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October 24, 2019

The Honorable Andrew Wheeler
Administrator
U.S. Environmental Protection Agency
Mail Code: 28221 T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Comments on Proposed Amendments to *"Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review"* Docket ID No. EPA-HQ-OAR-2017-0757

Dear Administrator Wheeler:

On behalf of the New Mexico Environment Department (NMED), I am providing the enclosed comments on the U.S. Environmental Protection Agency's (EPA) proposed revisions to *"Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources."*

The State of New Mexico strongly opposes the Environmental Protection Agency's (EPA) proposed revisions to the New Source Performance Standards (NSPS) which currently regulate volatile organic compounds (VOC) and methane emissions from new, reconstructed, and modified sources in the oil and natural gas industry. The process used to propose the rule is in contradiction to Executive Order 13132 and preempts state law while imposing significant burdens upon state environmental agencies. If finalized, the proposed revisions will significantly degrade air quality and adversely impact public health throughout the U.S., including the State of New Mexico. Finally, the proposed revisions would create an uncertain and unlevel playing field across production basins that span states, like the San Juan Basin, which crosses Colorado and New Mexico, and the Permian Basin, which crosses Texas and New Mexico.

Sincerely,

James C. Kenney
Cabinet Secretary

Enclosure: Technical comments

New Mexico Environment Department
Technical Comments to the U.S. Environmental Protection Agency
“Oil and Natural Gas Sector NSPS” Proposal
October 24, 2019

Docket ID No. EPA–HQ–OAR–2017–0757
84 Federal Register 185

1. Overarching Concerns

a. The Environmental Protection Agency (EPA) cannot proceed with the issuance of a final rule since it failed to properly address and implement Executive Order 13132 related to Federalism in the proposal. In the proposed action, the EPA concluded: “This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.” To the contrary, the proposed action will have substantial direct effects on the states.

To date, 25 governors committed to reducing greenhouse gas (GHG) emissions consistent with the goals of the Paris Agreement (subsequent to the June 1, 2017 announcement of the U.S. intent to withdraw from this agreement). This effort is led by state governments and is focused on state-to-state cooperation to accelerate the deployment of climate solutions needed to help each achieve their climate goals. Such efforts include enacting legislation, adopting regulations, and issuing policies related to renewable and non-renewable energy generation, transmission, and storage.

In New Mexico, Governor Michelle Lujan Grisham signed into law New Mexico’s Energy Transition Act (ETA) on March 22, 2019, establishing New Mexico as a national leader in clean energy. This law was developed over the course of a year with collaboration by community organizations, unions, energy groups, and advocates. The ETA sets a statewide renewable energy standard of 50 percent by 2030 for New Mexico investor-owned utilities and rural electric cooperatives and a goal of 80 percent by 2040, in addition to setting zero-carbon resources standards for investor-owned utilities by 2045 and rural electric cooperatives by 2050. The law transitions New Mexico toward clean energy, ensuring greater renewable energy production and reducing costs for consumers, and provides tens of millions of dollars of economic and workforce support for communities impacted by coal plant closures, as well as the development of renewable replacement power in San Juan County.

On August 4, 1999, President Clinton issued Executive Order 13132 (EO 13132), “Federalism,” and it became effective on November 2, 1999. EO 13132 stresses consultation with state and local governments and more sensitivity to their concerns. Specifically, Section 3(d) states: “When undertaking to formulate and implement policies that have federalism implications, agencies shall: (1) encourage States to develop their own policies to achieve program objectives and to work with appropriate officials in other States; (2) where possible, defer to the States to establish standards; (3) in determining whether to establish uniform national standards, consult with appropriate State and local officials as to the need for national standards and any alternatives that would limit the scope of national standards or otherwise preserve State prerogatives and authority; and (4) where national standards are required by Federal statutes, consult with appropriate State and local officials in developing those standards.” In summary, EO 13132 puts a strong emphasis on consulting with states which are defined as “the States of the United States of America, individually or collectively, and, where relevant, to State

governments, including units of local government and other political subdivisions established by the States.” Further state and local officials means “elected officials of State and local governments or their representative national organizations.”

The Office of Management and Budget (OMB) specifically designated nine national organizations as being representative of state and local officials for purposes of complying with the consultation requirements of the Order. The EPA’s policy is that consultation with a tenth organization – the Environmental Council of the States (ECOS) – is also required. The Shale Gas Caucus (SGC) of the ECOS Waste Committee promotes coordination and best practices on such matters as methane emissions for state environmental agency leaders spotlighting current research, regulatory initiatives, and other activities around the nation. The current Co-Chairs of the ECOS SGC are David Glatt, Director, North Dakota Department of the Environment and James C. Kenney, Secretary, NMED. Secretary Kenney was not consulted by the EPA on EO 13132 in his role as Secretary of the NMED or Co-Chair of the ECOS SGC with respect to the development or issuance of this proposed action.

Given that the State of New Mexico is the third largest oil producing state in the U.S., the NMED and the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) are developing an enforceable methane strategy for the oil and natural gas sector which includes exploration and production activities, gathering and processing, and transmission and storage. According to the EPA, methane emissions in the upstream oil and natural gas sector represent a significant portion of the U.S. GHG emissions. Methane is 31% of New Mexico’s GHG emissions profile. Methane emissions are dominated by the oil and natural gas industry which emits approximately 64% of all methane emissions. Thus, the efforts underway in the State of New Mexico and other states are substantially and directly impacted by the proposed rule to rescind federal emission limits for methane from the oil and natural gas sector set forth in the 2012 and 2016 Clean Air Act (CAA) NSPS, as codified at 40 C.F.R. part 60, Subparts OOOO and OOOOa.

