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September 16, 2020

Sandra Ely
Director, Environmental Protection Division
New Mexico Environment Department
State of New Mexico

Secretary James Kenney
New Mexico Environment Department
State of New Mexico

RE: Independent Petroleum Association of New Mexico (IPANM) Comments on Draft Methane Rules

Dear Director Ely & Secretary Kenney,

On behalf of the 350+ members comprising the independent oil & gas producers and associated industry members, I'd like to respectfully submit these comments to the proposed draft Methane rules released to the public on July 20, 2020. It is our intention to offer practical suggestions for essential changes that will benefit both your staff of regulators and our members. These comments are intended to be technical in nature, as well as provide critical context related to the well economics faced by our independent operators. As we have demonstrated throughout our year+ involvement in the Methane Advisory Panel (MAP), these comments are in no way political in nature and represent factual feasibility issues related to your future implementation of both rules.

The comments in this letter have been divided into several sections to clearly identify the specific sections of the New Mexico Environment Department's (NMED) Rule. The following page begins with a Table of Contents to quickly allow your staff to review comments by drafted sections.

We hope you carefully consider our technical requests included in this letter. Members of IPANM have spent considerable time working with the administration throughout the MAP process, and reviewing these draft rules, and assembling these comments. Needless to say, this kind of effort illustrates how certain regulatory changes with new Methane Rule could impact independent producers in terms of cost, resources, and the ability to operate in New Mexico.

Thank you for your consideration.

Highest Regards,

Jim Winchester

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Contents

COMMENTS ON THE DRAFT NMED METHANE (VOC) RULE: 3
General Comments on the Rule Development Process: 3
General Comments on Timing for Implementation and Compliance: 3
20.2.50.6 APPLICABILITY 4
20.2.50.8 DEFINITIONS 4
20.2.50.12 GENERAL PROVISIONS 5
20.2.50.13 STANDARDS FOR ENGINES AND TURBINES 7
20.2.50.15 STANDARDS FOR CONTROL DEVICES 10
20.2.50.16 STANDARDS FOR EQUIPMENT LEAKS 10
20.2.50.17 STANDARDS FOR NATURAL GAS WELL LIQUIDS UNLOADING 11
20.2.50.18 GLYCOL DEHYDRATORS 12
20.2.50.19 STANDARDS FOR HEATERS 12
20.2.50.20 STANDARDS FOR HYDROCARBON LIQUID TRANSFERS 12
20.2.50.21 STANDARDS FOR PIG LAUNCHING AND RECEIVING 12
20.2.50.22 STANDARDS FOR PNEUMATIC CONTROLLERS AND PUMPS 13
20.2.50.23 STANDARDS FOR STORAGE TANKS 13
20.2.50.24 STANDARDS FOR WORKOVERS 14
20.2.50.25 STANDARDS FOR OIL AND NATURAL GAS STRIPPER WELLS AND FACILITIES WITH SITE-WIDE VOC POTENTIAL TO EMIT LESS THAN 15 TPY 14
20.2.50.27 PROHIBITED ACTIVITIES AND CREDIBLE INFORMATION PRESUMPTIONS 15
Attachments: 17

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COMMENTS ON THE DRAFT NMED METHANE (VOC) RULE:

TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 2 AIR QUALITY (STATEWIDE)
PART 50 OIL AND NATURAL GAS REGULATION FOR OZONE PRECURSORS

General Comments on the Rule Development Process:

IPANM is very appreciative of the Methane Advisory Panel (MAP) technical stakeholder engagement process that took place in the fall of 2019. We were very supportive of the process and provided several technical representatives to provide input from the upstream and midstream sectors of the oil and gas industry in New Mexico. From the beginning of the process, it was stated that the NMED wanted to develop emission reduction strategies in the counties where the ambient ozone concentrations were in excess of ninety-five percent of the national ambient air quality standards (NAAQS) based on science, innovation, collaboration, and compliance. It is difficult to tie the current strategy to the use of best available science based on the fact that this first round of emission reductions is being promulgated without a good baseline. A new ozone rule should consider the current situation in New Mexico to direct the regulations to the specific emission sources necessary to achieve the NAAQS. Overall the current draft rules appear to be more stringent than necessary based on some of the provisions requiring emissions reductions to a similar or greater extent that would be required in a nonattainment classification. The oil and gas industry plays a significant role in the state's economy and budget. IPANM believes it is prudent to develop the appropriate environmental regulations with a balanced approach as to not overburden a vital industry for the state with unnecessary or excessive requirements.

General Comments on Timing for Implementation and Compliance:

IPANM is concerned about the aggressive implementation timeframe for the draft rules. The requirements in the draft rules will require significant equipment and field operations modifications. The sheer amount of engineering and administrative burden would require more than one year to implement. There is also a concern surrounding equipment availability with numerous operators in New Mexico sourcing the necessary equipment for compliance in a one-year timeframe. IPANM would suggest a three-year implementation period for the various provisions in the draft rules.

The following comments will reference the specific numeric rule reference number, followed by IPANM's comments and analysis. In some cases, our commentary may include figures or exact, inserted sections from the original draft rule.

20.2.50.6 APPLICABILITY

The inclusion of the Methane emission exemption in the draft NMED rule represents a critical aspect that will specifically allow independent operators the ability to operate, for the most part, in a manner that will extend the productive life of a well. The stripper well and low PTE exemption appropriately considers the lesser emission threat presented by stripper wells without economically burdensome equipment upgrades that would cost more than the value of the remaining resource.

