NEW MEXICO OIL AND GAS ASSOCIATION

P.O. Box 1864, Santa Fe, New Mexico 87505

September 16, 2020

Sandra Ely, Director
Environmental Protection Division
New Mexico Environment Department
1190 St. Francis Drive
Santa Fe, New Mexico 87505
Via email: nm.oai@state.nm.us

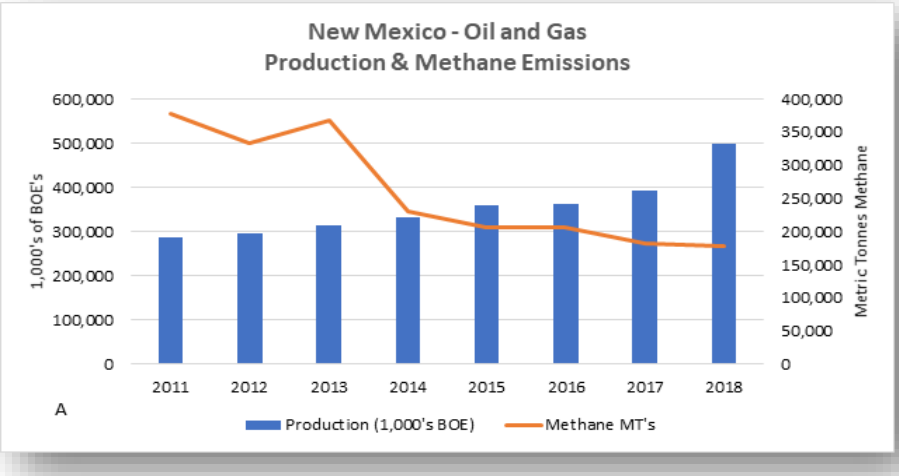
Director Ely,

The New Mexico Oil & Gas Association (NMOGA) is a coalition of more than 1,000 oil and natural gas companies and individuals operating in the state of New Mexico. NMOGA members include all facets of oil and gas production, transportation, and delivery, and is the oldest and largest organization representing the oil and gas industry in New Mexico. Oil and gas production is the greatest economic contributor to the state of New Mexico, supporting more than 134,000 jobs and $17 billion in annual economic activity. In addition, taxes and royalties from the oil and gas industry account for 39% of the State of New Mexico's annual budget, including over $1.4 billion for public schools.

NMOGA appreciates the opportunity to provide feedback on the New Mexico Environment Department's (NMED) draft regulation published for comment on July 20, 2020. Understanding the sources of pollutants known to produce ozone and potential reduction options is critical to developing policies, regulations, and guidance documents that are science-based, cost-effective, and result in significant methane emissions reductions. Including a broad range of stakeholders in this process has certainly improved the quality of the discussion and this document.

NMOGA member companies have undertaken a proactive approach to reduce emissions and capture as much natural gas as feasible. Using science, innovation, and collaboration, New Mexico operators worked, and continue to work to reduce emissions and improve air quality, all while growing production, creating jobs for New Mexicans, and revenues for the state. NMOGA and its member companies support practical, cost-effective emissions mitigation strategies. As the chart below illustrates, industry efforts have reduced methane emissions by over 50% even as oil and gas production has increased by approximately 70%.

We commend your agency and the members of the Methane Advisory Panel (MAP) for dedicating significant time and resources to developing a technical background document on oil and gas sources of methane. The paths forward in the MAP paper contain many more worthy suggestions, and best operating and design practices, than we see integrated into the draft



regulation. For example, during annual inspections, if utilizing optical gas imaging, the MAP report supported operators surveying intermittent bleed pneumatic controllers even when they are not actuating. This would identify malfunctioning devices quickly and efficiently. NMOGA has added this recommendation to the comments for consideration.

In practice, highly trained engineers work closely in reservoir engineering teams and operations teams to look for and create optimum design solutions for each production site that are practical, cost-effective and scientifically-sound, while being mindful of each site's differences. Many times, these teams use different designs and technologies to reach common goals depending on circumstances. Mandating very specific engineering solutions, instead of establishing flexible and efficient approaches will almost certainly result in unintended negative consequences. Prescriptive regulations limit engineers' abilities to adopt new technologies or tailor appropriate solutions for a site. We encourage NMED to carefully consider the balance between prescriptive measures and flexibility to innovate in order to allow operators to appropriately deploy best practices depending on current circumstances and to allow for best practices to evolve with the availability of new technology.

Allowing flexible and efficient approaches will allow individual companies to assess their operations and prioritize projects, as necessary, for compliance. While NMED should have sufficient information to perform their responsibilities, including monitoring progress towards an established standard, the recordkeeping and reporting requirements must be reasonable and balance the cost of additional recordkeeping and reporting with the need to cost-effectively reduce emissions.

One such concept is the EMITT system. This draft rule would require the placement of identification tags on literally millions of components that consume or emit natural gas, even those with a de minimis amount of emissions. Further, it would require that every operator impacted by this rule develop or acquire a computer-based system to track every aspect of these components for the life of the facility and make that data available in real time to inspectors. Many companies have asset tracking systems, maintenance management systems, and regulatory compliance systems that have been developed over many years that help them manage their business and remain in compliance with regulations across many jurisdictions. Besides the clear

danger of allowing outside digital access to internal systems, and the risk of cyber malfeasance that could invite, the enormous, years-long and expensive effort it would take to create such a system is completely disproportionate to any benefit that such a system would create. Further, it is unreasonable to require the addition of a new, parallel system that would require information already managed by existing systems to be duplicated in order to comply with this rule. The agency can use existing authority to request information from operators and let each operator determine the best way to capture and manage that information to fulfill requests.

The suggestions offered by NMOGA should help the industry meet the goals of this draft rule and give NMED the information it needs at a greatly reduced cost impact. The economic impacts of this rule, combined with the draft rule from OCD, are substantial at $4.017 billion, as projected in a report by the economist firm of John Dunham and Associates that is made part of this comment package.

NMOGA remains committed to working with NMED to create regulations that are effective in achieving real improvement in reducing emissions as necessary to address ozone attainment issues. We support achieving that goal through the establishment of clear, reasonable, standards and rules that allow operators flexibility in reaching those goals and also reporting requirements that are effective but not overly burdensome. Throughout this comment package, you will find recommendations which are intended to reduce barriers to adopting new solutions, including technologies that exist today, and those that may be available in the future so that we can reach our shared goals of valuable oil and gas development and avoidance of ozone non-attainment.

We look forward to continuing the discussion with you and the NMED team.

Sincerely,
Ryan Flynn
Executive Director
New Mexico Oil & Gas Association

Comments of the New Mexico Oil and Gas Association (NMOGA)

On The

New Mexico Environment Department's

Draft Oil and Natural Gas Regulation for Ozone Precursors Rule

Pre-Petition Draft

Dated July 20, 2020

September 16, 2020

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I. INTRODUCTION

The New Mexico Oil and Gas Association (NMOGA), an association of oil and natural gas producers, processors and others involved in the production of oil and natural gas and related products in New Mexico is pleased to provide comments on the New Mexico Environment Department (NMED) proposal to adopt an "Oil and Natural Gas Regulation for Ozone Precursors" (O&G Precursor Proposal or draft rule) as a new Rule 20.2.50 NMAC. NMOGA supports the reasonable regulation of methane and ozone precursors from all sectors that contribute them significantly and wants to ensure that this is done with rules that are practical and practicable. NMOGA submits these comments in the spirit of achieving good regulations that can be implemented in the time frames required by the resulting final rule.

A. NMOGA's Interest in the O&G Precursor Proposal

As owners and operators of the equipment proposed to be regulated by the O&G Precursor Proposal, NMOGA members are directly affected. As operators, NMOGA members are also those most involved with the day-to-day operation of the affected equipment and are thus in a unique position to provide valuable information to NMED and eventually the Environmental Improvement Board (EIB) on what best practices and emissions reductions can be obtained from current equipment and ongoing developments in the oil and gas industry.

NMOGA shares the NMED's objective of meeting the Legislature's direction to adopt regulations to control emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx) in areas of the state exceeding 95% of the ozone National Ambient Air Quality Standard (NAAQS) such that the NAAQS is attained or maintained[1] as set forth in state statute. NMSA 1978, § 74-2-5.3 (2009) (state statute). NMOGA and its members understand and endorse the Legislature's goal of ensuring that EPA does not designate any additional portions of New Mexico as nonattainment for the 2015 ozone standard both because we want to ensure that our families and our communities are not exposed to potentially unsafe levels of ozone and to avoid burdening ourselves and fellow community members with additional, often inflexible, regulatory mandates. NMOGA also fully endorses the objective of ensuring that any rulemaking be science-based, practicable, achievable and improve air quality. NMOGA believes that the data gained from modeling and other efforts currently underway may provide a path forward to achieving the Legislature's goals more effectively.

B. NMOGA's Review of the O&G Precursor Proposal

In order to provide the best possible input to NMED on the O&G Precursor Proposal, NMOGA and its members assembled a steering committee and numerous technical workgroups to study the draft rule, evaluate its workability, emissions reduction benefits, monitoring, recordkeeping, reporting, and overall cost implications. Over 80 individuals have participated in developing these technical comments, representing operating companies from every phase of the New Mexico oil and gas industry. NMOGA hopes that NMED staff, its contractors and the EIB will give these comments the care that they deserve as they reflect the significant work of the

industry and its members to arrive at consensus recommendations for NMED consideration. Additionally, NMOGA and its members will continue to review the draft and evaluate potential emission reduction strategies and controls so that NMOGA can present refined or additional recommendations NMED or the EIB as the rulemaking proceeds. NMOGA looks forward to continued engagement with stakeholders in this important project.

II. STATUTORY FRAMEWORK

A. An emission standard adopted pursuant to House Bill 195 must be reflective of a control technology that is reasonably available and economically feasible.

In enacting House Bill 195 into law, the Legislature directed the EIB, local board, and NMED to adopt a plan, including regulations, "to provide for attainment and maintenance" of the ozone national ambient air quality standard (ozone NAAQS). The plan and regulations are limited to sources "within the area of the state" where the ozone concentrations exceed 95% of the ozone NAAQS. Within this area, the EIB or a local board "may adopt" standards:

> for sources of emissions for which no federal standard of performance has been adopted and may adopt standards of performance more stringent than federal standards of performance for sources for which a federal standard of performance has been adopted.

The Legislature directed that:

> The standards of performance shall reflect the degree of emission limitation achievable through the application of control technology that is reasonably available considering technological and economic feasibility. The standards of performance may be more stringent than applicable federal standards of performance if the board determines that the federal standards of performance do not reflect the degree of emission limitation achievable through the application of control technology that is reasonably available, considering technological and economic feasibility, and that methods to further reduce emissions are commercially available and will result in substantially greater reductions in emissions than the federal standards for such sources.

The EIB and local board are required to consider five enumerated factors, including: public interest; past experience; energy, environmental and economic impacts and other social costs; prior efforts by sources to reduce emissions prior to the effective date; and remaining useful life. In addition, the Legislature directed that:

> No regulation adopted pursuant to this section shall require emission reductions for sources that between March 25, 2004 and January 1, 2009:
>
> (1) implemented and are operating reasonable control measures, considering technological and economic feasibility, that result in

quantifiable reductions for emission of oxides of nitrogen or volatile organic compounds; or

(2) are mandated by other requirements enforceable by the department or the local authority to implement reductions in emissions of oxides of nitrogen or volatile organic compounds.

§ 74-2-5.3(2009)

B. The Draft Rule lacks sufficient detail to assess the economic feasibility of the proposed (and alternative) controls.

Consistent with the Legislature's directive, NMOGA has sought to provide NMED with information on possible controls and whether they are "reasonably available, considering technological and economic feasibility." If controls are already mandated by the U.S. Environmental Protection Agency (EPA), NMOGA has sought to provide information on whether there are additional controls that are commercially available and will provide substantial additional emissions reduction. In providing its comments, NMOGA has been hindered by the limited nature of NMED's draft rule, which lists only proposed regulatory language, without emissions inventory or estimates of the proposed emissions reduction that may occur. Additionally, the draft rule does not include a preamble, which would further understanding of the proposal. The limited information in or accompanying the draft rule makes it difficult to determine whether the controls are reasonable because $5000 spent on a control or practice that reduces several tons of pollutants over the life of a source or piece of equipment is more reasonable than $5000 spent on a control that reduces a few pounds of pollutants over the life or a source or piece of equipment. NMOGA has provided comments such as it can to assist NMED in helping develop such estimates before it presents its proposal to the EIB.

