering efforts to reduce emissions of one of the two main ozone precursors, but it is endangering Coloradoans throughout the State.

On September 20, 2010, Colorado Department of Public Health and the Environment instituted a minimum threshold policy under PS Memo 10-01[1] in which all sources with NO_2 emissions below a threshold of 40 tons per year are exempted from the requirement of demonstrating compliance with the 1-hr NO_2 and SO_2 NAAQS. **This exemption enables unfettered growth of NO_2 emissions in the ozone nonattainment area from these sources, which over the years have been able to obtain air pollution permits without any verification or modeling of their impacts on air quality or public health.**

The cumulative impacts of the many, many industrial facilities which have not been required to demonstrate compliance with the 1-hr NO_2 NAAQS have degraded Colorado's air quality and exacerbated public health impacts for people in Colorado. These impacts also adversely impact vegetation at the State's majestic places like Rocky Mountain National Park. Further, these

[1] https://environmentalrecords.colorado.gov/HPRMWebDrawer/RecordView/901901

facilities have collectively and over a longer period of time also caused and continue to cause a severe ozone problem as NO_2 is one of the main precursors of this pollutant.

I. Visual Example of the Cumulative Impacts of Exempting "Minor" Facilities from Regulation

The effects of PS Memo 10-01 and these general permits are best illustrated by example. Using the CDPHE mapping site we can see that in the area around the towns of Johnstown and Milliken, there are a huge number of facilities operating, all inside the ozone non-attainment area, and jointly emitting hundreds of tons per year of one of the main ozone precursors, NO_2.[2]

Every single permit that is issued in that area is amplifying and making worse an already existing ozone violation with negative implications for air quality and public health.

The graphic below shows that in that radius of 25 kilometers around the two towns, there are 777 sources emitting a total of 5,009.01 tons per year of NO_2. *Almost half of that total --48%--comes from facilities with individual emissions below the level set in PS Memo 10-01 and the general permit's threshold of 40 tons per year*. *This means that these facilities have likely been permitted without any assessment of the impact of their NO_2 emissions on ambient air.*

Had these sources been permitted in compliance with regulatory requirements, the corresponding facilities would have been required to implement control measures, use better technology, or downsize their projects. This is turn would have the final effect of reducing the NO_2 emissions to comply with the 1-hr NO_2 NAAQS and in turn reducing the formation of ozone.

It is also possible that the area is so saturated that no more NO_2 sources would have been permitted at all, which would have at least slowed down the continuing deterioration of the ozone problem. Determining the actual status of the air quality in that area is part of CDPHE's job, but that duty has been neglected for years, leading to the current crisis and the eventual bump up of Colorado's NAAQS non-attainment status to "severe."

It is also relevant to note that the negative effects of the PS Memo 10-01 are not only circumscribed to the ozone nonattainment area, but to the entire state of Colorado. This situation can be illustrated by example by looking at the case of the Sandridge Exploration Bighorn Pad[3].

This oil & gas facility was initially permitted on August 28, 2017 and was exempted from demonstrating compliance with the 1-hr NO_2 NAAQS based on the PS Memo 10-01[4]. But the Modeling Review Comments document available on CDPHE's website reveals that a screening analysis showed it causing modeled violations of this NAAQS by more than six times the permitted value by itself, without including the effects of the surrounding facilities in the area.