Section 20.2.50.6 (D) establishes an essential exemption for facilities that emit less than 15 tons per year of VOCs. This is 15-ton limit is appropriate. Without such an exemption, independent operators, many of whom own a higher percentage of marginal wells, would be forced to prematurely and permanently shut-in a producing well or plug and abandon it. Such premature plugging would constitute resource waste. Preventing resource waste is one of the stated goals of the Oil Conservation Division (OCD) and Commission (OCC).

Opponents of this exemption inaccurately argue that the proposed exemption for low-emitting wells with emissions of less than 15 tons per year will exempt many of New Mexico's oil and gas wells from regulation, suggesting rules must be stricter than the draft proposal to close exemptions, and add more requirements for leak detection and prevention. This includes a fear-inducing threat that failure to eliminate the exemptions would worsen air quality and put at risk 95 percent of stripper wells in New Mexico. The economic sensitivity of stripper wells is highly variable depending upon the operator, but some of our members have indicated that even a small increase in lease operating expense can have a dramatic impact on the operational viability of a given well.

An area in this section that needs further clarification exists in 20.2.50.25.C(2), 20.2.50.25.D(4) and 20.2.50.25.E. These sections in the rule refer back to General Provisions 20.2.50.12 of the rule. This reference in the draft rule implies that stripper wells and low PTE sites would have to comply with the general provisions of the rule. The major concern is marginal facilities being required to comply with the equipment monitoring information and tracking tag tracking (EMITT).

20.2.50.8 DEFINITIONS

S. "Hydrocarbon liquids" means any naturally occurring, unrefined petroleum liquid and can include oil, condensate, ~~produced water,~~ and intermediate hydrocarbons. Produced water storage is an insignificant emission source and should be removed from the definition of hydrocarbon liquids in the rule. It is infeasible in most cases to control the VOC emissions from a produced water tank for various reasons. In many cases, the tank is not capable of being routed to a control device, and the modification or replacement would require significant capital investment.

LL. "Stripper well" means an oil well with a maximum daily average oil production not exceeding ~~10~~ **15** barrels of oil per day, or a natural gas well with a maximum daily average natural gas production not exceeding ~~60,000~~ **90,000** standard cubic feet per day, or a well with a maximum daily average combined oil and natural gas production not exceeding ~~10~~ **15** barrels of oil equivalent per day during any 12-month consecutive time period.

IPANM believes that raising the production thresholds in the definition of a stripper well would provide an additional reduction of economic burden on wells that are considered marginal.

20.2.50.12 GENERAL PROVISIONS

The Equipment Monitoring Information and Tracking Tag (EMITT) included in the draft NMED rule represents a substantial concern to operators. The rule calls for each operator to physically tag equipment subject to the requirements and upload equipment information to a database to be accessible by state inspectors.

Please refer to the excerpt 20.2.50.12 (A) (6 & 7) below from the draft rule that establishes the draft provisions that cause a great area of concern:

20.2.50.12 GENERAL PROVISIONS

(6) Within one year of the effective date of this rule, owners and operators of equipment requiring an Equipment Monitoring Information and Tracking Tag (EMITT) shall physically tag the unit with an EMITT that is scannable with a hand held scanner (RFID or QR) that uniquely identifies the unit to which it is assigned and the EMITT shall be maintained by the owner or operator. Data in the EMITT shall be scannable by state inspectors to provide at a minimum, the following information:
  (a) Unique unit identification number;
  (b) UTM coordinates of the facility;
  (c) Type of unit (tank, VRU, dehydrator, pneumatic controller, etc.);
  (d) For equipment, the VOC (and NOx, if applicable) potential to emit in pounds per hour and tons per year; and
  (e) For control equipment, the controlled VOC (and NOx, if applicable) potential to emit in pounds per hour and tons per year and the design control efficiency in percent.

(7) The EMITT shall be linked to an EMITT Database accessible to state inspectors that at a minimum supplies the data required by Section 20.2.50.12 NMAC and any other data required for that equipment under this Part.

The initial concern with this provision is that EMITT would be an extremely costly and labor-intensive effort for operators. In fact, the amount of effort required to tag equipment and maintain a database is open-ended to the point whereby even if an operator were to make a substantial investment and good faith effort to meet such a significant provision, there still exists the high probability that data would not be compatible with existing software systems used by different operators. In addition, we have been unable to identify specific information about potential EMITT solutions to enable us to thoroughly assess the costs and program details to adequately implement this requirement.

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Beyond the initial concerns expressed above related to the labor, travel, and costs required to tag every well within an operator's portfolio, there exists the more serious issue of data collection, organization, reporting and compatibility to input into NMED software. Consider the following:

- NMED has not provided any cost analysis that considers the expenses that will be placed on operators to install, track, and maintain such a vast amount of data.
- At a minimum, operators would need 18-months to research, purchase, and customize software to generate the necessary required information that the NMED is hoping to acquire in this provision.
- Furthermore, there already exists substantial multi-faceted software platforms in which operators have already invested heavily to meet current reporting requirements.

To begin having any discussion regarding the feasibility of this EMITT requirement, operators and the NMED need to have an extended discussion and analysis of existing platforms that operators are already using. Next, operators need to clearly understand why NMED is requesting and requiring for this data. Does the data requested actually fulfill any tangible benefit in decreasing the amount of emissions from individual wells? Finally, if there is a relevant need for such data, there would need to be flexibility on behalf of the NMED to accept the varying software platforms to acquire the data.

Based upon our August 3, 2020 discussion with NMED regarding the EMITT platform, IPANM was told that NMED would "circle back" with our association to clarify these questions and concerns posed at that time. IPANM still is waiting to engage in that discussion and strongly encourages the NMED to host that discussion before final rules are drafted.