NMOGA also believes it would have been better had NMED and its contractors completed their modeling efforts before the comment deadline. Modeling would have provided insight into whether certain compounds are more reactive than others in the New Mexico environment. For example, one study in the Uintah Basin showed that flash gas from oil wells has higher reactivity than flash gas from gas wells or raw gas from either type of well. [1] While this study is specific to the Uintah Basin of Utah, conducting similar studies in the fields in New Mexico could allow prioritizing initial controls on the most reactive compounds. For example, the Texas Commission on Environmental Quality (TCEQ) adopted and successfully implemented a rule for the Houston-Galveston-Brazoria ozone nonattainment area limitedto those VOC compounds identified as being highly reactive.[2] Highly reactive compounds might contribute disproportionately to ozone levels and targeting them may result in substantial gains,

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[1] Trang Tran and Seth Lyman (Utah State University, Bingham Research Center), Mike Pearson (Alliance Source Testing, LLC), Tom McGrath (Innovative Environmental Solutions, Inc.), and Lexie Wilson and Bart Cubrich (Utah Division of Air Quality); "Uintah Basin Composition Study, Comprehensive Final Report", March 31, 2020; Utah Division of Air Quality website at https://deq.utah.gov/air-quality/composition-of-volatile-organic-compound-emissions-from-oil-and-gas-wells-in-the-uinta-basin (accessed August 16, 2020).

[2] Texas Administrative Code Chapter 115 Subchapter H, "Highly-Reactive Volatile Organic Compounds", available on TCEQ website at https://www.tceq.texas.gov/rules/indxpdf.html#101.

while other compounds may have negligible impacts on ambient ozone levels. For example, in areas where a "NOx disbenefit" may exist, reductions in NOx emissions may result in an increase in ambient ozone levels. Money spent on control programs that result in negligible impact does not benefit the New Mexico environment or economy and is inconsistent with the Legislature's directives in House Bill 195.

III. GENERAL COMMENTS

In this section of its comments, NMOGA addresses some overarching concepts applicable to the draft rule.

A. The substantial uncertainty regarding the sources, causes, and efficacy of emissions reductions in New Mexico must be acknowledged.

NMOGA agrees with the aim of House Bill 195 to keep areas of New Mexico that exceed 95% of the ozone NAAQS in attainment with the standard. In developing programs to achieve this goal, it is important that all parties—NMOGA, NMED, environmental groups, the public and ultimately the EIB and local board—acknowledge that there is substantial uncertainty about the sources, causes and efficacy of emissions reductions in this effort.

For example, the magnitude of ozone in New Mexico caused by emissions from international sources including Mexico is not clearly known. For example, Ciudad Juarez, Mexico, located less than 150 miles from Eddy County, has more than 1.3 million people and a large industrial manufacturing sector. Studies conducted by EPA show that international influence on ambient ozone throughout New Mexico may be as high as 10 parts per billion (ppb) and enough to demonstrate the significant impact of international emissions on ozone levels in New Mexico.[3] Similarly, the degree to which recent ozone design values in New Mexico have been influenced by wildfires is also unknown and represents another area over which NMED has little practical control. One EPA study shows that only 8% of the ozone in Eddy County results from man-made sources within the state of New Mexico,[4] suggesting that requiring the most stringent control programs on all sources at the start of the regulatory process may not accomplish the objective of attaining and maintaining the NAAQS.

Because of these factors, no matter how stringent and comprehensive the rules applied to the oil and gas industry in the first round of rulemaking to address ozone precursors, it may not contribute effectively to the air quality objectives. Or, on the other hand, an overly comprehensive and stringent set of rules may impose far more costs on New Mexicans than

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[3] For example, see the presentation that EPA made to the Clean Air Act Advisory Committee (CAAAC) on November 7, 2019, entitled "Transboundary Air Pollution", located on the EPA website at https://www.epa.gov/caaac/2019-epa-clean-air-act-advisory-committee-meeting (accessed on August 15, 2020). This study indicates that 20 to 30% of the ozone on the ten days with the highest 8-hour average ozone concentrations may be due to international emissions.

[4] EPA's white paper on Background Ozone, "Implementation of the 2015 Primary Ozone NAAQS: Issues Associated with Background Ozone, White Paper for Discussion", Table 2c, December 30, 2015, located on EPA website at https://www.epa.gov/ground-level-ozone-pollution/background-ozone-workshop-and-information (accessed on August 16, 2020).

needed to accomplish the objective. NMOGA notes this not as a reason for inaction – NMOGA believes that we should take prudent steps now – but rather to emphasize that the focus should be on the most impactful, cost-effective measures initially, with less effective or more costly measures brought in after the impact of the initial measures on ambient ozone concentrations is assessed. At that time, New Mexico will be in a better place to determine whether additional measures are needed and which will be most efficacious.

B. The O&G Precursor Proposal should be part of an overall plan to address ozone.

As part of its overall response to the Legislature's directive in § 74-2-5.3, NMED, EIB and the local board should look at all sectors emitting VOC and NOx and ensure that all significant sources of these precursors are addressed. NMOGA members have already made substantial emissions reductions, despite increasing production of oil and gas.

C. The O&G Precursor Proposal is too stringent for an initial regulatory effort under the preserving ozone attainment initiative.

NMOGA and its members believe that the draft rule is too stringent and goes beyond what the Legislature intended when it enacted House Bill 195. The Legislature directed EIB, the local board and NMED to develop a plan and regulations that would keep areas of the state exceeding 95% of the ozone NAAQS "in attainment.". This suggests that the Legislature regarded these areas as susceptible to nonattainment while still compliant with the NAAQS. ***Serious, severe and extreme nonattainment controls are not appropriate.*** Because NMOGA shares the Legislature's and NMED's interest in keeping the areas presently exceeding 95% of the ozone NAAQS in attainment, NMOGA agrees that adopting some nonattainment control programs, such as those identified for marginal or possibly moderate areas (if reasonable and cost effective) is appropriate. But adopting serious, severe or extreme control programs, such as those from California's San Joaquin Valley, is not appropriate. Control programs in serious, severe and extreme areas seek to substantially reduce emissions already at levels significantly exceeding the NAAQS "as expeditiously as possible."[5] Such costly and substantial control programs are neither needed nor appropriate for an area in attainment.

Other States' programs should be used only after considering New Mexico's unique circumstances. In many instances, NMED is proposing to adopt controls that are as stringent as those adopted by any other State. For example, many of the draft rule's requirements mirror those adopted as part of Pennsylvania's GP-5 program or Colorado's Regulation 7, both of which are extremely stringent and tailored to factors specific to those states not applicable in New Mexico. NMOGA appreciates NMED's work to bring alternatives to the table so that the EIB, industry and public have a full slate of options to evaluate. But the most stringent control program is not necessarily the best control program for New Mexico, a state much different than Pennsylvania or Colorado, given differences in geographic scope, climatological conditions, locations of sources and role of oil and gas in its economy. Analysis of these differences is critical to determine the best control program. For example:

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[5] EPA has classified the San Joaquin ozone nonattainment area in California which includes the oil and gas producing Kern County as Extreme for the 1-hour, 1997 8-hour, 2008 8-hour, and 2015 8-hour standards. See EPA's "Green Book" on the EPA website at https://www.epa.gov/green-book (accessed on August 15, 2020).

- New Mexico operators do not have access to a significant population center with readily available contractors, vendors, and parts availability, or access through a major international airport. Thus, construction and maintenance may require more time and resources in New Mexico than it does in Pennsylvania, Colorado or California.
- Operations in New Mexico cover a wide geographic area, making more efficient centralized implementation solutions challenging.
- Operations in New Mexico have difficulty accessing infrastructure such as liquids gathering pipelines and electrification.
- New Mexico has a significant number of small operating companies where implementation may lose economies of scale.

Refinery and chemical plants are not a useful comparison point. Furthermore, some of the requirements in the draft rule appear to be modeled after the petroleum refinery requirements in 40 CFR Part 63, Subpart CC, and 40 CFR Part 60, Subpart Ja (e.g., flare requirements). NMOGA does not support modeling oil and gas sector rules after requirements developed for petroleum refineries or chemical plants. Petroleum refineries and chemical plant operations differ significantly from oil and gas operation in that they have onsite staff 24 hours per day, seven days per week, by necessity; they have onsite maintenance and engineering staffs; and they cover a concise, usually contiguous, plot of land and are not spread out over a wider geographic area like the operations of a typical oil and gas sector operator.

D. The O&G Precursor Proposal Cost Is Excessive.

NMOGA retained John Dunham and Associates (JDA) to prepare estimated costs and economic impact of the proposed NMOCD and NMED rules. Based upon data gathered from the federal government, the New Mexico oil and gas industry, and using the Western Energy Alliance model, JDA estimates that the total cost of the two rules is estimated at discounted $4 billion over five years. JDA's preliminary cost estimate is over $40,000 a well for non-stripper wells for the two rules. JDA further estimates that the two rules together risk shutting-in 4% of currently operating oil wells and as many as 42.6% of currently operating natural gas wells, potentially resulting in a 1.4% loss of oil production and 12.2% loss of natural gas production in the state. The combined impact of the two rules is is estimated to lead to the loss of as many as 264 jobs, cost the New Mexico economy approximately $56.5 million annually, and cut tax revenues by over $1.9 million, without considering reduced royalty and severance revenues from lower production. A copy of the JDA report is attached.

Given the magnitude of these costs, NMED should give careful consideration as to whether the benefits of the draft rule justify the costs or whether the majority of these benefits could be preserved through a more limited set of rules. NMOGA looks forward to working with NMED in such an effort.

E. NMED should propose a phased and tiered approach to better calibrate New Mexico's response to ozone levels.

NMOGA believes that NMED should propose, and EIB and the local board should adopt, a tiered and phased approach to the problem of areas at 95% or higher of the ozone NAAQS. Phasing is appropriate given the limitations in the current state of knowledge about how much and what type of reductions are needed to effect real change in ambient ozone levels and how

effective the various control programs would be in achieving that change and should include analysis of other sectors and sources for emissions reductions. Tiering may be appropriate so that control programs can be calibrated to the needs of specific areas and sectors so that additional, expensive and unneeded controls are not applied where they will lead to no benefit.

NMED should review all large contributors of ozone precursors, regardless of sector, and adopt reasonably available control programs. This process should be completed for all sectors and sources before moving to regulate smaller sources within any sector where control programs are often less cost-effective. Other states have taken this approach for initial rulemakings in ozone nonattainment areas. For example, the initial regulations for the oil and gas industry for the Uintah Basin Marginal ozone nonattainment area in Utah addressed only a segment of the regulatory control programs in the New Mexico draft rule, and yet reduced ozone design values in the nonattainment area by 11% from 2011 through 2019. Other states with oil and gas operations in ozone nonattainment areas adopted more limited regulations and reduced ozone over the same time period,[6] without implementing such a comprehensive suite of regulations as those in the draft rule. Wyoming is another example, where it was able to reduce the ozone design value by 8% in the Upper Green River Basin marginal non-attainment area with regulations targeting only the largest sources.

Control programs on smaller sources, or less cost-effective control programs, should be phased or tiered so that they are applied only when needed. After the most cost-effective control programs on larger sources are implemented and NMED has an opportunity to study their impact on ambient ozone levels, additional less cost-effective control programs or control programs for smaller sources could be phased in only when and where needed. This would reduce the cost to New Mexico while still achieving the Legislature's goal of keeping areas exceeding 95% of the ozone NAAQS in attainment.

F. Implementation deadlines for the O&G Precursor Rule must consider parts and labor availability, budget cycles and impacts on production and operation.

Implementation may start in the first year, but three years will be needed to fully implement the most sections of the draft rule. The time frames for implementing most parts of the draft rule are overly aggressive and, in some cases, potentially impossible to meet. All requirements involving equipment changes will require scoping, internal funding, design and engineering, procurement, installation, training, and startup. New Mexico industry typically allocates capital resources on an annual cycle, with budgets for 2021 already set or nearly set so modifications will need to be completed in 2022 and 2023 to match budgeting cycles. Given the large number of modifications required, it will be exceedingly difficult, perhaps impossible, to complete them in one year, especially considering that all operators with similar equipment will be looking for similar parts and will be seeking contractors with similar experience and skills to install the modifications. This may exceed New Mexico's parts and labor capacity. In the equipment specific sections that follow, NMOGA recommends timelines for implementation that

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[6] *See* 2019 Design Value Reports, "Ozone Design Values, 2019" dated May 28, 2020, located on EPA website at https://www.epa.gov/air-trends/air-quality-design-values (accessed on August 16, 2020).

consider parts and labor availability, budget cycles and impacts on production and operations. When specific recommendations are not provided, NMOGA requests three years to implement.

NMOGA believes that there should be a regulatory extension procedure for facilities that need additional time to comply due to unusual circumstances, such as the need to obtain additional land or long lead-time equipment.