The EPA states in the Regulatory Impact Analysis (RIA) associated with the proposed rule that: “The EPA recognizes that by rescinding the applicability of the NSPS, issued under CAA section 111(b), to methane emissions, existing sources of the same type in the source category will not be subject to regulation under the CAA section 111(d). Analysis of potential impacts of removing the requirement to regulate existing sources under section 111(d) is outside the scope of this RIA and would be speculative.” Section 111(d) of the CAA governs how the EPA issues emission guidelines and how and when states develop and submit their plans to establish performance standards for existing sources of air emissions. Removing methane from CAA sections 111(b) and 111(d) is detrimental to the State of New Mexico as it preempts our state authority given statutory prohibitions from establishing emission limits and standards beyond the limits and standards required by the federal government. Since the State of New Mexico adopts federal standards into state law, the EPA is proposing to preempt state authority. Further, if the EPA implemented the Federalism principles required by EO 13132 in the context of internally tiering this proposed action and worked with states like New Mexico, factual mistakes like assuming state limits and standards are sufficiently protective irrespective of federal outcomes would render this proposal fatal.

Further, the EPA’s stating that: “analysis of the potential impacts of removing the requirement to regulate existing sources under 111(d) is outside the scope of this RIA...” is an admission that the EPA did not meaningfully enter in to consultation with states - elected officials of state and local governments or their representative national organizations - pursuant to EO 13123. The EPA’s lack of due diligence to understand if the proposed action preempts state laws, regulations, and policies enacted subsequent to June 1, 2017 (the date

the U.S. announced it intended to withdraw from the Paris Agreement and states began to organize) is required under Federal Law pursuant to EO 13123.

The State of New Mexico is seeking the following relief due to the EPA's admitted failure to comply with EO 13132 and misrepresentation to the OMB that the proposal does not have federalism implications: (1) The EPA re-propose the rule to comply with EO 13132 regarding Federalism; (2) In the spirit of EO 13132, and consistent with the EPA's policy to promote communications between EPA and state and local governments, the EPA should specifically solicit comments on its re-proposal from state and local officials; and (3) The EPA must hold public hearings in oil and natural gas producing states that have enacted enforceable statutes, regulations, and policies related to methane reductions from oil and natural gas sector, including transmission and storage.

b. The proposed rule stands in direct contradiction to New Mexico's public health and environmental investment to reduce VOC emissions that contribute to unhealthy ozone levels. Several ozone monitors in New Mexico show that air quality is approaching the level of the 2015 ozone National Ambient Air Quality Standard (NAAQS). The Sunland Park area in southern New Mexico is currently designated as nonattainment of the 2015 ozone NAAQS, with an additional seven areas in the State monitoring ozone concentrations at or above 95% of the standard. Monitored ozone concentrations increased throughout New Mexico over the past five years (2014-2018), including both of New Mexico's oil and natural gas producing regions in the San Juan and Permian Basins. According to the EPA's latest National Emissions Inventory (EPA, 2014 NEI version II), over 80% of the local emissions in these areas are from oil and natural gas sources. The Carlsbad ozone air monitor (AQ5 ID # 35-015-1005) in the Permian Basin, which is an area of rapid growth in oil production, serves as a prime example of the air pollution problems facing New Mexico. The design value for ozone at this monitor has elevated from 68 ppb in 2016 to 74 ppb in 2018. Preliminary 2019 data shows some of the highest monitored ozone concentrations recorded in the past decade, indicating this upward trend will continue throughout the state.

To improve air quality in these areas, NMED developed the Ozone Attainment Initiative (OAI) and joined the EPA's Advance program in 2018 and 2019. As part of the OAI, NMED is currently researching and reviewing possible options for mandatory control measures for all source sectors through photochemical modeling; however, future year emissions inventories and modeling assume that both rules will be in place, casting doubt on the ability of resultant control measures selected for adoption through the OAI to achieve emissions reductions. NSPS OOOO and OOOOa are fundamental to reducing emissions from the oil and natural gas sector, with any roll back or relaxation of emission standards making it more difficult for New Mexico to keep these counties in attainment. By taking away NSPS requirements that limit ozone precursors while ozone levels are dangerously close to exceeding the NAAQS, the EPA is advocating for a nonattainment designation and nonattainment permitting requirements for New Mexico's oil and natural gas industry.

Previous modeling studies (Adelman et.al, 2016) and preliminary back-trajectory analyses indicates that interstate transport from the Permian Basin in Texas contributes to high ozone concentrations in southern and southeastern New Mexico. While New Mexico faces nonattainment designations and increased permitting requirements, Texas does not operate an ozone monitor on their side of the Permian Basin. Thus, the EPA lacks the required information to make a regulatory determination regarding attainment of the ozone standard, thereby creating an uneven playing field across state lines. This further emphasizes the need for strong, federally-enforceable NSPS emissions standards for the oil and natural gas sector to ensure fair and equitable requirements in a basin that spans state lines.

c. Exceeding ozone standards results in a nonattainment status designation which leads to expensive requirements for communities and the State of New Mexico. A nonattainment designation under section 107(d) of the CAA carries potentially serious sanctions and damaging repercussions for an area, including the potential loss of federal highway funding and economic development opportunities. States that contain nonattainment areas are required to develop a State Implementation Plan (SIP) designed to bring an area back into attainment with the NAAQS through the adoption of stricter emission controls (e.g., Reasonably Available Control Technology) and permitting requirements (emissions offsets) for emission sources that cause or contribute to poor air quality.

Once an area in New Mexico is designated nonattainment for ozone, not only will this trigger minor New Source Review (NSR) construction permits for sources at the minor source permit threshold of 10 pounds per hour (pph) or 25 tons per year (tpy) of VOC emissions, major source nonattainment permits will be required when VOC emissions from a new source or from a major modification at an existing source are projected to occur. The applicability thresholds of nonattainment permitting will depend on the nonattainment designation but are considered low thresholds and will affect thousands of sources. These permitting requirements will have a significant and negative impact on NMED and permittees.