20.2.50.13 STANDARDS FOR ENGINES AND TURBINES

Table 1 - Emission Standards for Natural Gas-Fired Spark-Ignition Engines

For each natural gas-fired spark-ignition engine constructed or reconstructed and installed before the effective date of 20.2.50 NMAC, the owner or operator shall ensure the existing engine(s) does not exceed the following emission standards as determined by the compliance schedule required in 20.2.50.13.B(3) NMAC:				
Engine Type	Rated bhp	NOx	CO	NMNEHC (as propane)
Lean-burn	≤100	2.0 g/bhp-h	2.0 g/bhp-h	-
Lean-burn	>100 - ≤500	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Lean-burn	>500	0.50 g/bhp-h	47 ppmvd @ 15% O2 or 93% reduction	0.30 g/bhp-h
Rich-burn	≤100	2.0 g/bhp-h	2.0 g/bhp-h	-
Rich-burn	>100 - ≤500	0.25 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h
Rich-burn	>500	0.20 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h
For each natural gas-fired spark-ignition engine constructed or reconstructed and installed on or after the effective date of 20.2.50 NMAC, the owner or operator shall ensure the engine does not exceed the following emission standards upon startup:				
Engine Type	Rated bhp	NOx	CO	NMNEHC (as propane)
Lean-burn	≤100	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Lean-burn	>100 - ≤500	1.0 g/bhp-h	0.70 g/bhp-h	0.30 g/bhp-h
Lean-burn	>500 - <2,370	0.50 g/bhp-h	0.25 g/bhp-h	0.30 g/bhp-h
Lean-burn	≥2,370	0.30 g/bhp-h Uncontrolled or 0.05 g/bhp-h with Control	0.25 g/bhp-h	0.30 g/bhp-h
Rich-burn	≤100	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Rich-burn	>100 - ≤500	0.25 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h
Rich-burn	>500	0.20 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h

The standards presented in Table 1 represent the first time IPANM has seen such emission limits, as this was not discussed in any detail throughout the MAP stakeholder process. Our initial concern was the origin of these proposed standards. Where did they come from? The initial response provided by the NMED on August 3, 2020, suggests they are the result of a survey of other existing state regulations, including Pennsylvania GP-5. If so, IPANM requests the NMED further provide the source of such limits and further context to their applicability to New Mexico. We believe that there are significant factors that make it challenging to apply Pennsylvania's overly restrictive GP-5 engine emissions standards in New Mexico. One of the primary concerns is the field fuel heating value, which in New Mexico can vary from an ideal value of 1000 btu/scf to upwards of 1,400 btu/scf. The higher end of the heating value range can have significant impacts on achieving the restrictive limits for NOx and VOC proposed in the rule. The other primary concern is the cost of compliance in terms of upgrading, replacing and performing maintenance for the necessary control systems to achieve the limits set forth in Table 1.

IPANM has looked at a similar situation in the neighboring state of Colorado. Table 1 in the draft rule contains two headings regarding applicability for existing engines constructed or reconstructed and installed after the effective date, meeting certain emission factors. Of particular concern are the emission standards for rich burn engines which proposes that rich burn engines ≥ 100 - ≤ 500 bhp meet

0.25 g/bhp-h (grams per brake horsepower-hour) for NOx and 0.30 g/bhp-h for CO. In addition, the proposal would impose an even lower emission threshold for rich burn engines ≥ 500 of 0.20 g/bhp-hr for NOx and a similar 0.30 g/bhp-h for CO. We do not believe these emission factors can be sustained based upon expert technical information reviewed by IPANM for a similar proposal made in Colorado.

The originator of this similar proposal to the Colorado Air Quality Control Commissions was the National Parks Conservation Association (NPCA) a non-governmental organization. In response, Spirit Environmental (Spirit), an air quality consulting firm in Denver, performed an exhaustive review of the proposal by NCPA. While Spirit's report focused on engines greater than 1,000 hp, smaller rich burn units such as those in the 100 hp-500 hp range have a similar starting point for emissions prior to controls being installed; therefore, similar conclusions regardless of the size of the engine are warranted. Their findings clearly outline the fallacy of NPCA's proposal, which is more fully explained below:

- NPCA assumed to achieve a 0.2 g/hp-hr NOx emission rate was the addition of an air-fuel ratio controller ("AFRC") and non-selective catalytic reduction ("NSCR"). This is also what NPCA's cost estimates were exclusively based on when they made their proposal. If this true, NOx emission control would have to achieve greater than 98% control based upon data compiled by Spirit which, as explained below, is not realistic with extended use of a compressor engine.

- While the addition of NSCR in conjunction with AFRC controls to an existing engine may provide >98% control with brand new catalyst elements and under ideal conditions, that level of control cannot be reliably maintained as catalytic elements age, and engine settings drift (within acceptable levels). Spirit confirmed this with Innio – Waukesha, a rich-burn engine vendor familiar with oil and gas operations using these types of compressors. Innio – Waukesha agreed that while a 4SRB engine equipped with NSCR and AFRC may be able to temporarily meet a 0.2 g/hp-hr NOx emission rate, maintaining it at those levels for ongoing compliance would be near impossible. In fact, catalyst manufacturers and vendors contacted by Spirit (Miratech, Johnson Matthey, and RJ Mann) confirmed that they would only guarantee catalyst performance for at most 1 to 3 years because the catalyst elements and engine management systems must be in almost new condition to attempt to meet such a low standard and high control efficiency. This was confirmed in NPCA's own technical data which indicated that a 90% reduction of nitrogen oxides is state of the art emission performance level for existing RICE fueled by natural gas and that 95% control of NOx may be assumed when evaluating the cost-effectiveness of NSCR/AFRC controls, yielding a 0.75 g/hp-hr NOx emission level at best.