G. The draft rule should apply to "operators," not "owners."

NMOGA believes that the draft rule should be addressed to "operators" and not "owners." An "operator" should mean "a person who, duly authorized, manages a lease's development or a producing property's operation, or who manages a facility's operation." "Owner" is a difficult concept, because ownership may be split over many entities such as the mineral owner, owners of percentage interest in production, equipment trusts that may finance equipment, and others.

H. NMED should recommend that compliance with NESHAP, NSPS or PSD permit conditions addressing VOC or NOx emissions satisfies the statutory "reasonably available controls" requirement.

NMOGA believes that NMED may simplify its approach by recognizing that equipment already subject to certain standards likely already meet the requirement for "reasonably available controls" set forth in the state statute. For example, the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) apply the "maximum achievable control technology" (MACT) standard to certain sources of hazardous air pollutants pursuant to 42 U.S.C. § 7412. New Source Performance Standards (NSPS) apply the "best system of emissions reduction" that is adequately demonstrated pursuant to 42 U.S.C. § 7411. Prevention of Significant Deterioration (PSD) permits apply "best available control technology" standards. 42 U.S.C. § 7475(a)(4). In each case, EPA considered similar factors and determined that these NESHAP, NSPS and PSD controls were the "best" or "maximum" achievable or available while being cost effective. Further, EPA periodically reviews and update NESHAP and NSPS controls. *See, e.g.*, 42 U.S.C. § 7412(d)(6). Accordingly, NMOGA recommends that NMED exempt units subject to such controls for VOC or NOx from further control under the statutory program.

NMOGA also notes that most of New Mexico's oil and gas is produced from equipment constructed after the applicability date of the New Source Performance Standards under Subpart OOOO and Subpart OOOOa. As the analysis below demonstrates, 64% of gas production was conducted with equipment constructed after the applicability date for Subpart OOOO, while 56% of gas production was conducted with equipment constructed after the applicability date for Subpart OOOOa. Similarly, 91% of oil production was conducted with equipment constructed after the Subpart OOOO applicability date, while 83% of oil production was conducted with equipment constructed after Subpart OOOOa.

NM Subpart OOOO/OOOOa Coverage Summary[7]

[7] Datasource: All NM Wells Downloaded from Enverus (DrillingInfo) August 2020.

	Gas Production MCF (last reported month)	Oil Production BBL (last reported month)
All Active Oil, Gas, Oil & Gas and CBM Wells in NM	151,943,791	26,794,966
Post OOOO Active Oil, Gas, Oil & Gas and CBM Wells in NM (based on Completion Date)	96,818,063	24,353,889
Post OOOOa Active Oil, Gas, Oil & Gas and CBM Wells in NM (based on Completion Date)	84,523,869	22,191,162
Post OOOO Active Oil, Gas, Oil & Gas and CBM Wells in NM (based on Completion Date) - Percentages	64%	91%
Post OOOOa Active Oil, Gas, Oil & Gas and CBM Wells in NM (based on Completion Date) - Percentages	56%	83%

I. EPA's "Control Techniques Guidelines for the Oil and Natural Gas Industry" (Oct. 2016) should form the basis for the draft rule.

Under the federal Clean Air Act, EPA is required to promulgate guidelines to assist states in applying "'reasonably available control measures,' including 'reasonably available control technology' (RACT), for existing sources of emissions" in nonattainment areas. 42 U.S.C. § 7502(c). EPA defines RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." 44 Fed. Reg. 53761 (Sept. 17, 1979). In 2016, the Obama Administration EPA undertook a comprehensive review of the oil and gas industry and promulgated the *Control Techniques Guidelines for the Oil and Natural Gas Industry* (CTGs). The CTGs are a 343-page document comprehensively analyzing available controls and their technical and economic feasibility. The CTGs considered the regulations adopted by other States, including Colorado, Montana, Wyoming, and the San Joaquin Valley Air Pollution Control District. Based upon this review, the CTGs include provisions on storage vessels, compressors, pneumatic controllers, pneumatic pumps, equipment leaks, well sites, and gathering and boosting stations. NMOGA believes that the CTGs provide a foundational understanding of what is, and is not, "technologically and economically feasible" at the present time. The CTGs, like the state statute, recognize differences between controlling new and existing sources, specifically where existing sources pose a higher cost, and, in oil and gas, lower emissions as production declines. The following summarizes a few examples where the draft rule mandates exceed the RACT recommendations in the CTGs for nonattainment areas:

- The CTG recommends exemptions for certain types of storage vessels that should be included in the draft rule. [8]
- The CTG cites an achievable efficiency for combustors under field conditions in the oil and gas industry of 95%[9] compared to 98% cited in the draft rule. The CTG found that of the top nine oil and gas producing states, only one requires 98% efficiency instead of the recommended 95%.[10]
- The CTG recommends that the 95% control efficiency apply to storage vessels with a potential to emit ("PTE") of VOC greater than or equal to six tons per year,[11] compared to the draft rule applicability threshold of two tons per year. At six tons per year, the CTG estimated the cost at between $4400 and $4000 per ton of VOC reduced. The cost will be substantially higher if the applicability threshold is reduced to two tons per year.
- The draft rule stripper well definition of 10 barrels per day conflicts with the CTG recommended threshold of 15 barrels per day.[12]
- The CTG recommends repairs to leaking components detected by optical gas imaging (OGI) or Method 21 (with a 500 ppm leak threshold) be completed within 30 days of detection[13] compared to 7 and 15 days respectively in the draft rule.
- The draft rule contains requirements for numerous sources not included in the CTGs.

NMOGA recommends that this initial rulemaking not exceed the RACT level of control, as evidenced by the CTG for moderate ozone nonattainment areas.

J. NMED asked stakeholders to offer feedback on "opportunities for greater transparency."

NMOGA respectfully suggests that the detailed proposals in the draft rule provide ample transparency to assure stakeholders, including the public, that the oil and gas industry is doing its part in reducing emissions of methane and ozone precursor species volatile organic compounds

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[8] EPA, Control Techniques Guidelines for the Oil and Natural Gas Industry 4-1 (2016) ("CTG"), Docket ID: EPA-HQ-OAR-2015-0216-0236.: "The emissions and emission controls discussed herein would not apply to the following vessels:
(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships), and are intended to be located at a site for less than 180 consecutive days.
(2) Process vessels such as surge control vessels, bottoms receivers, or knockout vessels.
(3) Pressure vessels designed to operate in excess of 204.9 kilopascals (29.7 pounds per square inch) and without emissions to the atmosphere."

[9] CTG 2-6. "As discussed in section 4.3.2 of this chapter, existing federal and state and local regulations already require the reduction of VOC emissions from storage vessels in the oil and natural gas industry at or greater than 95 percent. Further, we note that combustion devices can be designed to meet 98 percent control efficiencies and can control, on average, emissions by 98 percent or more in practice when properly operated.34 We also recognize that combustion devices designed to meet 98 percent control efficiency may not continuously meet this efficiency in practice, due to factors such as the variability of field conditions. Therefore, the recommendations specify that devices should be required to continuously meet at least 95 percent VOC control efficiency. In light of the above considerations, a continuous 95 percent reduction of VOC emissions from storage vessels in the oil and natural gas industry is a reasonable recommended RACT level of control."

[10] CTG at 4-18.

[11] CTG at 4-21.

[12] CTG at 9-38.

[13] CTG at 9-43.

(VOCs) and oxides of nitrogen (NOx) to avoid an ozone non-attainment designation. NMED should look for ways to create better instead of more transparency. More is not always better.

Better transparency should include a way to acquire necessary information quickly rather than requiring an equipment data and reporting scheme that is beyond the capabilities of most, if not all, operators' electronic data systems. Many operators use asset inventory and environmental information systems to manage their business and achieve compliance with regulations in many jurisdictions. NMED would be better served to set out information requirements and let individual operators use their own systems to meet those requirements. Operators' systems rely upon a variety of methods to identify individual components ranging from painted identifiers to site schematics with component identification codes.

NMED should not adopt regulations, such as the credible evidence provisions, that create an unintended incentive for untrained citizens to come near or onto active operational equipment to collect data, especially during system upsets, and to try to report what they believe to be violations. This puts the public at risk. Agencies should rely on inspections by their own, trained staff, ideally accompanied by company personnel at operating facilities

IV. COMMENTS ON SPECIFIC SECTIONS OF THE O&G PRECURSOR PROPOSAL

In this section, NMOGA and its members provide comments on specific rules included within the draft regulation.

A. 20.2.50.2 SCOPE

1. 20.2.50.2.A(b)(3). The O&G Precursor Rule's scope should be based on design values calculated using certified data and should not reference specific Counties.

The scope of the draft rule states that it "applies to sources located within counties that have areas with ambient ozone concentrations in excess of ninety-five percent of the national ambient air quality standard for ozone, including but not limited to Chaves, Eddy, Lea, Rio Arriba, Sandoval, and San Juan." NMOGA has concerns with several aspects of proposed 20.2.50.2.

First, NMOGA does not understand how the Department would make changes to the list of counties included under the "but not limited to" phrase, and the draft language does not indicate when an area will be deemed to have ambient ozone concentrations in excess of ninety-five percent of the NAAQS, particularly if there is no monitor located in that county or surrounding counties. Thus, any change to the counties listed needs to undergo rulemaking to ensure it provides an adequate opportunity to understand the basis for determining that an area meets the requirements, the sectors and types of sources requiring control programs, and to ensure it provides an adequate time to apply the regulations to that area on a prospective basis. Such rulemaking would be essential to develop appropriate implementation dates for newly added counties; it would be impossible for newly added counties to comply retroactively to dates

established by the effective date of the rule. Therefore, NMOGA recommends deleting the phrase "but not limited to".

Second, Chaves County currently does not have an ozone monitor for regulatory decision-making operated by the Department and established under the Department's Annual Air Monitoring Network Plan[20] that has been shown to have a design value exceeding 95% of the ozone standard.[21] Therefore, NMOGA recommends deleting Chaves Country from the scope at this time.

2. The O&G Precursor Rule should allow for counties to withdraw from the program if their design values fall below 95% of the standard.

Third, the state statute is limited to sources in counties that exceed 95% of the ozone NAAQS. The draft rule should address when areas, in this case counties, fall out of the program due to progress in reducing VOC and NOx emissions that brings the ambient ozone level below 95% of the NAAQS. For example, if the three-year design value in an affected county falls below 95% of the ozone NAAQS, then all (or at least the least cost effective) control programs might be suspended. If a county subsequently re-exceeds the 95% threshold, then the draft rule should provide a schedule for sources to resume compliance with the program.

B. 20.2.50.6 APPLICABILITY

NMOGA has several suggestions to improve the clarity of the "Applicability" section.

1. 20.2.50.6.A. The O&G Precursor Rule should look to the Lease Automatic Custody Transfer unit or sales check meter to define the point of custody transfer

NMOGA recommends the following changes to Paragraph A of 20.2.50.6 Applicability:

> Except as provided in paragraph (B), Part 50 applies to crude oil production and natural gas production equipment and operations that extract, collect, store, transport, or handle hydrocarbon liquids or produced water as defined in 20.2.50.8 NMAC in the areas specified in 20.2.50.2 NMAC. Crude oil production includes the well and extends to the point of custody transfer, i.e., the LACT or sales check meter or metering equipment, to the crude oil transmission pipeline or any other form of transportation to the crude oil transmission line. Natural gas production, processing, transmission, and storage includes the well and extends to, but does not include, the local distribution company custody transfer station.

NMOGA recommends revising the applicability section to clarify the scope of the production segments by adding a reference to the commonly understood point at which Custody Transfer typically occurs – at the Lease Automatic Custody Transfer unit (LACT) or at a sales check meter or similar metering equipment. / The purpose of a LACT unit is to record the transfer of crude oil or natural gas from one party's possession to another, i.e., a point of sale, and is a well-known bright line between processing and transmission. Use of the existing bright line will enhance industry compliance by eliminating uncertainty.

2. 20.2.50.6.B. The O&G Precursor Rule should clarify that it is not applicable to product terminals and asphalt plants and terminals

Paragraph B of Applicability exempts oil refineries from the proposal. NMOGA concurs that oil refineries are comprehensively regulated and that additional regulation under the state statute is unlikely to meet the statutory tests or substantially further reduce emissions. NMOGA recommends clarifying that product terminals (such as terminals for gasoline or diesel product) and asphalt plants and terminals are also not subject to this part. These operations do not have the same characteristics as the operations described in paragraph A and are already highly regulated.