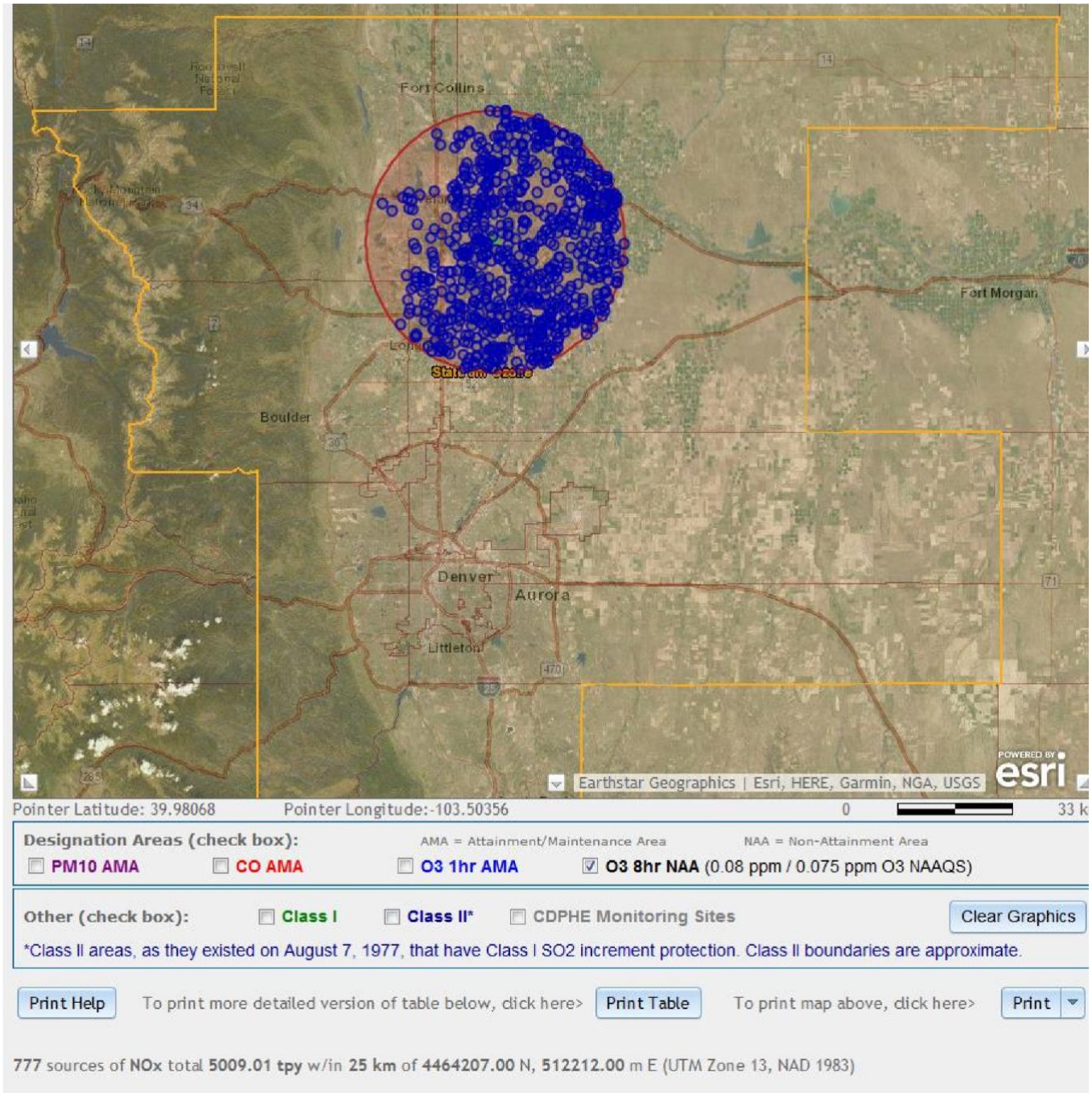
Not only was the permit issued regardless of the violation, but publicly available records also show that between the initial permit on August, 2017 and the present date, this same facility has received three additional air permits from CDPHE, on February 2018, August 2018, and November 2018.[5]

[2] https://www.colorado.gov/airquality/ss_map_wm.aspx See Attachment 1, Table of data listing the names of all of the facilities within the 25-mile radius of the graphic.

[3] Permit number 16JA1055. https://environmentalrecords.colorado.gov/HPRMWebDrawer/Search

[4] Vicars, W. "Modeling Review Comments – Bighorn Pad" CDPHE 05/25/2017 https://environmentalrecords.colorado.gov/HPRMWebDrawer/Search

[5] Most recently, Bighorn was granted a Title V operating permit on January 1, 2020. Source ID 0570051.



All those permits show that the NO_2 emission rates have increased from the original 23.6 ton per year to the final 34.2 tons per year. However, the additional permits were issued without any attempt to resolve the NAAQS violation, so in this case CDPHE repeatedly disregarded its legal mandate to protect air quality when issuing permits.