- NPCA included data that supports the inability to meet these 98% reductions on an ongoing basis. NPCA's experts note the following: "For example, retrofit installations of NSCR on five Caterpillar rich burn engines in Texas achieved a NOx reduction of 96% or greater on all of the engines. On two of those engines, testing conducted after more than 4,000 hours of operation with NSCR indicated the NSCR controls were still achieving a 95% NOx reduction." However, based on NPCA's own assumptions regarding the g/hp-hr for uncontrolled engines, 95 to 96 percent will not achieve the necessary limits.

- A more realistically achievable level of control using NSCR in conjunction with AFRC lies in the range of 90%-95%. For existing 4SRB engines to consistently meet a NOx emission level of 0.2 g/hp-hr, other significant equipment upgrades, in addition to an AFRC and/or NSCR installation, would need to be made. These engine upgrades were not accounted by NPCA. Engine upgrade kits may be used to replace several major components on an existing engine (e.g. pistons, heads, turbocharger, emission management system, flywheel etc.), and to work in conjunction with a traditional NSCR/AFRC system to further bolster the ability to achieve a 0.2 g/hp-hr NOx emission rate. Such costs could be in the hundreds of thousands of dollars for engines that are low emitting – representing an extensive and expensive total cost to operators and potentially high cost-per-ton reduced. This is a significant cost to the oil and natural gas industry where operators are largely already controlling engines and is a significant additional cost to achieve the minimal additional reductions that would result.

IPANM also surveyed a local engine vendor in the San Juan Basin and they categorically stated these emission thresholds, particularly for engines 100 hp-500 hp, cannot be met. The amount of catalyst needed to meet these standards would cause serious back pressure on the operation of the engine causing a loss of power and result in overheating. This would lead to engine blocks having to be replaced frequently, with associated increased costs to companies either buying or renting these units.

IPANM consulted a compression service provider in the Permian Basin and have included their feedback as an attachment to this comment letter. In summary, they found the proposed Rule as drafted would result in unachievable emission standards, very burdensome costs of retrofitting compressors, and maintenance and testing practices that are simply not viable.

We would encourage the NMED to review Spirit's analysis which was submitted to the CAQCC at https://drive.google.com/drive/folders/1yZmgQ9nAbSA7GfDoz6M70iuBY1iCeaL8. Their report can be found at Exhibit 10.

Furthermore, IPANM has concerns around lower horsepower limits. For example, the draft limits would certainly have different applications in different basins. With such limits as written, the costs of compression, especially in the San Juan Basin, would escalate to the point of rendering a marginal well uneconomic.

20.2.50.13 C(3)

IPANM requests flexibility in terms of fuel flow measurement in the stack gas flow rate calculation in accordance with EPA Reference Method 19. In situations where dedicated fuel flow meters are not available, IPANM requests the use of engine manufacturer established fuel consumption rates or other calculated fuel flow rate.

20.2.50.15 STANDARDS FOR CONTROL DEVICES

Consider the following as written:

20.2.50.15 C(1)(a) "The flare shall combust all gas sent to the flare…"
20.2.50.15 D(1)(a) "The ECD/TO shall combust all gas sent to the ECD/TO…"

This implies a 100% combustion efficiency. IPANM recommends a 95% capture and control efficiency consistent with EPA's Control Techniques Guidelines for the Oil and Natural Gas Industry.[1] The EPA CTGs note that combustion devices can be designed to meet 98% percent efficiency but may not meet this continuously due to the variability of field conditions.

In many circumstances, vapor recover units are utilized as process equipment versus an emission control device. IPANM recommends that the NMED consider some distinction on the purpose of a VRU in the proposed rule.

20.2.50.16 STANDARDS FOR EQUIPMENT LEAKS

IPANM supports the use of a leak detection and repair (LDAR) program as part of the state's emission reduction strategy. We believe the LDAR frequency needs to be appropriate for the reduction of emissions to be achieved. IPANM recommends an annual instrument leak detection frequency. The American Petroleum Institute (API) submitted comments regarding the EPA's reconsideration of the New Source Performance Standards (NSPS) in late 2018.[2] API collected subpart OOOOa data from member companies to analyze the fugitive emission monitoring trends. The conclusion drawn from the analysis was that a semi-annual frequency for leak detection surveys is not necessary or cost-effective. The data indicated that 58% of the initial surveys found zero leaks, and the average number of leaks found per site was 1.42 for the first survey and declines for the subsequent surveys. The cost to implement an instrument leak detection program can be a significant cost burden, especially for smaller operators who may have to contract with outside consultants to perform the work. The cost of each inspection is constant while there is a diminishing return in fugitive emissions identified per subsequent inspection.

The current draft rule only allows for Method 21 and OGI technology for leak detection. IPANM recommends that the NMED consider the use of other instruments for the leak surveys. It would be useful to have a list of approved technologies in the event operators have other devices that meet the requirements for leak detection.