3. 20.2.50.6.C and D. The O&G Precursor Rule should clarify that it is not applicable to Stripper Wells and low-emitting facilities regulated under 20.2.50.25

Paragraphs C and D of "Applicability" exempt equipment located at stripper wells and facilities with a site-wide total annual PTE less than 15 tons per year of VOC from the requirements of the draft rule except as specified in 20.2.50.25. NMOGA appreciates this exemption as it corresponds well to a focus on the equipment and facilities that contribute the largest emissions of VOCs and NOx, leading to ozone pollution. Applying the full regulatory program to these relatively small and declining sources would result in little ambient air quality improvement and would likely lead to their premature abandonment, reducing royalty payments to the mineral owners and state. Accordingly, NMOGA believes that NMED has adopted the correct approach for stripper wells and small facilities. Additional comments on the stripper well definition appear in comments on draft 20.2.50.8.

NMOGA notes that while Section 20.2.50.C and D state that these units are exempt except as specified in 20.2.50.25, that part includes cross-references to other sections. NMOGA believes that cross-referencing in the context of an exemption causes confusion. Accordingly, NMOGA requests that all requirements applicable to equipment and facilities subject to sections 20.2.50.6.C and D be collected in section 20.2.50.25 and that the exemption language be revised as follows:

> C. Equipment located at stripper wells, as defined in 20.2.50.8 NMAC, must comply with the requirements of 20.2.50.25 and are ~~is~~ exempt from all other ~~the~~ requirements of this Part 50~~, except as specified in 20.2.50.25 NMAC~~.
>
> D. Individual facilities with a site-wide total annual potential to emit less than 15 tons per year (tpy) of volatile organic compounds (VOC) must comply with the requirements of 20.2.50.25 and are exempt from all other ~~the~~ requirements of this Part~~, except as specified in 20.2.50.25 NMAC~~.

C. 20.2.50.7 OBJECTIVE – The O&G Precursor Rule's objective should be revised to better align with the statutory mandate.

NMOGA believes that the objective of the program should reflect the state statute and suggests the following revision:

> The objective of this Part is to establish emission standards for volatile organic compounds (VOC) and nitrogen oxides (NOx) for oil and gas production and processing sources in areas of the state exceeding

95% of the ozone national ambient air quality standard necessary to provide for continued attainment and maintenance of the ozone standard.

D. 20.2.50.8 DEFINITIONS

As the owners and operators of the equipment covered by the draft rule, NMOGA members have carefully reviewed the definitions to ensure that they are clear and, to the extent possible, consistent with other applicable regulatory uses of the term. This clarity and consistency will facilitate implementation and reduce confusion.

1. The definitions for "New" and "Existing" should be based on the date of construction or re-construction, not the date operations began.

The terms "New" and "Existing" as used throughout the draft rule are inconsistent with their draft definitions. In both definitions, whether equipment is new or existing is determined by when the unit "began operation:"

> "New" means any piece of equipment regulated by this Part that began operation on or after the effective date.
>
> "Existing" means any piece of equipment regulated by this Part that began operation prior to the effective date of the rule and has not since been modified or reconstructed. (emphasis added)

Despite the focus on beginning operation when used in the rule, whether a unit is new or existing is determined by when it was, in most cases, constructed or reconstructed. For example, the auto-igniter requirements for new and existing flares in 20.2.50.15.C.(1)(b) provide that:

> (iii)Any new flare constructed or re-constructed after the effective date of this Part shall be equipped with an auto-igniter. The auto-igniter shall be installed and operational upon startup.
>
> (iv) Any existing flare constructed prior to the effective date of this Part shall be equipped with an auto-igniter no later than one year after the effective date**.** (emphasis added)

This same construction is throughout the rule, even if the terms "new" or "existing" are not used. For example, in 20.2.50.19.B(2)-(3):

> (2) Natural gas-fired heater units constructed or reconstructed prior to the effective date of this Part shall come into compliance with the requirements of 20.2.50.19 NMAC beginning no later than one year after the effective date.
>
> (3) Natural gas-fired heater units that are constructed or reconstructed on or after the effective date of this Part shall be in compliance with the requirements of this section upon startup. (emphasis added)

Because applicability and deadlines for compliance with the substantive requirements of the draft rule are based on when equipment is constructed or reconstructed and not on beginning of operation, NMOGA recommends revising the definitions as follows:

> "New" means any piece of equipment regulated by this Part that ~~began operation~~ was constructed or reconstructed on or after the effective date.
>
> "Existing" means any piece of equipment regulated by this Part that ~~began operation~~ was constructed or reconstructed prior to the effective date of the rule.

NMED defines "Reconstruction" in 20.2.72.400 G as "a modification which results in the replacement of the components or addition of integrally related equipment to an existing source to such an extent that the fixed capital cost of the new components or equipment exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility." The term "reconstructed" is not defined in the draft rule and NMOGA recommends that the rule either include a cross reference to the definition in 20.2.72.400 G or include that same definition in 20.2.50.8 such as "Reconstructed or reconstruction…."

Given that the classification of equipment as "new" or "existing" is contingent on when the equipment was constructed or reconstructed, there is no need for the term "Modification." In addition, "modification" is used just two times in the draft rule, both in 20.2.50.14, Standards for Compressor Seals and only as a requirement to maintain records of the date of construction, reconstruction and modifications of centrifugal and reciprocating compressors. NMOGA recommends deleting the term "modification" in 20.2.50.14 D (1)(b) and (2)(b) and deleting the draft definition since it would not be relevant.

2. <u>The terms "Inspection," "Monitoring" and "Testing" are not interchangeable and should be used appropriately through the O&G Precursor Rule.</u>

NMOGA is concerned that the draft rule uses the terms inspection, monitoring, and testing interchangeably when they refer to different tasks. NMOGA requests that the terminology be clarified with the appropriate term used where appropriate.

3. <u>20.2.50.8.A "Air pollution control equipment" – This definition should only include vapor recovery units used as control equipment</u>

NMOGA recommends that this definition be revised to clarify that only vapor recovery <u>control</u> units are subject to the Part. It is in the State's interest to encourage vapor recovery process units that recover VOCs and return them to the process stream where they are converted to valuable products and yield royalties to mineral owners and the State. Excessive regulation of such units may result in routing more VOCs to combustion devices, which increases NOx and VOC emissions and may aggravate ozone concentrations. Accordingly, NMOGA suggests the following revision:

A. "Air Pollution Control Equipment" means open flares, enclosed combustion devices, thermal oxidizers, vapor recovery <u>control</u> unit, fuel cells, condensers, other combustion devices, air fuel ratio controllers, oxidative catalytic converters, selective and non- selective catalytic converters, or emission reduction equipment or technologies used to comply with emission standards and emission reduction requirements in 20.2.50 NMAC that are approved by the Department. <u>A final permit determination that a piece of equipment is air pollution control equipment shall be binding upon the department and the permittee.</u>

The longstanding EPA test for when a vapor recovery unit is a control unit or a process unit should be used to make the determination. This issue is discussed at greater length in the definition of a vapor recovery control unit and vapor recovery process unit.

4. 20.2.50.8.C "Auto-igniter" – This definition should not rely on the presence of pilot gas or a combustion chamber.

The draft rule defines "auto-igniter" as "a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust volatile organic compound emissions."

This definition presumes the use of a pilot and the presence of a combustion chamber, neither of which may be present. If the control device does not have pilot gas, it may have an igniter which ticks periodically to light the waste gases. The control device may also have an automatic pilot ignition system that lights a pilot in case the pilot fails. NMOGA researched definitions in other rules and recommends the following:

> "Auto-igniter" means a device which will automatically attempt to ~~re~~light the ~~pilot flame~~ gas ~~in the combustion chamber of a control device~~ in order to combust volatile organic compound emissions.

5. 20.2.50.8.G "Commencement of Operation". Given its limited use, this term should be replaced with the term "Startup of Production"

The draft rule defines commencement of operations as follows:

> "Commencement of operation" means for oil and natural gas wellheads, the date any permanent production equipment is in use and product is flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than the end of well completion operations.

The term is used only in defining "storage vessel." NMED appears to have pulled the general phrase and much of the definition from Colorado's Regulation No. 7 but removed a key word that renders the meaning entirely different. Specifically, Colorado defines "commencement of operations" for oil and gas well production facilities as:

> "the date any permanent production equipment is in use and product is **consistently** flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback)."

The draft rule has removed the term "consistently." As a consequence, commencement of operation could occur prior to actual startup of production and during the window of time during flowback when natural gas is being sent to the sales lines as part of green completion/reduced emissions completions.

NMOGA recommends replacing the term "commencement of operation" with the term "startup of production." In this way, the definition of storage vessel will be consistent with the definition of storage vessel in NSPS OOOOa. *See* 40 CFR §60.5430a. NMOGA has proposed a definition of the term below.

6. 20.2.50.8.H "Compressor Station" – The term "Gathering and Boosting Stations" should be removed and separately defined to clarify mid-/upstream obligations

The proposed definition of "compressor station" includes "gathering and boosting stations" (another defined term as "gathering and boosting site") and pulls most of its language from the NSPS OOOOa;[23] however, the language lacks definite delineation between upstream processes and gathering system processes.

NMOGA proposes that gathering and boosting stations be viewed as a separate and distinct operations from compressor stations, and that there be a distinct demarcation between the two operations by making the following changes to the definitions:

> [H] Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through distribution or transmission pipelines, or into or out of storage. ~~This includes, but is not limited to, gathering and boosting stations and transmission compressor stations.~~ The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station.
>
> [Q] Gathering and boosting ~~site~~ system means any permanent combination of equipment ~~that collect or move natural gas, crude oil, condensate, or produced water between the wellhead site and midstream oil and natural gas collection or distribution facilities~~ that has one or more connection points to a downstream endpoint, typically a gas processing plant, tank battery or compressor station ~~or into or out of storage~~.

By making this change, the definition places all mid-stream and subsequent operators into the definition of compressor station and all upstream operations into the definition of gathering and boosting system, clarifying the obligations of each set of operators.

7. 20.2.50.8.J "Connector". This new definition should be adopted for clarity.

Connector, a term used in the draft rule, need to be clearly defined. NMOGA recommends incorporating the following definition from 40 CFR §98.6:

> "Connector" means flanged, screwed, or other joined fittings used to connect pipe line segments, tubing, pipe components (such as elbows, reducers, "T's" or valves) or a pipe line and a piece of equipment or an instrument to a pipe, tube or piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors.

The proposed definition is more comprehensive and better accords with industry practice.

8. 20.2.50.8.K "Custody Transfer"– This definition is no longer necessary in light of proposed revisions to the Applicability section

As explained in the comments to draft 20.2.50.6 Applicability, the definition of "custody transfer" is used only in the applicability section. A revised approach is suggested in 20.2.50.6 that enables the deletion of the term from the definitions.

9. 20.2.50.8.O "Existing". This definition should be based on the date of construction or reconstruction.

The definition defines "existing" as "any piece of equipment regulated by this part that began operation prior to the effective date and has not been modified or reconstructed. However, throughout the draft rule, it is used in the context of "constructed" prior to the effective date of the draft rule. "Constructed" is easier to track and manage. Accordingly, NMOGA recommends:

> "Existing" means any piece of equipment regulated by this Part that ~~began operation~~ was constructed or reconstructed prior to the effective date of the rule.

10. 20.2.50.8.P "Gas Processing Plant". This term is redundant to the definition of "Natural Gas Processing Plant" and should be deleted.

There is a definition of "natural gas processing plant" in 20.2.50.8.X that is very similar to the "gas processing plant" definition. The definition in 20.2.50.8.X better reflects the common use of the term. NMOGA recommends that the definition of "gas processing plant" in 20.2.50.8.P be deleted as it is superfluous.

11. 20.2.50.8.Q "Gathering and Boosting Station". This definition should be revised to more clearly separate mid-/upstream obligations.

As discussed above in 20.2.50.8.H, NMOGA requests that this definition be revised as follows:

> [Q] Gathering and boosting ~~site~~ system means any permanent combination of equipment ~~that collect or move natural gas, crude oil, condensate, or produced water between the wellhead site and midstream oil and natural gas collection or distribution facilities~~ that has one or more connection points to a downstream endpoint, typically a gas processing plant, tank battery or compressor station ~~or into or out of storage~~.

As explained above, this definition provides a clearer separation of upstream from midstream and subsequent operations, clarifying the obligations for both.

12. 20.2.50.8.S "Hydrocarbon liquids". The term "produced water" should be removed from this definition.

The draft rule defines "hydrocarbon liquids" as "any naturally occurring, unrefined petroleum liquid and can include oil, condensate, produced water and intermediate hydrocarbons." NMOGA recommends removing "produced water" from the definition of hydrocarbon liquid to ensure it is clear it should not be included in the Hydrocarbon Liquid Transfers provisions because it introduces the possibility of explosion from the introduction of oxygen. Based upon review, NMOGA believes that there is little emission benefit from including produced water in the Liquid Transfer regulation. Accordingly, to appropriately distinguish between those regulations that apply to hydrocarbon liquids (i.e., crude oil and condensate) versus produced water, those terms should be separately defined and used together where appropriate and separately where appropriate.