Permittees looking to construct or modify their facility in an ozone nonattainment area are subject to the following: (1) Lowest Achievable Emission Rate (LAER) control techniques, which unlike PSD, do not consider the cost of controls; (2) requiring applicants to obtain permanent emission reductions through the purchase of emission offsets, which may or may not be available, from permittees of existing sources; (3) requiring complicated ambient air impact analyses to demonstrate a net air quality benefit from the proposed project; (4) requiring additional public outreach and participation from Federal Land Managers and the EPA; and (5) requiring expensive air quality permits that take significant resources and time for the permittee and NMED to prepare and process. Such changes require pre-approval through an air quality permit. Without similar requirements across state lines, New Mexico is at a competitive disadvantage.

New Mexico relies upon the NSPS OOOO and OOOOa regulations as they are incorporated into state law to control VOC emissions from small oil and natural gas sources with the goal of mitigating ozone ambient impacts within New Mexico and neighboring states. Without these regulations in place, New Mexico faces adverse public health impacts and a nonattainment designation, including minor and major nonattainment air quality permitting.

The EPA failed to account for the incremental costs to states in implementing a nonattainment NSR program as a direct result of the proposed action preempting state law. Further, the proposed rule also fails to account for the increased cost of health care to states and lost economic revenues to states from preempting state authority.

d. New Mexico disagrees with the EPA's conclusion that a lack of regulation of existing sources under CAA section 111(d) will not result in a substantial amount of lost emission reductions. NMED finds that proposing changes to existing requirements without sufficient data is contrary to the EPA's FY18 to FY22 Strategic Plan. In the preamble, the EPA states that it lacks sufficient information regarding turnover of existing sources that would eventually be replaced with new, modified, and reconstructed sources that would become subject to the existing NSPS OOOO and OOOOa regulations, yet it later concludes that it "expect[s] that many existing sources would be subject to regulation under CAA section 111(b) because they will undertake modification or reconstruction (84 FR 50271, September 24, 2019)." It is irresponsible to propose regulatory changes without sufficient data to support the change. Further, doing so is a breach of the EPA's Strategic Plan, Objective 2.2, which is to "increase transparency and public participation, listen to and collaborate with impacted

stakeholders, and provide effective platforms for public participation and meaningful engagement (EPA, February 2019/2018).”

e. This proposal disregards Supreme Court direction and clear statutory authority by rescinding the 2016 rule regulating methane from the oil and natural gas industry. The EPA’s proposal is legally flawed. In 2009, the EPA issued its GHG Endangerment Finding. This finding followed the Supreme Court’s landmark 2007 decision in *Massachusetts v. EPA*, which held that EPA is obligated to regulate pollutants that endanger public health and welfare, including pollutants that contribute to climate change. The Endangerment Finding triggered a requirement for EPA to regulate emissions of carbon dioxide, methane, and four other heat trapping air pollutants from vehicles, power plants, and other industries under the CAA. And in 2011 in *American Electric Power v. Connecticut*, the Supreme Court held that the states could not bring federal common law claims to abate greenhouse gas emissions from fossil-fuel fired power plants because the CAA preempts such claims and according to the Court, section 111 of the Clean Air Act “speaks directly” to regulating industrial sources of GHGs. Even the Trump administration agrees that the 2009 GHG Endangerment finding obligates the EPA, under section 111 of the CAA, to set some standard for existing power plants (Affordable Clean Energy Rule).

Under Section 111, the EPA first must identify “categories” of source whose emissions “contribute significantly” to dangerous air pollution. In 2016, EPA specifically found that the entire category contributed significantly to climate change. This triggered the obligation to set federal performance standards for “new and modified sources” in each source category that reflects the best system emissions reductions (aka BSER) taking into account health and environmental risks, cost of controls, and other factors. Following this, EPA is required to regulate emissions from “existing” sources through a combination of federal performance standards and state plans that are approved by the EPA.

This proposal disregards Supreme Court direction and clear statutory authority by rescinding the 2016 rule regulating methane from the oil and natural gas industry based on the dubious claim that those requirements are entirely redundant. The proposal also seeks to exempt facilities in the transmission and storage segment from any federal standards because it now claims that a new endangerment finding is required by the CAA as to both the pollutant and the source category. This interpretation flies in the face of the plain language of the CAA and EPA’s longstanding interpretation that once the EPA identifies a source of pollution, it is not obligated to make additional endangerment findings each time it regulates additional pollutants emitted by that same source category. Lastly, if finalized, this proposal would eliminate the EPA’s obligation under the statute to address GHG pollution (including methane) from existing oil and gas sources. This would have profoundly negative impacts on public health and the environment that the EPA’s proposal ignores or entirely fails to consider.

f. The Energy, Minerals and Natural Resources Department (EMNRD) and NMED are jointly developing a statewide, enforceable regulatory framework to secure reductions in oil and natural gas sector methane emissions, to prevent waste from new and existing sources. As acknowledged in the proposed rule, methane from the oil and natural gas industry is packaged with other pollutants: VOC, which are a key ingredient in ground-level ozone (smog); and a number of other pollutants known as “air toxics,” in particular, benzene, toluene, ethylbenzene and xylene.

Since crude oil is worth more than the methane-laden gas that is produced concurrently during crude oil drilling and production, it is often considered a waste product and is vented directly to the atmosphere or combusted in

flares. When a resource is wasted, the State of New Mexico is no longer able to collect royalties on the resource, making it unavailable for future beneficial use.

The San Juan Basin (SJB) in northwest New Mexico is one of the largest coal-bed methane producing regions in North America, and the natural gas production from conventional and shale sources, contributed approximately 2% of U.S. natural gas production in 2015. A collaborate study in 2014, “Four Corners: The largest US methane anomaly viewed from space,” indicates that the largest anomalous methane levels viewable from space over the conterminous U.S. are located within the Four Corners Region in the Southwest U.S.” (Korte, E. A., et. al, September 2014).