[1] [1] EPA, Control Techniques Guidelines for the Oil and Natural Gas Industry 2-6 (2016) ("2016 CTG")
[2] https://www.api.org/news-policy-and-issues/letters-or-comments/2018/12/18/epa-oil-gas-emission-standards-for-new-reconstructed-and-modified-sources-recons Attachment B

The following, except below, outlines NMED's proposed equipment leak repair requirements from 20.2.50.16 (D). IPANM has some practical application/feasibility issues for these replacement time frames and the extenuating circumstances surrounding the suggested timelines:

20.2.50.16 STANDARDS FOR EQUIPMENT LEAKS

D. Repair Requirements

(1) For any leaks detected in 20.2.50.16(C) NMAC:

(a) The owner or operator shall place a visible tag on the leaking component until the component has been repaired;

(b) All leaks detected using optical gas imaging shall be repaired within 7 days of discovery, all other leaks shall be repaired within 15 days of discovery;

(c) The equipment must be re-monitored no later than 15 days after discovery of the leak to demonstrate that it has been repaired; and

(d) If the leak cannot be repaired within 7 days for leaks detected using optical gas imaging and within 14 days for all other leaks without a process unit shutdown, it may be designated "Repair delayed," and must be repaired before the end of the next process unit shutdown.

IPANM agrees that leaking equipment presents an immediate need for repair, and we share the desire of the NMED to replace or repair the part as soon as possible. However, the NMED needs to account for the challenge of supply chain bottlenecks, including getting parts out to remote well sites.

For example, a component may not be readily available, and there could be a need to order the part from out of the area or the operator may have a challenge with getting labor resources dedicated for the repair.

Based on our experience and the practical application of getting labor to challenging sites, we suggest the following changes.

- Instead of requiring a repair within 7 days of discovery detected using optical gas imaging, IPANM suggests a repair with **30** days of discovery for all applications, regardless of how they are detected.
- Instead of re-monitoring repaired equipment no later than 15-days after discovery, IPANM suggests the repair confirmation survey completed at the time of the repair or **30** days after discovery.

20.2.50.17 STANDARDS FOR NATURAL GAS WELL LIQUIDS UNLOADING

The following, except below, outlines NMED's proposed standards for natural gas well liquids unloading 20.2.50.17. IPANM is in support of using best management practices to avoid manual liquids unloading and the use of best management practices to reduce the emissions of manual liquids unloading events when necessary to return the well to normal operation. There are factors and conditions in the field that are beyond the operator's control that make manual liquids unloading necessary. For example, there could be an increase in the gathering line pressure or a wellhead compressor experiences unexpected

downtime. As stated earlier in this comment letter IPANM has concerns about the EMITT requirements set forth in 20.2.50.12 NMAC.

20.2.50.18 GLYCOL DEHYDRATORS

IPANM believes that Glycol dehydrators are adequately regulated under 40 CFR 63, Subpart HH (MACT HH). Any additional emission reductions obtained above and beyond the MACT HH would not be significant and would not be cost-effective.

20.2.50.19 STANDARDS FOR HEATERS

IPANM recommends that the emissions standards proposed should only apply to new sources. The cost to retrofit existing heaters could be cost-prohibitive.

20.2.50.20 STANDARDS FOR HYDROCARBON LIQUID TRANSFERS

IPANM has concerns with the provisions for hydrocarbon liquid transfers in terms of an applicability threshold and implementation timeline. It would seem appropriate to have an emission or throughput threshold for controlling liquid transfer emissions, specifically for the operators in the San Juan Basin, where many sites have single tanks, and the loading of hydrocarbon liquids is infrequent. The cost to install vapor balance or other control methods would be cost-prohibitive. The cost to implement controls is significant, while the emission reductions would be minimal. IPANM requests further clarification on the overall emissions from hydrocarbon liquid transfer. The timeframe for implementation of these standards also needs to consider that it will take capital investment and supply chain support to implement. IPANM recommends a three-year implementation period for existing sites that would be applicable for compliance with these standards. The three-year implementation period would allow the operator to allocate capital investment and other resources to install the necessary equipment and the building of a contractor base with proper loading equipment. Currently, there would not be enough crude hauling trucks that could support the capture and re-routing of the vapors.

As noted in the comments above in the definitions section, IPANM recommends that these provisions not apply to produced water. The emissions from produced water loading are of insignificant quantities.

20.2.50.21 STANDARDS FOR PIG LAUNCHING AND RECEIVING

The following except below outlines NMED's proposed standards for pig launching and receiving in 20.2.50.21. IPANM has some clarifying questions regarding some of specific parameters in this draft:

20.2.50.21 STANDARDS FOR PIG LAUNCHING AND RECEIVING

B. Emission Standards

(1) The owner or operator of new and existing pipeline pig launching and receiving operations with a potential to emit equal to or greater than 1.0 tpy of VOC shall capture and reduce VOC emissions by at least 98%, beginning on the effective date of this Part.

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IPANM wishes to clarify the 1 ton/year threshold. Is this per launcher, receiver, or as a combined launching and receiving system? The PIG launcher and receiver can be separated by thousands of feet of pipeline and require two separate control installations. It seems technically infeasible to route 98% of the gas to a control device. The launcher and receiver both must be blown down to the atmosphere to ensure the safe operation while inserting or removing a PIG. These proposed provisions could disincentivize pigging operations.

Furthermore, IPANM would like to raise the central question related to the regulation: Are pigging operations a large source of VOC emissions in the state?

20.2.50.22 STANDARDS FOR PNEUMATIC CONTROLLERS AND PUMPS

20.2.50.22 outlines NMED's proposed standards for pneumatic controllers and pumps. IPANM has some clarifying questions regarding some of the specific parameters in this draft.

IPANM supports the phase-out of continuous high bleed pneumatic controllers.