13. 20.2.50.8. NEW TERM "Light liquid component". This definition is needed to clarify which components may be excluded from the leak detection provisions.

As discussed in NMOGA comments on the leak detection program below, leaking components that do not contain VOCs should not be subject to the standard. NMOGA proposes adding a definition of "light liquid" to assist in evaluating which components are eligible for exclusion from the leak detection provisions. The proposed definition is consistent with the light liquid service evaluation required under 40 C.F.R. Part 60, Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006. *See* 40 C.F.R. 60.485a(e).

> A light liquid component is a component that meets all the following conditions:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H2O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

14. <u>20.2.50.8.U "Liquid transfers". This definition should exclude the term "produced water" and clarify that tanks are the origin of the liquid transfers</u>

The draft rule defines "Liquid transfers" as "the loading and unloading of hydrocarbon liquids or produced water between storage tanks and tanker trucks or tanker rail cars for transport." NMOGA recommends removing produced water from the liquid transfers definition and clarifying that transfer is "from" the storage tanks "to" tanker trucks or rail cars. Including produced water in the definition has a low emissions benefit and, as outlined above, raises safety concerns. While condensate and oil are loaded in dedicated service pressurized tankers that are purged with inert gas prior to loading, produced water is loaded using nondedicated service non-pressurized vessels (e.g. vacuum trucks). A non-dedicated service truck could arrive with a vessel containing residual hydrocarbon vapors from a previous load which could result in a fire or explosion in the vacuum truck and vapor lines to the combustor. Both types of trucks pass leak tests but are used for different services.

15. <u>20.2.50.8 NEW TERM "Maintenance". The term should be defined to clearly differentiate it from the terms "inspection" and "monitoring"</u>

The draft rule utilizes the term "maintenance" but does not define it. The draft rule also appears to interchange the terms "inspection," "monitoring," and "maintenance" as if they were the same. Industry believes that each of these activities (inspection, monitoring, and maintenance) are distinct activities. Maintenance typically refers to activities undertaken to ensure that a piece of equipment remains in good condition and working order. Maintenance may be scheduled or unscheduled. For example, automobile manufacturers recommend that certain maintenance, such as an oil change, be conducted every 3000 miles or that tires be rotated every certain number of miles. However, other maintenance may occur when information is obtained that suggests new or additional maintenance is appropriate – when you receive an alarm/flashing light or by checking the level of windshield washer fluids. In other cases, maintenance may be required when the unit starts to operate out of normal parameters. In each of these circumstances, it is common that nothing has broken, and no repair is required – although the maintenance activity may result in cleaning, replacement or adjustment of the equipment. Accordingly, NMOGA recommends adding the following definition:

"Maintenance" means scheduled or unscheduled activities, including but not limited to, tuning, adjustments, consumables replacement, or cleaning, undertaken to ensure that equipment continues to perform for the purpose and in the manner for which it was designed.

16. 20.2.50.8 NEW TERM "Major production and processing equipment". This definition is needed to identify wellhead-only sites exempt from regulation

NMOGA has requested an exemption consistent with NSPS Subpart OOOOa for wellhead only well sites, which is a well site that contains one or more wellheads and no major production and processing equipment. To clarify the scope of this exemption, NMOGA proposes adding a definition for "major production and processing equipment" consistent with 40 C.F.R. 60.5430a:

> Major production and processing equipment means reciprocating or centrifugal compressors, glycol dehydrators, heater/treaters, separators, and storage vessels collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water, for the purpose of determining whether a well site is a wellhead only well site.

17. 20.2.50.8.W "Modification". This definition should be deleted given the terms "new" and "existing" are based on the date of construction and reconstruction

As explained in the general comments on the Definition section, the classification of equipment as "new" or "existing" is contingent on when the equipment was constructed or reconstructed, there is no need for the term "Modification." In addition, "modification" is used just two times in the draft rule, both in 20.2.50.14, Standards for Compressor Seals and only as a requirement to maintain records of the date of construction, reconstruction and modifications of centrifugal and reciprocating compressors. NMOGA recommends deleting the term "modification" in 20.2.50.14 D (1)(b) and (2)(b) and deleting the draft definition since it would not be relevant.

18. 20.2.50.8.AA "New". This definition should be based on the date of construction or re-construction, not on the date operations began.

As explained in the general comments on the Definition section, NMOGA recommends that the definition of "new" be tied to the date constructed or reconstructed, as this is how the term is used throughout the draft regulation.

> "New" means any piece of equipment regulated by this Part that ~~began operation~~ was constructed or reconstructed on or after the effective date.

19. 20.2.50.8 NEW TERM "Operator". This term should be defined for clarity.

NMOGA believes that the term "operator" should be defined as follows:

> "Operator" means a person who, duly authorized, manages a lease's development or a producing property's operation, or who manages a facility's operation.

20.2.50.8.CC "Pneumatic controller"

20. 20.2.50.8.CC "Pneumatic controller". This term should be defined consistent with NSPS OOOOa and sub-categorized by type of controller.

NMOGA has several recommendations for pneumatic controllers to assist with implementation of the draft rule.

First, NMOGA recommends that the proposed definition be made consistent with NSPS Subparts OOOO and OOOOa by eliminating "flow volume." This eliminates the situation where the same piece of equipment may be subject to potentially inconsistent regulatory regimes.

Second, NMOGA recommends that three subclasses of pneumatic controller from 40 CFR 98.6 be included:

1. "High-bleed pneumatic devices" means automated, continuous bleed flow control devices powered by pressurized natural gas and used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. Part of the gas power stream that is regulated by the process condition flows to a valve actuator controller where it vents continuously (bleeds) to the atmosphere at a rate in excess of 6 standard cubic feet per hour.
2. "Intermittent bleed pneumatic devices" means automated flow control devices powered by pressurized natural gas and used for automatically maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. These devices have a mechanical barrier between the supply gas and end device that discharges all or a portion of the volume of the actuator intermittently when control action is necessary but does not bleed continuously.
3. "Low-bleed pneumatic devices" means automated flow control devices powered by pressurized natural gas and used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. Part of the gas power stream that is regulated by the process condition flows to a valve actuator controller where it vents continuously (bleeds) to the atmosphere at a rate equal to or less than six standard cubic feet per hour.

These classifications correspond with how vendors sell these devices. Using these definitions will allow use of the vendor's classification for compliance purposes.

21. <u>20.2.50.8.DD "Pneumatic pump". This definition should be revised to be consistent with the federal definition for "natural gas-driven diaphragm pump."</u>

NMOGA recommends that this definition be replaced with the substantially equivalent federal definition to avoid confusion and possible inconsistent regulation. The federal definition is for "natural gas driven diaphragm pump" and is defined as:

> "Natural gas-driven diaphragm pump" means a positive displacement pump powered by pressurized natural gas that uses the reciprocating action of flexible diaphragms in conjunction with check valves to pump a fluid. A pump in which a fluid is displaced by a piston driven by a diaphragm is not considered a diaphragm pump for purposes of this subpart. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump.

40 C.F.R. § 60.5430a.

22. <u>20.2.50.8.EE "Potential to emit". This term should be replaced with "Potential Emissions Rate" or revised to consider limits "enforceable as a practical matter."</u>

The proposed definition of "potential to emit" was declared arbitrary and capricious in *National Mining Ass'n v. EPA*, 59 F.3d 1351 (D.C. Cir. 1995), and *Chemical Mfrs Ass'n v. EPA*, No. 89-1514 (D.C. Cir. Sept. 15, 1995). EPA has subsequently provided guidance that permit conditions need only be "enforceable as a practical matter" to effectively limit potential to emit. NMOGA recommends that the draft rule either use the definition of "potential emission rate" from 20.2.72.7.Y NMAC or the following revised definition of "potential to emit":

"Potential to emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is ~~federally enforceable~~ legally and practically enforceable in a~~n operating~~ a permit, authorization, or other requirement established under a federal, state, local or tribal authority. The potential to emit for nitrogen dioxide shall be based on total oxides of nitrogen.

23. 20.2.50.8 NEW TERM "Process vessel". This term should be defined for greater clarity.

NMOGA recommends that the following term be added to facilitate the draft rule:

"Process Vessel" means a pressure vessel (container for the containment of pressure, either internal or external) used to separate liquids and gases that is designed not to vent to the atmosphere, operates in excess of 15 lbf/in^2 gauge, and consists of an inside diameter greater than 6 in.

24. 20.2.50.8.FF "Produced water". This definition should be revised to be consistent with the Produced Water Act.

The draft rule defines produced water as "water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction." NMOGA believes that it would be more appropriate to use the definition from the Produced Water Act, section 70-13-2(B), NMSA 1978:

"Produced water" means a fluid that is an incidental byproduct from drilling for or the production of oil and gas.

The draft rule should refer to hydrocarbon liquids (e.g., crude oil or condensate) and produced water separately. This is particularly important with respect to requirements such as liquids transfer. As written, the NMED rules would require dmissions reductions from liquids transfers associated with produced water. NMOGA does not believe it is appropriate to require control of liquid transfers of produced water. Thus, to appropriately distinguish between those regulations that apply to hydrocarbon liquids (i.e., crude oil and condensate) versus produced water, those terms should be separately defined.

25. 20.2.50.8 NEW TERM "Reconstructed or reconstruction". This term should be defined, or cross-reference 20.2.72.400.G, for greater clarity.

"Reconstructed" or "reconstruction" is not defined in the draft rule. "Reconstruction" is defined in 20.2.72.400 G as "a modification which results in the replacement of the components or addition of integrally related equipment to an existing source to such an extent that the fixed capital cost of the new components or equipment exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility." NMOGA recommends that the rule either include a cross reference to the definition in 20.2.72.400 G or include that same definition in 20.2.50.8.

26. 20.2.50.8.HH "Responsible official". This definition should be deleted in light of proposed revisions to the certification of monitoring plans.

The draft rule requires a "Responsible Official," as defined in 40 CFR Part 70, the Federal Operating Permit rule, to certify compliance with an approved alternative monitoring plan or pre-approved monitoring plan. There is no apparent need for this requirement and even NSPS OOOOa, presumably the inspiration for allowing alternative monitoring plans, does not require certification by a Responsible Official. It imposes significant burdens because there are relatively few "Responsible Officials" relative to the number of oil and gas facilities when compared to traditional Title V industrial facilities. For that reason, NMOGA recommends deleting the definition for Responsible Official.

27. 20.2.50.8.II "Startup". This definition should be revised to be consistent with the definition of "Startup" in 20.2.72.7.

The draft rule defines "Startup" as "the setting into operation of any air pollution control equipment or process equipment." This definition is inconsistent with the Department's definition in 20.2.72.7:

> **"Startup"** means the setting into operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing in of batch process units.

For consistency, NMOGA recommends that the definition of "startup" in 20.2.72.7 NMAC be used, in its entirety, in the final rule.

28. 20.2.50.8 NEW TERM "Startup of Production". This new term should be adopted consistent with NSPS OOOOa to support the definition of storage vessel.

NMOGA recommends that the draft rule incorporate the definition of "startup of production" from NSPS OOOOa into the definitions to support the definition of storage vessel. See 40 CFR §60.5430a. Specifically, startup of production should be defined as follows:

> "Startup of production" means the beginning of initial flow following the end of flowback when there is continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate or produced water.

The use of the term **continuous** recovery of salable quality gas and separation and recovery of any crude oil, condensate or produced water follows more closely with Colorado's definition and prevents startup of production from occurring during the flowback stage.

29. 20.2.50.8.JJ "Storage tank" and KK "Storage vessel". For improved clarity, the term "storage tank" should be replaced with the term "storage vessel"

After careful review, NMOGA believes that the proposed definition of "storage tank" is susceptible to multiple interpretations and does not have a clear demarcation point for operators to use in assessing what it means. This will lead to confusion and needless conflict in interpretation. NMOGA recommends that the draft rule delete the definition of "storage tank" and use in its place the revised definition of "storage vessel" below:

"Storage vessel" means a container for crude oil, condensate, intermediate hydrocarbon liquids, or produced water that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after commencement of operation for a period which exceeds 60 days is considered a storage tank. A storage vessel does not include:

1. Process vessels designed to operate in excess of 15 lbf/in2 gauge and without emissions to the atmosphere.

2. Tanks that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. If you do not keep or are not able to produce records showing that the vessel has been located at a site for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel from the date the original vessel was first located at the site. This exclusion does not apply to a well completion vessel as described above.

30. <u>20.2.50.8.LL "Stripper well". This term should be defined consistent with the CTG recommendation.</u>

NMOGA discusses the proper definition of "stripper well" in its comments on proposed 20.2.50.25.