II. Minor Sources Below the 40 Tons per year Threshold in PS Memo 10-01 are Proven to Cause NAAQS Violations

PEER and the Center hired an independent air quality modeling expert to conduct a Tier 3 method NO_2 modeling analysis to determine if the Bighorn well pad does cause NAAQS violations. This modeling is based on CDPHE's most recent analysis, using the files and information provided to us directly by CDPHE and re-running the exact same model but changing only the original Tier 1 method to the Tier 3 OLM method.

The results of our modeling continue to show violations of the 1-hr NO_2 NAAQS with values as high as 364.69 ppb, more than three and a half times the NAAQS value of 100 ppb. *See attached,* Lindsey Meyers, Air Dispersion Modeling Analysis For Verifying Compliance with the One-Hour NO_2 NAAQS: SandRidge Exploration and Production LLC Bighorn Pad Facility.

This example shows that the 40 tons per year threshold of NO_2 emissions is inadequate and should not be used as a surrogate for a proper demonstration of compliance with this NAAQS. It also demonstrates with certainty that there is no basis to infer that all sources with NO_2 emission rates below 40 tons per year will not cause or contribute to violations of the NAAQS.

As evidenced in this case, sources with relatively small annual emission rates can by themselves cause violations of the 1-hr NO_2 NAAQS, and those violations will only be amplified and aggravated with every additional permit that is issued in the same area without any assessment for their combined impact on air quality. In other words, the 40 tons per year threshold is arbitrary because it uses an annual averaging time threshold to protect a 1-hour averaging time NAAQS. The 40 tons per year threshold also ignores whether a source requesting a permit is nearby other sources of pollution.

This example begs the question of how many similar situations are there in the state, with permits having been issued despite NAAQS violations taking place, and with CDPHE's consent, creating unhealthy air quality conditions without the general population's knowledge.

In PS 10-01, the Division stated: "The Division is aware of no factual basis to impose more stringent requirements on minor sources than EPA would impose on the largest air pollution sources." Ms. Meyers' modeling analysis of the Bighorn well pad now provides a factual basis to get rid of the 40 tons per year threshold.

We note that the 40 ton year threshold was established in the 1970s, decades before the 2010 1-hour NO_2 and SO_2 NAAQS were created. At that time, modeling for ambient impacts was extremely limited and the understanding of air pollution impacts was nothing like it is today. To the extent the Division is concerned about treating major sources less stringently than minor sources, to the extent the Division ever actually issues a major source permit, the obvious answer is the Division should request that the Air Quality Control Commission change the significant emission rate to a pounds per hour threshold that is protective of the current NAAQS.

III. Clean Air Act Violation

NAAQS compliance is at the heart of the Clean Air Act (CAA): its main purpose is to protect public health and welfare (42 U.S.C. § 7401(b)(1)). Thus, section 110(a)(2)(C) of the CAA provides that State Implementation Plans (SIPs) and permitting programs must include ". . .

regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that [NAAQS] are achieved."

Accordingly, the mechanism to ensure that new stationary sources don't interfere with the attainment of the NAAQS is contained in the New Source Review (NSR) Program under 40 C.F.R. §51.160 through §51.166. These regulations require that the state preconstruction permitting program must enable the permitting agency to determine whether any application to construct or modify a facility will interfere with attainment or maintenance of the NAAQS and to reject such application if that is the case.

Specifically, states' implementation plans are required pursuant to 40 C.F.R. §51.160(a) to have legally enforceable procedures to prevent the construction or modification or a source that would violate the control strategy or interfere with attainment or maintenance of the NAAQS. Pursuant to 40 C.F.R. §51.160(c), these procedures must require the submittal of information on the proposed new or modified source regarding the nature and amount of emissions and the location, design, construction, and operation of the source. The procedures must discuss the air quality data and dispersion or other air quality modeling to be used, as required by 40 C.F.R. §51.160(f). The state's procedures must also provide for the public availability of the information submitted by the owner or operator of the proposed source and the state's analysis of that proposed or modified sources' impact on air quality, notice by prominent advertisement in the area affected by the source, and a 30-day comment public period on that source-specific information, pursuant to 40 C.F.R. §51.161.