Throughout 20.2.50.22 (B) Emissions Standards for both pneumatic controllers and pneumatic pumps, the rules do not offer any clarification on how NMED defines "access to electrical power." NMED verbally clarified on August 3, 2020 that access to electrical power for pneumatic devices should be assumed to mean that the facility has commercially lined power segmented and directly available as its connection to power. Therefore, IPANM requests the rule specifically make this clarification by defining access to electrical power as having a direct connection to commercial line power with sufficient capacity for site demand.

Next, IPANM would like to address situations where a site may have access to electric power but has a small number of pneumatic controllers. The direct experience of our operators with electric controllers demonstrates that there are issues with response time for process control. For example, in the case of a separator with electric actuators, due to a closing delay, the overall emissions ultimately increase due to gas vented to the tank during the liquid transfer from the separator. Therefore, to achieve a zero-bleed rate, it would require the installation of an instrument air system. The cost of the instrument air installation could be cost-prohibitive. IPANM would recommend placing a pneumatic controller count threshold for the zero-bleed requirement.

Finally, the way 20.2.50.22 is written, there is no allowance for intermittent devices. Intermittent controls can have an instantaneous bleed rate above 6 scf/h during certain actuation phases but do not bleed continuously. Therefore, IPANM requests that the draft rule includes new language to account for intermittent devices. During our August 3, 2020 conversation, NMED clarified that staff would reexamine these circumstances and develop language to address these concerns.

20.2.50.23 STANDARDS FOR STORAGE TANKS

IPANM would recommend a revision in the applicability threshold to align with the NSPS OOOO/OOOOa by raising the 2 tpy to 6 tpy. On the tanks with a PTE less than 6 tpy it is more likely that combustion would be the method for control, which could lead to a trade-off of increasing NOx and CO2 emissions while trying to reduce VOC emissions.

IPANM has concerns with the timeframe for compliance for existing tanks. IPANM would recommend extending the required timeline for existing tanks to come into compliance within two years.

20.2.50.24 STANDARDS FOR WORKOVERS

The following except below outlines NMED's proposed standards for workovers:

20.2.50.24 STANDARDS FOR WORKOVERS

E. Reporting Requirements
(1) Owners and operators shall comply with the reporting requirements in 20.2.50.12 NMAC.
(2) If it is not feasible to prevent VOC emissions from being emitted to the atmosphere from any workover event, the owner or operator shall notify all residents by certified mail located within 0.25 miles of the well of the planned workover at least three (3) calendar days prior to the workover event.

As IPANM mentioned during our August 3, 2020 conference call with NMED staff, the notification of work on a well within ¼ miles is problematic on a number of levels:

- With wells that fall within more densely populated areas, there could be hundreds of residents within that radius. For example, the City of Farmington has numerous wells within its jurisdiction or nearby. It would be a significant administrative burden for an operator to both gather addresses and send certified mail with no reduction in emissions associated with the effort.
- Three calendar day notice isn't always possible due the last-minute availability of service companies.

IPANM was advised to provide comments or recommendations to achieve a similar purpose. A possible suggestion includes:

- A temporary sign at the access entrance to the wellsite on behalf of the service company to indicate workover operations are currently ongoing. This would successfully provide notice to the particular residents of concern, who would undoubtedly seek answers to workover operations by simply arriving at the wellsite entrance.

20.2.50.25 STANDARDS FOR OIL AND NATURAL GAS STRIPPER WELLS AND FACILITIES WITH SITE-WIDE VOC POTENTIAL TO EMIT LESS THAN 15 TPY

The inclusion of the Methane emission exemption included in the draft NMED rule represents a critical aspect that will specifically allow independent operators the ability to operate, for the most part, in a manner that will appropriately consider the lesser emission threat presented by stripper wells without economically burdensome equipment upgrades that would cost more than the value of the remaining resource.

IPANM does have questions on the necessity to calculate and maintain a NOx database to be reported to NMED on annual basis. Upon questioning the necessity of this NOx database, NMED staff indicated it

was needed due to requests for that information from other stakeholders, such as environmental groups. IPANM believes that here and in other sections of the rule, which call for calculated data for recordkeeping, consideration should be made for publishing the Department approved methodology. Example would be 20.2.50.23 D(1)(d):

D. Recordkeeping Requirements
(1) Owners and operators subject to control requirements under 20.2.50.23 NMAC shall, on a monthly basis, maintain records in accordance with 20.2.50.12 NMAC for each storage tank of:
(a) The tank's location and unique inventory control number or name;
(b) Monthly liquid throughput and the most recent date of measurement;
(c) The average monthly upstream separator pressure;
(d) The data and methodology used to calculate the potential to emit of VOC (the calculation methodology must be a Department approved methodology);
(e) The controlled and uncontrolled VOC emissions (tpy); and
(f) The location, type, make, model and unique identification number of any control equipment.

20.2.50.27 PROHIBITED ACTIVITIES AND CREDIBLE INFORMATION PRESUMPTIONS

The following except below outlines NMED's prohibited activities and credible information presumptions:

20.2.50.27 PROHIBITED ACTIVITIES AND CREDIBLE INFORMATION PRESUMPTIONS

A. Failure to comply with any of the emissions standards, recordkeeping, reporting, or other requirements of this Part within the timeframes specified shall constitute a violation of this Part subject to enforcement action under Section 74-2-12 of the Act.

B. If credible information obtained by the Department indicates that a source is not in compliance with any provision of this Part, the source shall be presumed to be in violation of this Part unless and until the owner or operator provides credible evidence or information demonstrating otherwise.