Methane emissions exceeding the EPA inventory estimates totaled 0.59 Teragrams of methane per year. The Environmental Defense Fund (June 2018) found that the oil and natural gas sector could emit 60 percent more than the EPA's emission inventory estimates. In 2014, NASA scientists published their discovery of a methane “hot spot” over New Mexico’s SJB. The 2,500-square-mile expanse is the largest area of elevated methane concentration ever measured in the U.S. In 2016, NASA researchers concluded that many of the region’s highest-emitting sources were associated with the region’s oil and natural gas production and distribution infrastructure. For the latest hot spot study, this one published in Environmental Science and Technology, researchers used aircraft to measure methane concentrations in the atmosphere over the Four Corners Region over a five-day period. Although the SJB includes other methane emission sources, such as coal mines and geologic seepage, these sources are not large enough to explain the bulk of emissions (Frankenberg, C., et. al, August 2016). EMNRD and NMED is working with industry and other stakeholders now to find new solutions to the high levels of methane in New Mexico and mitigate those emissions.

The proposed revision undermines New Mexico’s plan to reduce methane emissions and collect royalties on the wasted resource. The proposed revision eliminates the backstop for methane emissions and does not accurately account for the projected methane emission increases and, thus, makes planning for the emission increases tenuous and unsupportable and open to legal challenge. The EPA projects the increases to be significant, but as the data in the proposal already underestimates methane emissions, the actual increases will be far greater than projected. This uncertainty puts at risk New Mexico’s ability to develop an adequate plan to reduce methane emissions and collect royalties due to the State.

g. A multitude of peer-reviewed studies show that federal and state estimations of VOC and associated methane emissions are underestimated or unknown in the oil and natural gas production and processing, and transmission and storage sectors. Many of the analyses, including analysis of the 2014 National Emissions Inventory (NEI), show underestimations of 50% or more. This is alarming, especially given that the proposed revisions to NSPS OOOO and OOOOa use a very uncertain inventory to calculate costs and benefits. In a memorandum that evaluates the currently used 2014 NEI version in order to enhance understanding of the representativeness and completeness of the data used in the national inventory and to prioritize national data needs, Western States Air Resources Council-Western Regional Air Partnership (WESTAR-WRAP), working collaboratively with the EPA and Rambol, recognized several data gaps in the NEI related to nonpoint source oil and natural gas emissions pertinent to this proposed rule.

Accounting for emissions from high-emitting oil and natural gas sources (“super-emitters”) is an evolving area of oil and natural gas inventory development. Analyses of oil and natural gas hydrocarbon fugitive and vent source emission measurements collected in several studies show that a small percentage of oil and natural gas sites

contribute a large fraction of hydrocarbon emissions, which includes VOC and Hazardous Air Pollutants (HAP) emissions (Brandt et al., 2014). Analysis of hydrocarbon emission measurements from 18 studies across several oil and natural gas production areas in the U.S. indicated that the largest 5% of emission sources comprised over 50% of fugitive and vent source methane emissions (Brandt et al. 2016). Results of helicopter-based infrared surveys of more than 8,000 well pads across several areas in the U.S. showed that 4% of all surveyed well pads were high emitters with over 92% of high emitter emissions coming from tank vents and hatches, and the remaining high emitter emissions coming from dehydrators, separators, trucks unloading oil from tanks, and unlit or malfunctioning flares (Lyon et al., 2016). High emitters are primarily stochastic (i.e., random); leak detection and repair (LDAR) surveys have been identified as a method by which high emitter emissions may be controlled. High emitters are likely underrepresented in emission rate estimates that are a basis of oil and natural gas emissions in the 2014 NEI for several fugitive and venting emission source categories. Future versions of the NEI should consider how to account for high emitters and report on the extent to which high emitters are missing from NEI oil and natural gas emissions. Beginning in 2016, gathering and boosting facilities and natural gas transmission pipeline reporting began under the Greenhouse Gas Reporting Program (GHGRP). Gathering and boosting facility reporting will increase the potential for synergies between the point source NEI and the GHGRP datasets for the 2017 NEI and include submittals for gas gathering pipeline equipment leaks, which are likely missing from the 2014 NEI. The review of the 2014 nonpoint and point NEI emission inventories indicates that production and processing, natural gas transmission and storage, and distribution pipeline emissions are data gaps in the inventory. GHGRP input data and emissions for pipelines should be investigated for use as reference data upon which an estimate of criteria pollutants and HAP emissions from pipelines may be added to the 2017 NEI. The National Oil and Gas Committee, the WESTAR-WRAP Oil and Gas Work Group, and the 2016 EPA Oil and Gas emissions inventory and modeling workgroup enhanced inventories over the past 2-3 years. The EPA must consult with, account for, and address the issues from these collaborations in the proposed rule.

h. The State of New Mexico is disproportionately affected by the proposed rule given production volumes, number of wells and overall emissions. Oil and natural gas production information shows an estimated 46,271 producing oil and natural gas wells; 25.1 million barrels of oil production, and 143.9 M MCF of gas produced in 2018 (drillingedge.com, 2019).