The regulations also require that, where appropriate, the permitting agencies use air quality models, databases and other requirements specified in the Guidelines on Air Quality Models specified in Appendix W. 40 C.F.R. §51.160 (f). While minor sources are allowed for under the statute, the CAA requires that a minor source program must ensure that minor sources comply with emissions control measures and the program does not interfere with attainment or maintenance of the NAAQS. In Colorado, as demonstrated by our analysis of the Bighorn well pad, it is clear that the Air Pollution Control Division is issuing permits to "minor" sources which cause NAAQS violations.

Colorado regulations implementing the Clean Air Act and governing air pollution are located in 5 C.C.R. 1001-5 ("Stationary Source Permitting and Air Pollutant Emission Notice Requirements" or "Colorado Reg. 3"). Colorado Reg. 3 Part B, Concerning Construction Permits, § III.D.1 requires as a condition for issuing an air permit that the proposed facility or modification complies with the NAAQS as set by the U.S. EPA.

Section III.B.5 further requires that prior to issuing an air permit, CDPHE must determine if the proposed facility or modification will comply with the NAAQS. Finally, § III.F.1 indicates that failure to comply with the provisions of § III.D.1 will result in a written denial of the air permit.

In light of this legal framework, it is clear that the policy of exempting such a large group of emission sources from these requirements compromises the effectiveness of federal and state regulations. And by failing to enforce the NO_2 NAAQS, the Air Pollution Control Division has directly contributed to the deteriorating situation of the Ozone NAAQS nonattainment area in Colorado.

PEER and the Center understand the theory behind setting a minimum threshold exemption for minor sources: to prioritize large sources of emissions within an agency that may lack the capacity

to permit every source. But using an annual emissions threshold to protect a 1-hour ambient standard does not and mathematically cannot work. Nor can ignoring whether a proposed source applying for a minor source permit is nearby to other sources of pollution. The reality that exists in Colorado is that oil & gas extraction takes the form of a very large number of minor sources scattered throughout the state, and a permitting program designed to tackle the emissions of only a small number of large sources is not effective. CDPHE needs to adapt to current conditions in order to effectively fight air pollution.

IV. Administrative Procedure Act Violation

The Air Pollution Control Division treats Memo 10-01 dispositively, ignoring the applicable CAA standards and Colorado's air permitting regulations. It is applied by staff and managers across the board as a rule, so any facility applying for a permit with emissions below 40 tpy of NO_2 will simply cite to the Memo.

Revealed in a Colorado Open Records Act request, is an April 18, 2011 e-mail chain between Chip Hancock, current head of the Construction Permits Unit of the Air Pollution Control Division and Doris Jung, Air Quality Scientist, which demonstrates the finality with which this rule is applied.[6] Doris Jung correctly pointed out to her supervisor, that the NAAQS for NO_2 would be exceeded if a construction permit was granted. His response was, "Does not matter-PS memo 10-01 overrides." She responds, "It does not supersede statutory/regulatory requirements." The supervisor then adds, "Per Kirsten and Roland it does." referring to his supervisors. At that time Kirsten King was the Stationary Sources Program Manager and Roland Hea was a Permitting Section Supervisor.

Applying the Memo as a binding rule to justify exempting facilities from the 1 hr. NO_2 NAAQS in this way violates the Colorado Administrative Procedure Act (APA) and the requirements for rulemaking. *See generally* C.R.S. Title 24, Article 4. A rule which "supersedes statutory/regulatory requirements" is a) unlawful to the extent that it is in violation of statute, and b) must go through proper administrative procedure to the extent it overrides existing regulation. Additionally, the Air Pollution Control Division is usurping the lawful authority of the Air Quality Control Commission, which is the only entity in Colorado authorized to create air pollution rules.

Generally, agencies must promulgate rules whenever adopting a "policy of general applicability" that implements or interprets an enactment of the Colorado General Assembly, Congress or a regulation adopted by a federal agency.[7] For an agency to create a rule which establishes a "binding norm," a rulemaking is required, otherwise an agency may issue a nonbinding interpretive rule or general statement of policy.[8] An improperly promulgated rule may not be relied upon or cited against any person.[9] We have seen no evidence that CDPHE ever provided notice of a rulemaking hearing in the Colorado Register or for comment on Memo 10-01 or any other public record of the administrative process leading to its adoption. Memo 10-01 is a "final agency action" and is subject to judicial review in part because of its binding application.[10]

[6] See Attachment 2.
[7] C.R.S. § 24-4-102(15)
[8] Id.
[9] C.R.S. § 24-4-103(10).
[10] C.R.S. §24-4-106.