C. If credible information provided to the Department by a member of the public indicates that a source is not in compliance with any provision of this Part, the source shall be presumed to be in violation of this Part unless and until the owner or operator provides credible evidence or information demonstrating otherwise.

In short, 20.2.50.27 (B) & (C) are problematic and should be fully eliminated. Just some of IPANM's concerns are offered below in the following points:

- Persons or groups reporting complaints are offering evidence without any jurisdictional regulatory authority.
- There is no established standard for what constitutes "credible information."
- There is no consideration offered on behalf of the department as to who would be considered a credible source to present information, whether that information was deemed to be credible or not.

- This rule essentially invites persons or groups to state, federal or private sites or facilities to trespass without any consideration to the rule of law or regard to personal safety or the safety of authorized personnel on-site, in an attempt to act as unauthorized inspectors, or worse, vigilantes, with the potential to lead to intended or unintended consequence of invoking confrontational exchanges.
- The rule invites organized efforts from anti-industry groups to inundate the NMED and operators with unauthenticated complaints with the sole motive to simply shut down a site as the ultimate objective.
- The presumption of non-compliance without official state confirmation by authorized state inspectors who can demonstrate non-compliance is problematic. It represents a "guilty until proven innocent" hostile mentality on behalf of the department. There is a complete failure of due process afforded to the unjustly accused.
- During our August 3, 2020 conference call, NMED staff admitted that persons or groups send data, videos to the department "all the time." NMED staff also acknowledged such complaints inundate the department. This represents an immediate conflict-of-interest, especially if such a rule empowers or emboldens further action on the part of these groups.
- Further addressing this in draft rule form only invites further inundation of what industry would consider non-credible information.

IPANM already has concerns about NMED notices being sent out to operators indicating that third-parties have observed regulatory issues without independent verification from NMED Field Inspectors. This practice is inherently dubious in nature, is a far cry from best-practices on the part of any regulatory agency, and certainly should not be utilized moving forward. IPANM foresees excessive regulatory and/or legal challenges from operators if this practice continues.

SUMMARY

IPANM wishes to commend the agency on a very productive engagement with stakeholders through the process of developing a strategy to reduce methane emissions and waste. We hope to continue to provide feedback after the close of this informal comment period. We feel strongly that the further dialogue with industry will help ensure that the agency develops rules that secure the necessary reductions while balancing the overall impacts to operators in the state.

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Attachments:

September 14, 2020

VIA ELECTRONIC MAIL

Sandra Ely
Director, Environmental Protection Division
New Mexico Environment Department
State of New Mexico

Secretary James Kenney
New Mexico Environment Department
State of New Mexico

RE: NMED Draft Ozone Precursor Rule – Initial Feedback

To Whom It May Concern:

An industry-leading gas compression services provider ("Service Company") has been requested to provide initial feedback regarding the proposed Ozone Precursor Rule (the "Rule") drafted by the New Mexico Environment Department ("NMED"). Service Company provides contract gas compression services to various midstream and E&P companies throughout the U.S., including in the Permian Basin. A substantial amount of Service Company's Horsepower is located in the state of New Mexico, and the implementation of the Rule as drafted will directly impact Service Company, its customers in the state, as well as the manufacturers and packagers of Service Company's compression units (the "Compression Units"). Service Company's feedback to the Rule will focus on three main areas of concern: the proposed emissions standards, the proposed maintenance and testing standards, and the proposed monitoring and tracking standards.

Area of Concern No. 1: Emission Standards

The Rule proposes emission limitations based on a Compression Unit's engine size, particularly, <0.50 NOx, that are simply not attainable based on the current configuration of emissions equipment on the Compression Units (i.e., catalytic converter elements, catalyst housings, etc.) and the quality of the natural gas produced in the State of New Mexico.[1] Service Company's fleet is one of the most "state of the art" fleets in the industry designed to meet the already high 0.50 NOx standard. Service Company would have to materially redesign its Compression Units or at a minimum retrofit the same with additional emissions equipment to meet such a high standard; all costing Service Company, and in conjunction its customers, significant capital in this time of distressed oil prices.

[1] Proposed § 20.2.50.13.B

Furthermore, NMED must consider the "real world" operating conditions and the effects that the quality of the natural gas have on emissions standards and the ability of any operator to achieve these heightened standards. "Field gas", which is used to power Service Company's Compression Units, is significantly different in those New Mexico counties than the Pipeline Quality Natural Gas (PQNG) used in the laboratory settings that drives OEM's standards as well as NMED's proposed standards. The typical New Mexico field gas contains lower amounts by volume of methane and higher amounts of heavier constituents such as propane, ethane, and butane. The makeup of the field gas can materially affect emissions, especially with respect to VOCs, making compliance with the rule significantly more challenging and costly to attain when compared to a laboratory setting. Similar to the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) limits for CO on lean burns, a percent reduction alternative should be included, which allows for a 93% CO reduction option for a given target concentration. A 50% VOC reduction is a comparable standard but would require double the costs.

As it currently stands, there is only one engine type in Service Company's modern fleet above 600 Horsepower that would meet the enhanced NOx standards in the proposed Rule without *significant* capital costs.[2,3] Assuming you could not upgrade an existing engine, millions of dollars would be required to reconfigure the piping for entire fields to operate with the larger compressor packages that could potentially comply with the proposed Rule.