The State of New Mexico is part of the Western States Air Resources Council-Western Regional Air Partnership (WESTAR-WRAP) region consisting of 15 states in the Western U.S. Oil and natural gas production in the WESTAR-WRAP region comprises 40% of U.S.-wide crude oil production and 26% U.S.-wide natural gas production (Western Regional Air Partnership [WRAP] et. al., August 2018). Due to the high level of emissions and concern from the EPA over area source emissions from the sector, New Mexico worked with WESTAR-WRAP to conduct emissions inventories for the two major oil and natural gas basins in the New Mexico for base year 2014 and future year 2023/2028 estimates for criteria pollutants and greenhouse gasses (BLM, et al, August 2019).

i. Permian Basin (NM): Statistics from the 2017 IHS database show the Permian Basin (NM) had 22,326 producing oil wells and 5,745 conventional gas wells (IHS Enerdeq database, February 2019). Base year emissions from the oil and natural gas production and processing sector were 121,644 tons of VOC and 15,682,752 of CO_{2e} tons per year. It is estimated that 94% of anthropogenic VOC emissions in the Permian Basin are from oil and natural gas exploration, production, and midstream operations.

ii. San Juan Basin (New Mexico): Statistics from the 2017 IHS Enerdeq database show the San Juan Basin (New Mexico) contained 1,555 oil wells, 14,808 conventional gas wells, and 4,617 coal bed methane

(CBM) wells. Base year 2014 emissions from the oil and natural gas production and processing sector were 73,950 tons of VOC and 19,303,000 tons of CO_{2e} per year (WRAP, August 2018). It is estimated that 86% of anthropogenic VOC emissions in the San Juan Basin are from oil and natural gas exploration, production, and midstream operations.

iii. Future year oil and natural gas emission inventories are critical for air quality planning, including regional haze, attainment, and non-attainment planning. The WESTAR-WRAP and the EPA worked to develop these inventories and modeling platforms for a base year for 2016 and to project into the future for modeling and planning purposes. The collaboration with WESTAR-WRAP and the EPA has included the existing NSPS OOOO and OOOOa regulations in the inventory and the future projections. Even with the NSPS OOOO and OOOOa standards in place, VOC emissions are projected to increase in New Mexico's San Juan and Permian Basins, which indicates the standards are not going far enough to reduce VOC and associated methane emissions. Expansions in shale oil and natural gas production are expected to continue into the future leading to increased emissions.

i. The EPA's proposed rule is contrary to all three goals in EPA's FY18 to FY22 Strategic Plan and contrary to EPA's mission of protecting human health and the environment. Objective 1.1 of the strategic plan is to "Improve Air Quality: Work with states and tribes to accurately measure air quality and ensure that more Americans are living and working in areas that meet high air quality standards. The EPA will prioritize key activities to support attainment of the national ambient air quality standards (NAAQS) and implementation of stationary source regulations" (EPA, 2019/2018). NMED agrees with the objective as stated, but the EPA's practice – as evident in the Proposed Rule – is contrary to its own strategic plan. The intentions and amendments in the proposed rule violate EPA's FY 2018-2022 core mission, cooperative federalism, and threaten the rule of law and process.

The abbreviated comment period for such a complex, far reaching proposed rule is insufficient. The Proposed Rule makes sweeping changes that will significantly impact state regulatory programs and resources. In addition to the proposed regulatory changes, EPA requests comments and data that cannot be provided within a 60-day comment period or are outside of the scope of this proposed rulemaking. For example, the EPA is seeking comment and/or requests data on its original GHG Endangerment Finding; the criteria used to make significant contribution findings under CAA section 111 to determine future new and revised NSPS for all stationary sources; data to determine 'turnover rates' of existing sources to new sources subject to NSPS OOOOa; and ways to use this data to predict turnover trends. The EPA also requests comments regarding if sufficient market incentives exist to offset the costs of emissions capture such that the total methane emissions will trend downward under these incentives (84 FR 50267, September 24, 2019). The lack of meaningful engagement with states and other stakeholders under EO 13132 and EPA's own strategic plan is a continuing concern for many agencies, and we ask that the EPA provide 60 calendar days of additional time to provide comments on the main proposal and alternative proposal.

Objective 2.2 in the EPA's 2018-2022 Strategic Plan is to "Increase Transparency and Public Participation: Listen to and collaborate with impacted stakeholders and provide effective platforms for public participation and meaningful engagement (EPA, February 2018)." The Proposed Rule does not provide meaningful engagement around several significant issues and providing only 60 days of public comment is disingenuous to impacted states and communities.

2. Comments on Primary Proposal: Proposal to remove the transmission and storage sector from the oil and gas source category entirely

a. NMED disagrees with the EPA’s poorly supported proposal to define the transmission and storage segment as a separate source category under CAA 111(b) and to remove the transmission and storage sector from regulation under NSPS OOOO and OOOOa. Removing this segment from regulation will increase VOC emissions that contribute to ambient ozone concentrations; contradicts the intent of the New Mexico Ozone Attainment Initiative (OAI); contradicts Objective 1.1 of U.S. EPA’s FY18 to FY22 strategic plan; and eliminates all regulatory avenues currently available to the State of New Mexico to mitigate the effects of methane emissions.

b. Removing the transmission and storage segments from regulation under NSPS OOOO and OOOOa decreases the ability of New Mexico to maintain ozone ambient air quality standards (NAAQS). NMED has seven ozone monitors registering concentrations exceeding 95% of the ozone NAAQS, including the Carlsbad ozone monitor with a 2018 ozone design value at 74 ppb. The EPA’s proposal removes critical regulatory tools available to NMED to mitigate VOC emissions and undermines the New Mexico Environmental Improvement Board’s (EIB) obligation under the CAA and the Air Quality Control Act (AQCA) to “prevent or abate air pollution” and “to attain and maintain national ambient air quality standards” (New Mexico Statutes Annotated [NMSA], §74-2-5, 1978).

c. The emissions inventory used by the EPA to compare VOC emissions from the various segments of the oil and gas industry is flawed (84 FR Page 50250). The EPA relied upon the 2014 VOC emissions inventory, which in most states, applies only to Title V Major Sources to compare emissions between segments in the oil and natural gas industry. The 2014 emissions inventory excludes emissions from a significant number of minor sources in the transmission and storage segments and when excluded, rely on an incomplete and miscalculated data set.