31. <u>20.2.50.8 NEW TERM "Tank battery". This term should be defined for greater clarity.</u>

The draft rule uses the term "tank battery" multiple times but does not define the term. NMOGA believes that the term should be defined as follows:

"Tank battery" means the group of equipment used to separate, treat, store, and transfer crude oil, condensate, natural gas, and produced water prior to the tank battery outlet for transportation, typically a meter or valve.

The proposed definition provides clarity about the group of equipment, including storage vessels, that constitute the equipment of concern.

32. <u>20.2.50.8 NEW TERM "Vapor Recovery Control Unit". This definition should be revised to delineate process versus control vapor recovery units.</u>

Vapor recovery units may be process units or air pollution control equipment. Both EPA and NMED's Air Quality Bureau have recognized this "dual" role of vapor recovery units and have used the "three questions" test and economic analysis to determine how such units should be classified. NMOGA proposes the following definition:

"Vapor Recovery Control Unit" means a system composed of a scrubber, a compressor and a switch. Its main purpose is to recover vapors formed inside completely sealed crude oil or condensate tanks. The switch detects pressure variations inside the tanks and turns the compressor on and off. The vapors are sucked through a scrubber, where the liquid trapped is returned to the liquid pipeline system or to the tanks, and the vapor recovered is pumped into gas lines. To determine if a vapor recovery unit is process or control equipment the operator must answer the following three questions:

_____i. Is the primary purpose of the equipment to control air pollution?

_____ii. Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment?

_____iii. Would the equipment be installed if no air quality regulations are in place?

If the primary purpose is to control air pollution than the vapor recovery unit is a vapor recovery control unit. A vapor recovery unit's classification as a control or process unit in a final permit is binding upon both the Department and the operator.

This definition recognizes the historic tests used by EPA and NMED for when a vapor recovery unit is a piece of air pollution control equipment. Because of the complexity of the test, NMOGA believes that the status of vapor recovery units should be resolved in an appropriate permit proceedings, which would look at the facts and circumstances of each unit, and reach the most appropriate conclusion that would thereafter bind the operator.

33. 20.2.50.8.MM "Wellhead site" and related NEW TERMS. Separate definitions should be adopted for "Well Site," "Wellhead," and Wellhead-Only Well Site."

The draft rule defines "Wellhead site" as "all equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for extraction, collection, routing, storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline." This definition is problematic because there are well-heads and well-sites but there are not wellhead sites (as defined by the draft). To address the wide variety of well sites and processing equipment variations, NMOGA recommends separating the definitions similar to the definitions in NSPS OOOOa:[14]

[MM] "Well site" means one or more surface sites that are constructed for the drilling and subsequent operation of any oil well, natural gas well, or injection well." For the purposes of 20.2.50.16 well site does not include (1) UIC Class II oilfield disposal wells and disposal facilities, (2) UIC Class I oilfield disposal wells, and (3) the flange immediately upstream of the custody meter assembly and equipment, including fugitive emissions components, located downstream of this flange.

[NEW] "Wellhead" means the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. The wellhead does not include other equipment at the well site except for any conveyance through which gas is vented to the atmosphere."

[NEW] "Wellhead only well site" means, for the purposes 20.2.50.16, a well site that contains one or more wellheads and no major production and processing equipment.

34. 20.2.50.8 NEW TERM "Well Workover". This term should be defined for greater clarity.

The draft rule does not include a definition for "well workover." NMOGA recommends adding the following definition:

"Well workover" means the process(es) of performing one or more of a variety of remedial operations on producing hydrocarbon liquids-and natural gas wells to try to increase production. This process also includes high-rate flowback of injected gas, water, oil, and proppant used to re-fracture and prop-open new fractures in existing low permeability gas reservoirs, steps that may vent large quantities of produced gas to the atmosphere.

[14] *See* 85 Fed. Reg. 57398, 57460 (Sept. 15, 2020).

E. 20.2.50.12 GENERAL PROVISIONS

1. 20.2.50.12.A. The requirement to maintain manufacturer's specifications should be removed from the general provisions and, when included in the equipment standards, allow companies to develop their own maintenance and operating procedures.

In 20.2.50.12.A(1), the draft rule states:

> "All equipment subject to requirements under 20.2.50 NMAC shall be operated and maintained consistent with manufacturer specifications and good engineering and maintenance practices. The owner or operator shall keep manufacturer specifications and maintenance practices on file and make them available upon request by the Department."

Including this requirement in the General Provisions is redundant as similar provisions are included in the equipment specific provisions of the rule.

Some types of equipment have useful service lives that extend beyond a single site. As a result, the initial design and operating procedures may be obsolete and no longer appropriate. The draft rule should allow owners and operators to develop maintenance and operating procedures based on site-specific operating conditions and their extensive experience operating this type of equipment. Manufacturer specifications and recommended practices should be optional, rather than required, throughout the NMED regulations. Furthermore, depending on the age of the equipment, whether the manufacturer remains in business, and other possible factors, manufacturer specifications and recommended practices may no longer be available. At the very least, the draft rule should allow the substitution of an owner/operators specifications, subject to a requirement that such specifications conform to good engineering practice.

NMOGA recommends deleting the requirement in 20.2.50.12.A(1) from the General Provisions and including any necessary and appropriate provisions in equipment specific provisions of the rule. Furthermore, the draft rule should allow and encourage companies to develop their own maintenance and operating procedures specific to the field and conditions in which they operate.

2. 20.2.50.12.A(6). The Equipment Monitoring Information and Tracking Tag (EMITT) system imposes substantial cost, is not readily available, and does little to address ozone in New Mexico.

Draft rule 20.2.50.12.A(6) requires operators to implement an Equipment Monitoring Information and Tracking Tag (EMITT) which consists of a physical tag that is scannable with a hand-held scanner (RFID or QR) that uniquely identifies the unit to which is it assigned. 20.2.50.12.A(7) requires the EMITT to be linked to a database and made accessible to state inspectors to provide information specific to that equipment including the type of unit, potential to emit, and design control efficiency for emission control equipment. The EMITT database would also host records for equipment specific monitoring and maintenance requirements proposed in the different rule sections.

The EMITT system proposed through this rule is unprecedented in its prescriptiveness and is even more onerous than a system required in an extreme nonattainment area (San Joaquin Valley, CA). The cost of implementation and maintenance of an EMITT system will be disproportionately higher than the emission reduction potential. Moreover, NMOGA member companies can identify no other air quality regulations that have successfully implemented and justified the requirement for a similar system.

At this time, NMOGA has not found a currently available commercial software product suitable for oil and gas operations that will satisfy the proposed EMITT system. Having each operator develop a system of such complexity will require tremendous time, cost and effort with the largest burden falling to smaller operators. Additionally, granting access to a proprietary system exposes the operator to cybersecurity concerns or cyber-attacks.

NMED must justify the additional cost burden of this system and provide the purpose of an electronic system instead of the operator's current systems of documenting compliance. Furthermore, the language in this rule does not provide a cogent statement of the anticipated environmental benefit of the EMITT system making it difficult for NMOGA to provide cost effective solutions to NMED's environmental concerns.

In summary, NMOGA does not believe a centralized, comprehensive inventory is needed. Instead, each operator should maintain its own equipment inventory system responsive to their needs. It is the operator's responsibility to ensure that its system is capable of providing clear records and reports to NMED.NMOGA recommends deleting all sections of the rule related to the EMITT system including the following:

NMAC §	**Section**	**Provisions to Remove**
20.2.50.12	General Provisions	20.2.50.12.A (6) and 20.2.50.12.A (7)
20.2.50.13	Standards for Engines and Turbines	20.2.50.13.B.(9) and 20.2.50.13.C (5)
20.2.50.14	Standards for Compressor Seals	20.2.50.C (5)
20.2.50.15	Standards for Control Devices,	20.2.50.15.B (3), 20.2.50.15.B (4), 20.2.50.15.C (2)(d), 20.2.50.15.D (2)(c), and 20.2.50.15.E (2)(b)
20.2.50.17	Standards for Natural Gas Well Liquids Unloading	20.2.50.17.B (3) and 20.2.50.17.C (3)
20.2.50.18	Standards for Glycol Dehydrators	20.2.50.18.B (3)(d)
20.2.50.19	Standards for Heaters	20.2.50.19.B (4) and 20.2.50.19.C (4)
20.2.50.21	Standards for Pig Launching and Receiving	20.2.50.21.B (3)
20.2.50.22	Standards for Pneumatic Controllers and Pumps	20.2.50.22.C (2), 20.2.50.22.C (3), 20.2.50.22.C (4), 20.2.50.22.D (2)(b), 20.2.50.22.D (3), and 20.2.50.22.D (4)

20.2.50.23	Standards for Storage Tanks	20.2.50.23.B (8) and 20.2.50.23.C (4)

3. <u>20.2.50.12.B(1). The general monthly inspection requirement is superfluous because equipment-specific standards adequately describe inspection obligations.</u>

In draft 20.2.50.12.B(1), the draft rule states:

> All equipment subject to control or monitoring requirements under this Part shall be inspected monthly to ensure proper maintenance and operation, unless a different inspection schedule is specified in the section below applicable to that particular type [of] equipment. If the emission unit is shutdown at the time when periodic monitoring or inspections are due to be accomplished, the owner or operator is not required to restart the unit for the sole purpose of performing the monitoring or inspection but shall so note in the equipment or controller's records.

NMOGA appreciates that NMED provides that it is not necessary to start a unit for the sole purpose of monitoring or inspection. This makes sense and reduces emissions.

The monthly inspections prescribed in the General Provisions, however, are vague and are not needed. As shown in table below, each equipment type has an inspection schedule specified in the associated "Monitoring Requirements" for the equipment type. The only exception is for "Standards for Oil And Natural Gas Stripper Wells And Facilities With Site-Wide VOC Potential To Emit Less Than 15 TPY." As a result, this vague General Provision requirement is not needed and adds complexity and uncertainty that provides no benefit.

NMAC §	Section	Inspection Schedule (as drafted)
20.2.50.13	Standards for Engines And Turbines	IPT & Annual Test
20.2.50.14	Standards for Compressor Seals	semiannual
20.2.50.15	Standards for Control Devices	Flares/ECD/TO-Continuous, quarterly VRU-Weekly AVO, routine OGI
20.2.50.16	Standards for Equipment Leaks	weekly AVO, routine OGI
20.2.50.17	Standards for Natural Gas Well Liquids Unloading	during liquid unloading
20.2.50.18	Standards for Glycol Dehydrators	semiannual
20.2.50.19	Standards for Heaters	every 2 years
20.2.50.20	Standards for Hydrocarbon Liquid Transfers	during transfers

NMAC §	Section	Inspection Schedule (as drafted)
20.2.50.21	Standards for Pig Launching And Receiving	during launching/receiving
20.2.50.22	Standards for Pneumatic Controllers And Pumps	monthly
20.2.50.23	Standards for Storage Tanks	weekly, monthly
20.2.50.24	Standards for Workovers	during workover
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	none specified
20.2.50.26	Standards for Evaporation Ponds	monthly

Based on this analysis, NMOGA recommends that the General Monitoring provision be limited to providing relief from monitoring of shutdown units given the comprehensive coverage in the equipment specific provisions.

4. <u>20.2.50.12.B(2). The requirement to conduct periodic monitoring at 90% of unit capacity is vague and does not apply to many types of equipment.</u>

In 20.2.50.12.B(2), the draft rule states:

> All periodic monitoring events shall be conducted at 90% or greater of the unit's capacity. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions.

Equipment specific monitoring requirements should be, and generally are, identified in the equipment specific section of this Part. See table below. If any additional units need to meet this requirement, it should be reflected in the equipment specific subpart.

NMAC §	Section	Monitoring at 90% Capacity
20.2.50.13	Standards for Engines And Turbines	Yes - 90% load
20.2.50.14	Standards for Compressor Seals	Not specified, not applicable
20.2.50.15	Standards for Control Devices	Not specified, not applicable/practicable

NMAC §	Section	Monitoring at 90% Capacity
20.2.50.16	Standards for Equipment Leaks	Not specified, not applicable/practicable
20.2.50.17	Standards for Natural Gas Well Liquids Unloading	Not specified, not applicable
20.2.50.18	Standards for Glycol Dehydrators	Not specified, not applicable/practicable
20.2.50.19	Standards for Heaters	Yes - 90% load
20.2.50.20	Standards for Hydrocarbon Liquid Transfers	Not specified, not applicable/practicable
20.2.50.21	Standards for Pig Launching And Receiving	Not specified, not applicable/practicable
20.2.50.22	Standards for Pneumatic Controllers And Pumps	Not specified, not applicable/practicable
20.2.50.23	Standards for Storage Tanks	Not specified, not applicable/practicable
20.2.50.24	Standards for Workovers	Not specified, not applicable/practicable
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	Not specified, not applicable/practicable
20.2.50.26	Standards for Evaporation Ponds	Not specified, not applicable/practicable

NMOGA recommends deleting draft rule section 20.2.50.12.B(2).