Memo 10-01 has had far-reaching and likely unintended or unanticipated consequences. Rulemaking is uniquely equipped to accommodate these challenges with procedural safeguards.[11]

A rulemaking proceeding would best serve the public interest because it will accommodate thoughtful consideration of the significant environmental, public health, economic, and social impacts of the formal adoption of Memo 10-01. Rulemaking gives the public and stakeholders the opportunity to participate though notice, comment, and a public hearing.[12]

In *Weaver v. Colorado Department of Social Services*, the Colorado Court of Appeals considered the legality of the method used by the Department of Social Services ("DOSS") for determining whether applicants were entitled to receive benefits under the Home and Community Based Services program.[13] That case, like this one, involved an agency which made dispositive decisions based on a policy document which had not gone through proper public process. DOSS evaluated applicants and assigned a numerical point system to their functional deficits based on an internal policy which had not undergone a full notice and comment process, using an arbitrary cutoff of 20 points.[14]

Petitioner Weaver suffered from cerebral palsy, partial deafness, and severe cervical arthritis, and was assigned an assessment score of 38 points in 1984 and 39 in 1985, making him eligible for benefits.[15] DOSS reassessed in 1986 and assigned him less than 20 points.[16] Weaver challenged the decision, claiming that DOSS improperly used the point system guideline as a binding regulation.[17] The Colorado Court of Appeals agreed, holding that the point system was a binding rule since DOSS "utilized this point system as the sole criterion upon which to determine petitioner's continuing eligibility for benefits."[18] It therefore violated the APA's requirement for notice and public rulemaking hearing where interested parties may be heard. *Id*., at 1234. Similarly, CDPHE is using an arbitrary numerical cutoff which has not undergone any public administrative process to make binding judgments about permitting decisions for sources of NAAQS pollutants, that is, Memo 10-01.

As they likely would here, Colorado courts have stricken "interpretive" rules" or "general statements of policy" when they are tantamount to a legislative rule. For example, in *Hammond v. Pub. Employees' Retirement Association of Colorado*, a state employee challenged the Public Employees' Retirement Association's ("PERA's") calculation of her retirement benefits when, according to an internal policy, PERA pro-rated a lump-sum payment for unused vacation time at her regular rate of pay, crediting her with additional months of service but failing to account for

[11] "The legislature often provides by statute for notice, comment, and hearing procedures as a means by which to safeguard individual rights." *Simpson v. Bijou Irrigation Co*., 69 P.3d 50, 71 (Colo. 2003), *as modified on denial of reh'g* (May 27, 2003). The U.S. Supreme Court has characterized rulemaking as being "'designed to assure fairness and mature consideration of rules of general application.'" *Brown Exp., Inc. v. U.S*., 607 F.2d 695, 701 (5th Cir. 1979) (quoting *NLRB v. Wyman-Gordon Co*., 394 U.S. 759, 764 (1969). It "afford[s] an opportunity for 'the agency promulgating the rule to educate itself before establishing rules and procedures which have a substantial impact on those regulated.'" *Id*. (quoting *Texaco, Inc. v. FPC*, 412 F.2d 740, 744 (3rd Cir. 1969)).

[12] C.R.S. § 24-4-103 and 103-4(a).

[13] 791 P.2d 1230 (Colo. App. 1990).

[14] Id. at 1231.

[15] Id.

[16] Id.

[17] Id., at 1233.

[18] Id. at 1233-34.

an increase in average salary.[19] The internal policy stated that vacation pay received upon termination should be prorated prospectively over as many months as possible at the employee's most recent rate of pay, which constructively postponed employee's termination date and resulted in additional service credit.[20]

Hammond challenged the calculation, claiming in part that the policy was a legislative rule not adopted in compliance with the APA.[21] PERA claimed that it was merely an interpretive rule. On appeal, the Colorado Court of Appeals agreed with Hammond, stating that "[w]hether a rule is legislative or interpretive depends on its effect: it is legislative if it establishes a norm that commands a particular result in all applicable proceedings; it is interpretive if it establishes guidelines that do not bind the agency to a particular result."[22] The court determined that PERA's policy was a legislative rule because it required a particular action (and thus achieved a particular result) in all applicable cases, and the court therefore voided the rule. Similarly, CDPHE is relying on Memo 10-01 to command particular results concerning whether modeling and permitting is necessary for given sources in all proceedings involving sources whose emissions are below an arbitrary threshold. This is an inherently legislative decision and CDPHE should undergo the administrative process required for such decisions before giving them the force of law.