d. Removing the transmission and storage segment from regulation undermines the purpose and success of the New Mexico Ozone Attainment Initiative (OAI). The OAI works in collaboration with EPA’s Ozone Advance Program, a collaborative effort by the EPA, states, tribes and local governments to encourage emissions reductions to help them continue to meet the NAAQS. The EPA’s proposal to remove the transportation and storage of sector from regulation under NSPS OOOO and OOOOa is shortsighted and negates any possible benefits that could be obtained through the OAI efforts to maintain compliance with ozone NAAQS.

e. Excluding the transmission and storage sector leads to increased methane emissions when New Mexico is looking to reduce emissions thus preempting state law, rule and/or policies. Methane is a potent greenhouse gas with a 100-year global warming potential more than 25 times greater than that of carbon dioxide. It is the second most prevalent greenhouse gas emitted in the United States from human activities, and approximately one-third of those emissions come from oil production and the production, transmission and distribution of natural gas. To protect public health and the environment, the EPA issued the 2012 and 2016 NSPS requirements to reduce emissions by an expected 510,000 short tons of methane and 210,000 tons VOC in 2025. This proposed rule would rescind the methane requirements to all oil and natural gas sources. As a result, the EPA estimates an increase emission of 370,000 short tons of methane from 2019 to 2025 (EPA, August 2019). This effort obstructs New Mexico’s ability to make measurable reductions of methane from the oil and natural gas sector and may preempt the State’s ability to meet Governor Lujan Grisham’s Executive Order to reduce GHG emissions by at least 45% by 2030.

f. NMED disagrees that the transmission and storage segments are a separate source category from production and processing for the purposes of regulating the source and determining its contribution of air pollution. The EPA currently proposes that, in 2016, the EPA should have made a finding that the transmission and storage segment, in and of itself, contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. The EPA also stated that the source should not be combined with production and processing to make this determination. (84 FR 50257, September 24, 2019). NMED disagrees with this flawed logic. EPA did not err in including the transmission and storage sector, and there is sufficient evidence of the impacts from transmission and storage and its interrelatedness to production and processing to keep the sector included in the rule. The transmission and storage sector contribute a significant amount of emissions in New Mexico. There are over 1500 regulated tank batteries under NMED's jurisdiction, including several batteries with emissions greater than Title V permitting thresholds. Collectively, these facilities emit greater than 63,710 tons per year (tpy) of VOC and contribute to worsening air quality, impact public health, and contribute to exceedances of the ozone NAAQS.

g. The EPA's previous determination to include the transmission and storage segments with production and processing as a single source in its September 18, 2015 preamble to the proposed NSPS OOOO/OOOOa regulations was sound and well supported, whereas EPA's current proposal is illogical and lacks support.

i. NMED agrees that the EPA's list of categories published in 1979 was to "broadly cover the natural gas industry." In the NSPS OOOOa preamble, the EPA stated that, "it [the oil and natural gas industry] includes production, processing, transmission, and storage" (80 FR 56600, September 18, 2015).

ii. NMED also agrees that there are logical reasons for regulating VOC, HAP, and methane emissions from the production, process, transmission, and storage segments of the natural gas industry as one source category. The EPA stated in its promulgation of NSPS OOOO and OOOOa, and NMED agrees, that the "operations at production, processing, transmission and storage facilities are a sequence of functions that are interrelated and necessary for getting the recovered gas ready for distribution...because they are interrelated, segments that follow others faced with increases in throughput caused by growth in throughput of the segments preceding (i.e., feeding) them" (80 FR 56600, September 18, 2015).

iii. As additional support to EPA's logic to combine sources, the production and processing sectors and the transmission and storage sectors employ the same source types (e.g., storage tanks, compressors, and fugitive emissions components), emit the same regulated air pollutants (e.g. VOC, HAPS, and methane), and use the same emissions control techniques (e.g. vapor recovery units (VRUs), flares, and thermal oxidizers). To avoid redundancy or conflicting regulations, it is the most logical approach to regulate the emissions and sources of VOC, HAP, and methane from these same source types. The varying degrees of VOC and methane in the up and downstream processes makes no difference in the methods used to reduce their regulated air emissions.

iv. The EPA's example using unique regulatory requirements for petroleum refineries as a basis for regulating the production and processing segments separately from the transmission and storage segments is flawed (84 FR 50258, September 24). Refineries use multiple unique processes not employed by the upstream and midstream oil and natural gas segments, including, but not limited to fluid catalytic cracking, kerosene and distillate hydrotreating, crude distillation, and cooling towers. Thus, this is not an appropriate comparison and should not be relied upon as a basis for comparison.

3. Comments on Primary Proposal Step 2: EPA Proposal to rescind emissions limits for methane for production and processing sector, but keep emissions limits for VOC (84 FR 50257, September 24, 2019)

a. The EPA’s basis for proposing to rescind the methane emissions standards from NSPS OOOOa for all sources based on the EPA’s statement that the standards are “wholly redundant with the existing VOC requirements,” is not correct and seriously irresponsible. Proposing to rescind the methane standards since they are redundant to VOC controls and with the assumption that EPA and States already regulate VOC emissions from these sources fails to take into account the many thousands of existing VOC sources that are not, and will not be, regulated under NSPS OOOO and OOOOa. For example, tens of thousands of wells that were drilled and in existence before the EPA and the NMED regulated oil and natural gas production will not undergo modification or reconstruction and, thus, will not be subject to the rule.