Area of Concern No. 2: Maintenance and Testing Standards

The Rule proposes a testing methodology and maintenance standards that are too broad, inclusive and simply not viable based on the current "real world" operating standards and equipment utilized by Service Company and its customers (i.e., using portable analyzers with electrochemical sensors).[4] Beyond the exorbitant costs associated with additional testing for other VOCs without material differences in overall effect, due to the inherent cross sensitivities of the electrochemical cells, it has been proven that the test method should not be applied to other pollutants or emission sources. Based on current limitations in testing and the unduly burdensome costs for any alternative, CO should act as a surrogate measure for VOC emissions consistent with current NMED monitoring protocols. In other words, compliance with CO emission limits should also demonstrate compliance with VOC emission limits. The rationale is that portable analyzers do not currently delineate between VOC compounds, and the cost of a separate EPA method test is prohibitive. Taking into account that the OEM tests the equipment and specifies the expected NOx, CO, and VOC emissions for an engine operating properly, as well as basic principles of combustion chemistry, if an engine test demonstrates that CO concentration falls within the emission limits, then VOC also falls within the emission limits via a simple calculation and would not require an additional reading given the engine is performing as represented in the application.

In addition, the proposed maintenance standards do not account for site specific operating conditions and scenarios. Simply, maintenance standards should have to meet the minimum

[2] CAT 3608 ADEM IV (1,875 HP).
[3] In order to upgrade Service Company's already modern fleet, Service Company would have to invest significant capital in electronic upgrades, catalyst housing upgrades, cooler upgrades, piping reconfigurations, etc. This does not include the additional capital needed to re-pipe the site for the "upgraded" engines.
[4] Proposed § 20.2.50.13.C

OEM's recommended maintenance schedule or follow an owner/operator specified maintenance plan, while complying with all applicable federal requirements, and following the prescribed practices of all state rules. While Service Company's maintenance schedule already meets or exceeds OEM's requirements, there are situations where the schedule is much more stringent because of fuel gas quality and/or other operating conditions. By increasing the overall standards, the NMED will disincentivize Service Company, and other operators, from increasing the maintenance standards further as it would be extremely cost prohibitive given the higher baseline in costs. As it stands currently, by using OEM recommendations as the minimum standards, the NMED is ensuring emissions compliance and allowing certain operators the flexibility to concentrate on the sites that may present issues.

Area of Concern No. 3: Monitoring and Tracking Standards

Pursuant to the Rule, NMED proposes that all Compression Units be equipped with Equipment Monitoring Information and Tracking Tags (EMITT) linked to a separate EMITT database.[5] The EMITT requirement simply does not work from both a cost and practicality standpoint. As you are aware, the various components of Service Company's Compression Units are manufactured by third-party companies and then packaged by a different third-party company. The Compression Unit consists primarily of an engine, a compressor, a cooler and various connectors and components. Each engine and compressor carry a unique serial number provided by its third-party manufacturer. This serial number is currently utilized to provide the EPA, state agencies and Service Company's customers and packagers a uniform standard to identify basic information regarding the Compression Unit's original build. While each Compression Unit has an engine and compressor, the particular Compression Unit does not always keep the same engine and compressor throughout its useful life (i.e., engine or compressor "swings"), resulting in a change of serial number for that component of the Compression Unit. Furthermore, when an engine or compressor is replaced or swung on the Compression Unit, the replacement does not always come from the state where the Compression Unit is operating. Also, each time an engine or compressor leaves the State of New Mexico the replacement would be assigned a new EMITT that would not correlate with the originally permitted Compression Unit regardless of the software utilized. Therefore, the overall EMITT requirement becomes ineffectual, and at a high cost in terms of time, money and effort to keep track of.

More granularly, NMED proposes that the EMITT shall provide a state inspector with: (a) a unique unit identification number; (b) the UTM coordinates of the facility; (c) the type of unit (e.g., tank, VRU, dehydrator, pneumatic controller, etc.); (d) for the engine, the VOC (and NOx, if applicable) potential to emit in pounds per hour and tons per year; and (e) for control equipment, the controlled VOC (and NOx, if applicable) potential to emit in pounds per hour and tons per year and the design control efficiency in percent. First, Service Company's customers hold the permit for their respective locations, and Service Company does not have access to the permit's particular information. Also, while Service Company tracks its Compression Units internally through a unique identification procedure, the particular engine, compressor or other components on that Compression Unit may change over time. A "unique unit identification number" is simply not workable based on Service Company's lack of insight into its customer's permitting information and ever-changing nature of the Compression Unit's components. Secondly, the Compression

[5] Proposed § 20.2.50.12.A(6)(7), B(4).

Unit's components manufacturers do not guarantee criteria pollutant potential to emit ("PTE") emission factors. Each scenario is different depending on site-specific variables such as operating conditions (e.g., elevation, temperature, etc.) and gas conditions, impacting Rated Horsepower (hp), Maximum Operating Hours, Fuel HHV (Btu/scf), Fuel Consumption (Btu/bhp-hr @ 100% load) and Maximum Heat Input (MMBtu/hr). Therefore, no such guarantee is possible. Third, the EMITT applicable to diverse and competing compression service providers' fleets cannot be linked to an EMITT database accessible to state inspectors, as that fleet data is competitively sensitive information and could arguably be considered material, non-public information by those compression providers and/or relevant governmental authorities. Moreover, there is no state or federal rule specifying the use of a certain software. Also, Service Company and its various customers have unique database management systems and processes that may not be capable of interfacing with one another, not to mention a separate database as well. Simply, regulation requiring the EMITT to be linked to an unspecified database is overly vague, overreaching and technologically and competitively problematic.

In summary, the proposed Rule as drafted would result in unachievable emission standards, very burdensome costs of retrofitting Compression Units, and maintenance and testing practices that are simply not viable.