5. <u>20.2.50.12.C. General recordkeeping provisions should be revised to eliminate redundancy and moved to equipment sections.</u>

NMOGA supports the general concepts for recordkeeping in draft rule section 20.2.50.12.C, but believes that some language should be modified to address duplications and/or conflicts with existing NMED regulations concerning recordkeeping. NMOGA also suggests that the recordkeeping requirements found in the General Provisions be moved to each equipment section to prevent duplication and potential conflicting or confusing requirements.

Units complying with an NSPS or NESHAP in lieu of draft rule provisions should comply only with the NSPS or NESHAP recordkeeping requirements. For sources subject to 40 CFR Part 60 subparts and where compliance with the subpart is deemed compliance with the draft rule, the recordkeeping requirements under the applicable subparts should be referenced and used to document compliance with the draft rule. One prevailing set of already enacted

reporting requirements for each type of source category would be used rather than two sets of requirements.

Duplicative records should be removed. For example, the excess emissions requirements in 20.2.50.12.C(4) NMAC duplicate the general excess emissions reporting requirements in 20.2.7.110 NMAC (Notification). NMOGA recommends deleting the duplicative requirements found in the draft rule and that NMED require operators to comply with the existing excess emissions requirements.

Additionally, NMOGA recommends that 20.2.50.12.C (3) be removed or language modified to exempt SSM emissions subject to other requirements. The requirement as proposed is duplicative and potentially conflicting with permitted start-up, shutdown, and malfunction emissions requirements. Part B NSR General Conditions B107 (Startup, Shutdown and Maintenance Operations) and B109 (General Recordkeeping Requirements) address recordkeeping and reporting requirements for these specific emissions.

NMOGA also recommends removing 20.2.50.12.C.(1)(g) requiring that the operator maintain a copy of the manufacturers specifications, including those for maintenance or repair. As explained in these comments, the equipment manufacturer's maintenance or repair recommendations may not be as relevant to the equipment as operator's own documents. The operator's documents may incorporate newer technology or methods or information gleaned from company or industry experience with the equipment in the specific service application. Furthermore, for existing equipment, the equipment may be old, or the manufacturer may no longer be in business and the operator may not be able to obtain the manufacturer's recommendations at this time.

Consistent with NMOGA recommendations in these comments, all provisions regarding EMITT should be deleted.

6. <u>20.2.50.12.C(6). The pre-transfer compliance evaluation should be removed because it is not necessary to achieve NMED's statutory objectives.</u>

In section 20.2.50.12.C(6), the draft rule states:

> Prior to the transfer of ownership of any equipment subject to this Part, the current owner or operator shall conduct and document a full compliance evaluation of all equipment subject to the rule. The documentation shall indicate whether or not each piece of equipment subject to requirements under this Part is currently complying with those requirements. The compliance determination shall be conducted no earlier than one year prior to the transfer.

NMOGA requests that the agency remove this proposed requirement. Companies acquiring new equipment routinely perform pre-acquisition due diligence and/or post-acquisition audits to evaluate compliance risks and costs associated with the acquisition. Adding a regulatorily-required compliance evaluation by the transferor would be redundant.

NMOGA further notes that it would be highly unusual for a pre-transfer evaluation requirement to be incorporated into a state rule that otherwise purports to set "standards of performance for sources of emissions" under NMSA section 74-2-5.3.B. Comprehensive self-assessment requirements are more commonly a feature of programs that depend on immediately

time-sensitive information (such as release reporting under the NMED's excess emissions reporting requirements), are modeled after federal programs (such as Federal Clean Air Act Title V deviation reporting), or are voluntary (such as the NMED's Voluntary Environmental Disclosure Policy). Incorporating a pre-transfer evaluation into the draft rule is not similar in spirit to any of these programs and is not necessary to achieve the agency's statutory objectives.

Finally, failure to transfer records upon sale or transfer of ownership or operating authority should not be a citable offense to the current owner or operator. If a prior owner or operator failed to keep certain records, the current owner or operator has no way to remedy that situation. NMOGA recommends deleting the parenthetical phrase "(including failure to transfer records upon sale or transfer o[f] ownership or operating authority)" from this item.

7. <u>20.2.50.12.D(2). The reporting requirements should be revised to remove duplication with existing standards and provide certainty.</u>

As identified for recordkeeping, NMOGA found duplications in the reporting requirements of the proposed draft rule as well. The proposed reporting requirements of Root Cause and Corrective Action Analysis Report in 20.2.50.12.D(2) NMAC (Reporting Requirements) is currently addressed in the existing 20.2.7.114 NMAC requirement. NMOGA, therefore, recommends this language be removed and allow owners and operators to comply with the existing excess emissions reporting requirements.

Units complying with an NSPS or NESHAP in lieu of draft rule provisions should comply only with the NSPS or NESHAP reporting requirements. For sources subject to 40 CFR Part 60 subparts and where compliance with the subpart is deemed compliance with the draft rule, the reporting requirements under the applicable subparts should be referenced and used to document compliance with the draft rule. One prevailing set of already enacted reporting requirements for each type of source category would be used rather than two sets of requirements.

Additionally, NMOGA request the agency to add clarifying language to 20.2.50.12.D(1) NMAC identifying specific reports requiring submittal. This unclear citation is referenced throughout the entire draft rule, but no specific reports are identified. NMOGA recommends that the draft rule either specify the reports or remove the general language and identify individual reporting requirements within the prospective sections. It may be best to adopt the former approach.

F. 20.2.50.13 STANDARDS FOR ENGINES AND TURBINES

NMOGA believes that significant modification to the proposed engine and turbine draft regulations are needed to comply with federal law and to make them workable.

1. <u>20.2.50.13.A. The draft rule should not apply to nonroad engines.</u>

The draft rule broadly proposes to regulate "new and existing portable and stationary" engines and turbines. While stationary and some portable equipment is subject to the EIB's and

NMED's authority, portable equipment regulated by the EPA as a "nonroad engine" is not. The federal Clean Air Act preempts state authority over these "nonroad" engines except in certain limited circumstances. 42 U.S.C. § 7543(e)(1) & (2); § 7550(10). A "nonroad engine" is defined as follows:

> *Nonroad engine* means:
>
> (1) Except as discussed in paragraph (2) of this definition, a nonroad engine is an internal combustion engine that meets any of the following criteria:
>
> (i) It is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers).
>
> (ii) It is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers).
>
> (iii) By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.
>
> (2) An internal combustion engine is not a nonroad engine if it meets any of the following criteria:
>
> (i) The engine is used to propel a motor vehicle, an aircraft, or equipment used solely for competition.
>
> (ii) The engine is regulated under 40 CFR part 60, (or otherwise regulated by a federal New Source Performance Standard promulgated under section 111 of the Clean Air Act (42 U.S.C. 7411)). Note that this criterion does not apply for engines meeting any of the criteria of paragraph (1) of this definition that are voluntarily certified under 40 CFR part 60.
>
> (iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. For any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced, include the time period of both engines in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (*i.e.*, at least two years) and that operates at that single location approximately three months (or more) each year. See §1068.31 for provisions that apply if the engine is removed from the location.

40 C.F.R. § 1068.30 *Nonroad engine.* Thus, state regulation of nonroad engines is preempted unless an engine is regulated by an NSPS or remains at a "single site" at a location for more than 12 consecutive months (because oil and gas facilities are not "seasonal sources. This is true even if the engine is attached to a structure, so long as it retains its indicia of portability.

Practical considerations support exclusion of small portable equipment. Expansion to portable equipment would affect such items as portable generators, air compressors, power washers, welding machines and similar small equipment. Engines used in a temporary capacity such as well work, startup, power, pumping, and air compression typically remain on a source for a short time. Due to the short duration of use, limited time on location, and fact that they often move around on work vehicles, it would be extremely difficult, if not impossible, to satisfy monitoring and recordkeeping requirements for such equipment.

2. 20.2.50.13.A. Engines and Turbines Subject to NSPS and NESHAP should not be subject to additional standards.

To avoid duplication with federal regulations, engines and turbines subject to applicable NSPS and NESHAP requirements should not be included in this regulation. These federal standards are: 40 CFR Part 60, subpart GG, Standards of Performance for Stationary Gas Turbines; 40 CFR Part 60, subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines; 40 CFR Part 60, subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; 40 CFR Part 60, subpart KKKK, Standards of Performance for Stationary Gas and Combustion Turbines, and 40 CFR Part 63, subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. NMOGA believes that NSPS and NESHAP emissions standards are either exempt under the statutory exclusion or fulfill the statutory directive to adopt "control technology that is reasonably available considering technological and economic feasibility" and that the proposed revisions will not achieve "substantially greater reductions" than the existing NSPS for these classes of equipment.

3. 20.2.50.13.A. Emergency engines and turbines should be exempt from the rule.

Engines used for emergency use such as fire-fighting equipment should also be exempt from these requirements as their emissions are highly sporadic and unlikely to affect ambient ozone concentrations.

Based on the foregoing considerations, NMOGA recommends the following changes to the applicability section:

Proposed Revision:

A. Applicability. New and existing stationary natural gas-fired spark ignition engines, compression ignition engines, and natural gas-fired combustion turbines located at wellheads, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to the requirements of 20.2.50.13 NMAC, except that the following units are exempt:

(1) Nonroad engines as defined under 40 C.F.R. 1068.30 are exempt from the requirements of 20.2.50.13 NMAC.

(2) Stationary Spark ignition engines that are subject to and complying with standards in 40 CFR Part 60, subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, are exempt from the requirements of this part 20.2.50.13.

(3) Stationary compression ignition engines that are subject to and complying with standards in 40 CFR Part 60, subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, are exempt from the requirements of this part 20.2.50.13.

(4) Stationary natural gas-fired combustion turbines that are subject to and complying with standards in 40 CFR Part 60, subpart KKKK, Standards of Performance for Stationary Gas and Combustion Turbines, or 40 CFR Part 60, subpart GG, Standards of Performance for Stationary Gas Turbines, are exempt from the requirements of this part 20.2.50.13.

(5) Existing sources that were subject to federal standards of performance under 40 CFR Part 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines.

(6) Any existing engine or turbine less than 1000 bhp.

4. 20.2.50.13.B(1)-(4). The proposed emission standards for spark ignition engines do not reflect the use of control technology that is reasonably available considering technological and economic feasibility in all respects, and standards should be phased-in over time.

NMOGA supports emission standards for existing engines where they are cost effective and would lead to material improvements in air quality. NMOGA has substantial concerns about "borrowing" other States' determinations as it is unclear whether those programs used "control technology that is reasonably available considering technological and economic feasibility" as directed by the Legislature.

Pennsylvania's GP-5 rule is not an appropriate model for New Mexico. For example, NMOGA does not believe that the draft rule's apparent adoption of Pennsylvania's aggressive GP-5 engine emissions standards is appropriate. The GP-5 engine emissions standards are based on a "Best Available Technology" (BAT) determination for emissions from engines. Critically, unlike the New Mexico definition, which requires that "the standards of performance shall reflect the degree of emission limitation achievable through the application of control technology that is reasonably available considering technological and economic feasibility," the GP-5 regulations specifically do not account for economic feasibility at all. Pennsylvania's "BAT" standard is defined as follows:

> "Air contamination sources must be regulated to protect the public welfare, and new sources shall control air pollutant emissions to the maximum extent consistent with Best Available Technology (BAT) as determined by the Department.
>
> Best available technology--Equipment, devices, methods or techniques as determined by the Department which will prevent, reduce or control emissions of air contaminants to the maximum degree possible and which are available or may be made available."

25 Pa. Code 127.1.

The New Mexico standard and the Pennsylvania standards are not comparable. Absent a clearer indication that such stringent controls are necessary to achieve the Legislature's goal of preventing areas from falling into nonattainment, their adoption at this time is premature. Another example of the differences between New Mexico and Pennsylvania is fuel gas quality, which impacts resulting emissions. In Pennsylvania, the fuel gas quality in the gathering system is very good, almost pure methane with a heat value around 1,000 btu/scf. In Southeast New Mexico, gas production is associated with oil production. As a result, fuel gas in the gathering systems have heat values in the range of 1,100 to 1,400 btu/scf, with the majority toward the upper end of the specified range. The higher heating value of the fuel gas has a notable negative impact on the ability to control VOC and NOx emissions at the low levels in the draft rule. In addition, higher btu fuel can increase ash that fouls the catalyst, making it very difficult to maintain catalysts that can sustainably achieve ultra-low VOC emission levels contemplated in the GP5 standard. NMOGA recommends that GP-5 not be used because it is not an appropriate model for New Mexico.