Also, while the release of VOC may always be accompanied by methane, it does not follow that the release of methane will always be accompanied by the release of VOC. The EPA acknowledges under its own rule that it expects an additional release of 370,000 tons of methane annually as part of the proposed regulation changes (EPA, August 2019). Additionally, the emission inventories for oil and natural gas are still being developed and most likely are underestimated based on several studies.

b. Methane sources in the production and processing sector that contain smaller amounts of VOC contribute significant emissions in aggregate and should be subject to NSPS regulation. New Mexico has an extensive network of Coal Bed Methane (CBM) wells that have low levels of VOC but still contribute both VOC and methane emissions. There are VOC emissions associated with these wells but much less than conventional wells. Natural gas well site equipment from well sites covered under the NSPS OOOO/OOOOa regulations, including completions of hydraulically fractured wells, equipment leaks, pneumatic controllers, pneumatic pumps and storage tanks, are significant in the San Juan Basin in New Mexico. The San Juan Basin is one of the oldest producing areas in the United States, with the first conventional natural gas discovered in 1921, and the first CBM well spud in 1948. The basin has produced from over 300 oil fields and nearly 40,000 wells. As of 2009, cumulative production reached 42.6 trillion cubic feet of gas and 381 million barrels of oil. The active CBM well count in 2014 was inventoried to be 4,851 wells, producing 281,000 MMCF/yr. (BLM, et al, August 2019).

c. Oil and natural gas production and processing is the largest source of anthropogenic methane and VOC, and the methane requirements should not be rescinded when New Mexico is working with stakeholders to reduce methane even further. New Mexico depends on the platform of federal regulations to move forward to protect its citizens.

4. Comments on Alternative Proposal: “As an alternative, EPA is proposing to rescind the methane requirements in the NSPS for oil and natural gas sources, without removing any sources from the source category (EPA, 2019).” Under this alternative proposal, the EPA’s basis for proposing to entirely rescind the methane emissions standards from NSPS OOOOa for all sources in the source category is essentially the same as the EPA’s basis for proposing to remove methane emissions standards for sources in the production and processing segments, described in section IV of the Federal Register (84 FR 50254, September 24).

a. The EPA’s argument that state regulations and voluntary measures will compensate for removal of the federal methane requirements is illogical and baseless. State programs and standards vary widely, and many states have statutory provisions preventing their regulations from being more stringent than the federal equivalent or providing for automatic repeal of a state standard if the corresponding federal standard is eliminated. In addition, the number of companies that participate in voluntary programs is small compared to the large number of oil and natural gas companies that are in operation. Voluntary reductions are

commendable, but they cannot compare or compensate for legally enforceable requirements that set uniform minimum standards among the states with anti-backsliding requirements.

b. Transmission and storage sector emissions are likely to increase and go unregulated if methane is removed from the NSPS. Natural gas in the transmission and storage segment contains less VOC relative to the production segment and is closer to pure methane. This sector was an important addition to the NSPS OOOOa. There is a lot of uncertainty regarding emissions in this sector that covers natural gas compressor stations at the transmission and storage level. The compressors, equipment leaks, and pneumatic controllers are important sources that contribute to large emissions from the source category. While VOC are leaked during the production, processing, and gathering of natural gas, VOC are barely present further downstream, which means that methane leaks which are currently covered under the NSPS may no longer be covered by this proposal.

c. The EPA should go further to inventory and reduce emissions from oil and natural gas methane emissions throughout the sources and sectors covered in the NSPS, including the transmission and storage sector, and should not reduce or remove them.

5. Comments on the EPA's obligation to develop emission guidelines to address methane emissions from existing sources under section 111(d) of the CAA.

a. EPA's prediction that existing sources will be modified or retired is not supported by the available evidence. The EPA states that they "expect that many existing sources will retire or become subject to regulation under CAA section 111(b) because they will undertake modification or reconstruction (84 FR 50271, September 24, 2019)". Yet, in the same preamble the EPA requests turnover data for the sources regulated under NSPS OOOO and OOOOa because it lacks sufficient turnover data (84 FR 50273, September 24, 2019). As stated previously, 60 days is not enough time to gather the turnover data requested by EPA in this proposed rulemaking. However, NMED disagrees with the EPA's conclusion based on existing records that reflect numerous oil and natural gas fugitive emissions sources, storage tanks, and loadout emissions sources with construction dates going back to 1970 (almost 50 years ago) that have not been modified, reconstructed, or replaced with new equipment.

b. Major implications for the OAI – See the comments in Section 1.b. of this comment paper.

c. The 2016 NSPS OOOOa regulation is critical to regulating methane emissions from existing oil and natural gas sources. A large part of the effectiveness of NSPS OOOOa relies on controlling these wide-spread existing sources that often emit much more than new sources. Information requests help the EPA and states to better understand these existing sources and the process inefficiencies that may lead to emissions problems. Process inefficiencies and capture inefficiencies are often associated with existing sources and can overwhelm new source emissions in the inventory. Some examples of existing source categories and studies related to oil and natural gas production include:

- i. The major natural gas producing basin in New Mexico is the San Juan Basin in the northwest corner of the state. The San Juan is one of the oldest producing areas in the United States, with the first conventional natural gas discovered in 1921, and the first CBM well spud in 1948. The basin has produced from over 300 oil fields and nearly 40,000 wells. cumulative production reached 42.6 trillion cubic feet of gas and 381 million barrels of oil in 2009. With such a long history, a large amount of the infrastructure is aged and existing sources are retained indefinitely in many cases (Natural Gas Intel, 2014). The idea that existing source regulation under 111(d) lacks significance is an incorrect assumption by the proposed rule.