V. The Relationship Between Air Pollution and COVID-19 calls for Immediate Action

NO_2 and ozone irritate the respiratory system and can trigger or aggravate respiratory diseases such as asthma, emphysema, and chronic bronchitis.[23] Under normal conditions, short- and long-term exposure to these and other air pollutants is a major environmental health problem that will result in increased visits to doctors and emergency rooms, hospital admissions, and premature deaths.[24]

But these are not normal conditions. We are living in unprecedented times in which the spread of the novel Coronavirus COVID-19 has reached pandemic levels and has infected more than 58,000 people and killed 1,853 of those patients in Colorado.[25]

Major symptoms of this disease include sore throat, cough, and shortness of breath, which overlap with the effects of NO_2 and ozone pollution. According to two recent studies[26], long term exposure to these pollutants is linked to COVID-19 cases and may be one of the most important contributors to fatality caused by the COVID-19 virus.

It is therefore, more urgent than ever to take immediate actions to curb NO_2 emissions.

[19] 219 P.3d 426, 427-28 (Colo. App. 2009).
[20] Id., at 428.
[21] Id.
[22] Id.
[23] US Environmental Protection Agency. https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects and https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.
[24] World Health Organization. https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health and US Environmental Protection Agency. https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.
[25] CDPHE and Colorado State Emergency Operations Center. https://covid19.colorado.gov/covid-19-data (last visited 9/2/2020).
[26] Travaglio, M., Et Al. "Links between air pollution and COVID-19 in England", and Ogen, Y. "Assessing nitrogen dioxide (NO2) levels as a contributing factor to conornavirus (COVID-19) fatality."

VI. CDPHE Has the Ability to Act Now

We understand that leaders at CDPHE are looking for every available tool to address air quality in Colorado.[27] Revoking Memo 10-01 rule could be one of these important tools. It is difficult for us to know how many sources have been permitted under the umbrella of this rule, but CDPHE's own emissions inventories show that there are currently hundreds of minor sources with NO_2 emissions below the policy threshold of 40 tons per year, operating in the ozone nonattainment area with total emissions of this ozone precursor now in the thousands of tons per year. These amounts of NO_2 emissions are not at all negligible, and while transforming in the atmosphere to form more ozone, NO_2 is also a very harmful pollutant that by itself warrants attention.

As the public agency in charge of protecting human health and the environment, CDPHE should not continue to operate with a rule that has resulted in exposing a large portion of the state population to unsafe levels of air pollution. At the very moment when Colorado is headed towards severe ozone nonattainment status, this is the time to revoke the Air Pollution Control Division's rule that allows unchecked emissions of one ozone precursor.

Without revision, Colorado's current permitting structure will continue to fail to protect Colorado. This all but ensures that the ozone problem will continue to hurt the people and the economy of Colorado for years to come. **PEER, the Colorado Latino Forum, the Sierra Club Colorado Chapter, PSR Colorado, and the Center respectfully requests that you revoke PS Memo 10-01 within thirty days**.

Sincerely,

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[27] " "We need to have a full suite of tools. Everything is on the table now," [Director of Environmental Programs John] Putnam said. "What are the things that will move the needle in the most cost-effective way." " 1/19/2020, Bruce Finley, DENVER POST, *What's Polluting Colorado's Air,* Denver Post (Jan. 19, 2020). See also, Executive Director Jill Hunsaker Ryan's statement, "It's an exciting time in Colorado right now for air quality. I really think that we can make a difference." 12/27/19, John Herrick, *Jill Hunsaker Ryan, Public Health and Environment Department Head, Talks Environmental Justice and Air Quality*, COLORADO INDEPENDENT (Dec. 27, 2019).

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