- ii. A study of midstream oil and natural gas infrastructure found that 42% of devices account for 85% of emissions and that malfunctioning low-bleed pneumatic controllers accounted for the majority of those emissions (Luck, B. et. al., 2019).
- iii. In a study by Omara, et. al, researchers used site-level methane emissions data from over 1000 natural gas production sites in eight basins, including 92 new site-level methane measurements in the Uinta, northeastern Marcellus, and Denver-Julesburg basins, to investigate methane emissions characteristics and develop a new national methane emission estimate for the natural gas production sector. The distribution of site-level emissions is highly skewed, with the top 5% of sites accounting for 50% of cumulative emissions. High emitting sites are predominantly also high producing (>10 Mcfd). However, low natural gas production sites emit a larger fraction of their methane production. When combined with activity data, we predict that this creates substantial variability in the basin-level methane emissions which, as a fraction of basin-level methane production, range from 0.90% for the Appalachian and Greater Green River to >4.5% in the San Juan and San Joaquin. Their total methane emissions estimate is 2.3 times higher than the EPA's estimate and likely attributable to the disproportionate influence of high emitting sites (Omara, M. et. al., 2018).
- iv. The Colorado Department of Public Health and Environment has studied emissions in the Denver Metro Area as part of the ozone attainment planning. Condensate tanks are the largest oil and natural gas source category in the Denver Metro Area & North Front Range 8-hour Ozone Nonattainment Area. Recent studies found that condensate emissions were consistently underestimated. A top-down inventory by NOAA suggested inventory may be twice as high as established oil and natural gas equipment estimates (Wells, 2018).

6. Comment on whether the EPA should revise the positions it took in the 2016 rule regarding its legal authority to regulate methane.

a. EPA question “Whether section 111 of the CAA requires the EPA to make a pollutant-specific significant contribution finding for GHG emissions (primarily methane) from the oil and natural gas industry (EPA, 2019).”

NMED Response: The initial GHG Endangerment Finding under the CAA section 202(a) is directed towards transportation sector emissions. The EPA subsequently extended the Endangerment Finding to the energy generation sector and power plant emissions. The Clean Power Plan (CPP) regulation was based on this extension. While the CPP was stayed by the United States Supreme Court while legal challenges worked through the lower courts, it never went into effect. The Trump administration dropped its defense of the CPP and started a new rulemaking to replace the CPP. The Affordable Clean Energy (ACE) plan was released in 2019. Through this action, the EPA implicitly acknowledged that the previous administration’s extension of the Endangerment Finding to the energy sector was legally sufficient and that GHG emissions from the energy sector are pollutants that must be regulated. Because the Endangerment Finding has already been extended once before without making a new significant contribution finding, and is now the legal basis for the ACE, this indicates that no such finding is required for another extension of it to another GHG emitting source. Moreover, the previous EPA Administrator was exercising her “judgement,” as specified in the CAA section 111 (B)(1)(A) during the promulgation of NSPS OOOO and OOOOa to determine that the oil and natural gas industry “contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.”

b. EPA question “If the law does require a pollutant-specific finding for methane, whether the finding in the alternative in NSPS OOOOa properly satisfied that requirement (EPA, 2019).”

NMED Response: The proposed alternative to the NSPS OOOOa rule does not satisfy the endangerment requirement to control the specific pollutant (methane). The EPA is correct in identifying that oil and natural gas production facilities emit both VOC and methane simultaneously, and that emissions detection and repair technologies address emissions of both pollutant types. The proposed changes purport to remove the NSPS OOOOa methane standard because it is “redundant” and “burdensome,” and retain the NSPS OOOO VOC standard. The VOC standards for some components (e.g., condensate tanks) is based on an allowable threshold of VOC emissions per year (in tons). This is critical because VOC and methane are not emitted in a 1:1 ratio and thus they are not perfect proxies for regulatory requirements. Moreover, individual hydrocarbon basins (both oil and natural gas producing areas) vary in ratios of VOC to methane, where producers in a basin with a higher ratio (or a “wet gas” basin) will have a greater likelihood of reaching the VOC emission limits and, thus, a greater likelihood of using the technological controls. In another (dry gas) basin, without a methane requirement, producers may not approach the VOC limits and may not institute the relevant controls for both methane and VOC. Therefore, these proposed rule changes may result in increased methane emissions for dry gas basins because they would not be in violation of VOC standards in the NSPS OOOO and OOOOa. This casts doubt on EPA’s assessment that these changes will not result in emissions increases. The basin-to-basin variability in VOC to methane ratios may result in increased methane emissions from dry gas basins and is evidence for the need to have requirements for both pollutants, and the proposed revisions do not satisfy the endangerment requirement for controlling methane.

c. The EPA seeks comment “on the appropriate criteria to use when determining, under section 111 of the CAA, whether a pollutant emitted from a particular source category significantly contributes to air pollution that may reasonably be anticipated to endanger public health and the environment (EPA, 2019).”

NMED Response: While the 2009 GHG Endangerment Finding specifies methane as one of the components of the “well mixed greenhouse gases” addressed in the finding, there are important additional realities to consider when developing criteria to use in determining what sources “significantly [contribute] to air pollution that may reasonably be anticipated to endanger public health and the environment.” First, regulators must consider the relative forcing and lifespan of GHG (in this case, methane). Methane as a GHG is approximately 80 times (Jorgensen et. al, 2014; Howarth et. al., 2012) more efficient at trapping heat than carbon dioxide, but it is in the atmosphere for only 12±3 years. In 100-year global warming potential (GWP) calculations, the IPCC 4th and 5th assessments used a ~25x CO_{2e} for methane. (IPCC4, IPCC5). These are consistent with the EPA’s own calculations. But other research teams argue, and the UNFCCC now argues, that a 20-year GWP is more necessary due to potential short-term climate change impacts, (Jorgensen et. al, 2014; Howarth et. al., 2012) and in 20 GWP assessments methane is 56x CO_{2e} (UNFCCC, 2019). These newer classifications are critical to devising evaluative criteria for significant methane sources. Moreover, the short-term intensity of methane means that criteria will exacerbate near-term environmental hazards associated with climate change, but also provide short-term benefits in reducing climate forcing significantly.

The second reality that must be factored into evaluative criteria pertains to the challenge in quantifying impacts from emissions. Climate science and the models used to project future climate scenarios have dramatically progressed over the past few decades. However, attempts to quantify impacts in dollars and connect those impacts to specific emissions sources are difficult and come with substantial scientific uncertainty.

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