Factors in Evaluating Other States Program. To the extent NMED chooses to look to other states for examples on how to control engines—an approach about which NMOGA has significant reservations given the unique nature of New Mexico operations discussed above—NMED should also look to the manner in which these states adopted such controls—i.e., through a phased-in or tied progression that considered measured alternatives at each stage. For example, in June 2020 Ohio EPA completed another of its periodic reasonably available control technology reviews under its state program and established NOx limit for existing engines of 3.0 g/hp-hr. Colorado has proposed limits for existing engines but limited them to only those engines over 1000 horsepower and chosen to assess the impact of these controls before proceeding to more difficult and costly to control smaller engines. NMOGA believes a similar approach to applicability would be best for New Mexico.

Factors in New Mexico Requiring Consideration. In considering possible standards meeting the "reasonably available considering technological and economic feasibility" mandate, NMED should give consideration to the wide variety of existing natural gas fired spark ignition engines operating in the upstream and midstream oil and gas sector in New Mexico. Like the variation in the engine fleet, the proposed emissions standards will have a varying cost of compliance, depending on source specific conditions. Some existing units will need additional catalyst, some will require catalyst and engine control upgrades, and some will require engine replacement if controls are technically infeasible. Costs are expected to range from $50,000 to $750,000 per unit for engines that can upgrade controls, to several millions of dollars per unit for engines that must be replaced. For example, for two-stroke lean-burn engines in the gathering and processing sector, the costs to upgrade controls to meet the proposed standards is expected to be $1 to $2 million per unit. Finally, for some smaller engines, no upgrades are known to exist and replacement would appear to be the only option.

Implementation. NMOGA believes additional time is needed to implement the rules. We suggest NMED provides a longer phase-in period, to January 1, 2030 with the ability to adjust the schedule. NMOGA members believe more time will be required to implement new emissions standards on existing sources to ensure adequate resources are available to transition to the new levels. This includes adequate phase in through multiple budget cycles; adequate staffing from operations, engineering and contract staff to implement upgrade and replacement projects; and adequate equipment availability. NMOGA proposes a phase-in period to January 1, 2030, which will provide four, two-year periods, with 25% of an operator's fleet upgraded during each period. Operators need flexibility to amend the compliance schedule submitted by January 1, 2022. Also, please see NMOGA's General Comments about implementation and extensions.

Recommendations on phase-in schedule:

NMOGA suggests the following revised timeline:

- By January 1, 2024, 25% of an operator's fleet of existing engines shall meet the requirements of Table 1.
- By January 1, 2026, operators shall ensure an additional 25% of the 's fleet of existing engines meet the requirements of Table 1.
- By January 1, 2028, operators shall ensure an additional 25% of the operator's fleet of existing engines meet the requirements of Table 1.

- By January 1, 2030, operators shall ensure the remaining 25% of the operator's fleet of existing engines meet the requirements of Table 1.

Recommendations on standards:

As noted throughout these comments, NMOGA shares NMED's interest in preventing areas of the state from exceeding the ozone NAAQS. NMOGA also believes that a phased-in approach is most appropriate. NMOGA therefore suggests the following recommendations for the initial phase of implementation.

- For new spark ignition engines, NMOGA believes that the NSPS Subpart JJJJ standards are appropriate for engines to which they apply. NMOGA does not believe it is necessary to include them in the rule because all companies must comply with the NSPS in any case. Therefore, the proposed exemption is appropriate.
- For each 4-stroke natural gas fired spark ignition engines, greater than 1,000 bhp, constructed or reconstructed before the effective date of 20.2.50 NMAC, the operator shall ensure the existing engine(s) do not exceed the following emissions standards as determined by the compliance schedule required in 20.2.50.13.B(3) NMAC:
    - 3 g/bhp-hr NOx
    - 4 g/bhp-hr CO
    - 1 g/bhp-hr VOC
- For each 4-stroke natural gas fired spark ignition engines, greater than 500 bhp, constructed or reconstructed on or after the effective date of 20.2.50 NMAC, the operator shall ensure the new engine(s) do not exceed the following emissions standards upon startup:
    - 1 g/bhp-hr NOx
    - 2 g/bhp-hr CO
    - 0.7 g/bhp-hr VOC

NMOGA was unable to complete a comprehensive analysis to determine a reasonably available control that is technologically and economically feasible for existing two-stroke natural gas fired spark ignition engines but was not able to do so. The variability in this class of engines is extremely great and each class requires a detailed, individual analysis that was not possible in the time available.

5. <u>20.2.50.13.B(5)-(6). NMOGA supports the standards for stationary compression ignition engines.</u>

NMOGA is supportive of the draft regulation for stationary compression engines.

6. <u>20.2.50.13.B(7)-(8). Turbine limits for stationary combustion turbines should be based on bhp or heat rating under ISO standard conditions, not both.</u>

NMOGA has substantial reservations about the draft regulation for stationary combustion turbines. First, emissions standards should based on turbine rating should use one criterion, either brake horsepower or heat rating, but not both, calculated using the International Standards Organization (ISO) "standard day" conditions. This comment is echoed by Solar Turbines in its

September 2, 2020 letter, where it notes that "the power rate reference could cause confusion" and "is redundant."

7. 20.2.50.13.B(7)-(8). CO limits should be set no less than 50 ppm for existing turbines.

Second, Solar Turbines indicates that a limit of 50 ppm carbon monoxide for existing stationary combustion turbines sources is appropriate.

8. 20.2.50.13.B(7)-(8). Existing 1000 to 5000 bhp turbines should comply with NSPS Subpart KKKK standards at most.

Third, NMOGA believes the draft emissions standards in Table 2 for natural gas fired combustion turbines to be excessive and wholly inappropriate for existing natural gas fired combustion turbines. Solar Turbines strongly argues that existing 1000 to 5000 hp turbines cannot meet the standard given the proposed expansion to pre-2013 turbines. It suggests that congruence with NSPS Subpart KKKK may allow dry low NOx technology. Otherwise, existing natural gas fired combustion turbines require a detailed cost benefit analysis and technical feasibility analysis in order to establish appropriate emissions standards. Modifications to meet the proposed emissions standards are likely to be cost prohibitive.

9. 20.2.50.13.B(7)-(8). More time will be needed to implement standards for existing stationary combustion turbines.

NMOGA members believe more time will be required to implement new emissions standards on existing sources, to ensure adequate resources are available to transition to the new levels. This includes adequate phase-in through multiple budget cycles, adequate staffing (operations, engineering, and contractors), and adequate control equipment availability. Members need flexibility to amend the compliance schedule submitted by January 1, 2022. Please see NMOGA's General Comments about implementation and extensions.

Recommendations for implementation phase in:

NMOGA proposes a phase-in process aligned with the proposal for engines:

- By January 1, 2022, operators of existing combustion turbines shall complete an inventory and prepare a schedule for each existing turbine to comply with the requirements of Table 2 by January 1, 2030.
- By January 1, 2024, operators shall ensure that 25% of the operator's fleet of existing turbines meet the requirements of Table 2.
- By January 1, 2026, operators shall ensure an additional 25% of the operator's fleet of existing turbines meet the requirements of Table 2.
- By January 1, 2028, operators shall ensure an additional 25% of the operator's fleet of existing turbines meet the requirements of Table 2.
- By January 1, 2030, operators shall ensure the remaining 25% of the operator's fleet of existing turbines meet the requirements of Table 2.

10. 20.2.50.13.B(7)-(8). NMOGA requests further review of emissions standards for existing natural gas fired combustion turbines.

For existing natural gas fired combustion turbines, NMOGA believes further study is needed. For new or reconstructed natural gas fired combustion turbines, NMOGA agrees with the proposed emissions standards in the draft rule.

11. 20.2.50.13.C(1)(a), (b), Company specific monitoring should be allowed rather than arbitrarily restricted to manufacturers specifications.

Monitoring is an important component of operations. NMOGA supports with modifications the monitoring requirements. As discussed in the general comments, operators should be allowed to develop company specific operating and maintenance practices/procedures to minimize emissions rather than limited to manufacturers specifications. Company specific operating and maintenance practices and procedures take into account company and site-specific needs and experience and promote the use of new technology such as equipment monitoring.

NMOGA requests that arbitrary requirements around routine and unscheduled maintenance that take equipment out of service for certain periods of time be removed, such as those found in C(1)(a) and (b), as there is no apparent benefit or basis for these provisions. Documentation of maintenance and repair activities is already covered in 20.2.50.13 D(1)(c).

12. 20.2.50.13.C(2). Catalysts should not be required during up to 48 hours after start-up of a new or overhauled engine to avoid catalyst degradation.

In proposed C(2), an exemption must be made during the break-in period for new or overhauled engines, as excess oils are being burned out of the engine. Requiring catalyst operation during such periods can cause premature degradation of the catalyst. NMOGA recommends that catalyst operation not be required for a period of up to 48 hours after start-up of a new or overhauled engine to prevent catalyst degradation. The draft rule should allow replacement with a "functionally equivalent" spare pending final replacement to allow continued operation with less disruption.

13. 20.2.50.13.C(3). The draft rule should provide an option to use manufacturers specifications to calculate fuel consumption.

In C(3), the draft rule should allow an option to use manufacturer's specified procedures or relevant equipment instrumentation or other protocol approved by NMED in lieu of requiring fuel meters, which most units do not have.

14. 20.2.50.13.C(2)(b). The draft rule should allow use of the NMED GCP-Oil & Gas NSR permits' CO portable analyzer method as a surrogate for VOC emissions.

NMOGA also notes that portable electrochemical cell analyzers are technologically incapable of measuring non-methane, non-ethane hydrocarbons (NMNEHC) and recommends aligning requirements in this part with the NMED GCP-Oil & Gas and NSR permits that allow use of the CO portable analyzer results as a surrogate for VOC emission standards. Compliance

with the CO limits has correlated to compliance with the VOC emissions standards in the past, and there is no reason to anticipate any change. If a CO standard is exceeded, then the VOC standard should be tested using EPA Test Methods to determine if a violation has occurred. NMED should also continue to allow the use of previously approved portable analyzer protocols.

15. 20.2.50.13.C(3). NMOGA supports a performance testing using either an annual portable analyzer test or EPA reference method test.

NMOGA agrees with the requirement to conduct a performance test using either an annual portable analyzer or EPA Test Method test (at the operator's election). Where NMED has identified that use of a CO analyzer on certain units is problematic, NMOGA believes it appropriate for NMED to request that the initial performance test on such units be completed using EPA Test Methods.

16. 20.2.50.13.C(3)(b). The minimum testing period for rich-burn engines should be reduced to 10 minutes.

A growing issue as limits have declined is a loss of accuracy in electrochemical test cells, which particularly with rich burn engines, can be depleted of oxygen. This can occur when the test runs are prolonged, when there are multiple rich burn engines to be tested, and during the stability test. NMOGA requests that NMED give consideration to reducing the test run for rich burn engines to 10 minutes. In addition, the use of the word "load" rather than capacity for engines is probably more accurate and less confusing.

17. 20.2.50.13.C. NMED should consider using TCEQ "stain tube indicators" or CTM-30 as an alternative test methods.

NMOGA also requests that the draft rule give consideration to possible use of the TCEQ "stain tube indicators" to indicate compliance, as these give rapid results. These are found in 30 TAC 106.512 and 117.8140(b). Another testing approach deserving of consideration is EPA's CTM-30. A broader array of testing approaches allows selection of the test approach best suited to the particular engine being tested to avoid some of the limitations outlined above.

18. 20.2.50.13.C(3)(f). NMOGA recommends use of a representative gas analysis rather than a site-specific gas analysis.

NMOGA believes that a "representative gas analysis" should be allowed, instead of requiring a gas analysis from each specific facility.

19. 20.2.50.13.C(4). NMOGA recommends that the draft rule consider an option of allowing testing on an operating hour basis.

In paragraph C(4), NMOGA requests that an option for testing on an operating hour basis be allowed, with testing required once every 8760 hours. This would be tracked by recording the operating hours at the time of the test and then reporting the number of hours since the prior test. For units that run infrequently, this approach would provide some relief while also ensuring that every unit receives testing on the same basis.

Consistent with the General Comments, the EMITT provisions should be removed.

20. 20.2.50.13.D(1). Records should be limited to units required to test.

In D(1), NMOGA requests that records only be required for units subject to a substantive limit in 20.2.50.13.B. As outlined above, company developed protocols should be allowed in addition to or in lieu of manufacturer's specifications.

21. 20.2.50.13.D(1)-(3). Recordkeeping requirements should be streamlined to eliminate unnecessary elements.

Records in D(1)(c) should be limited to maintenance records and results of inspections should be kept but limited to the name of the inspector and the relevant inspection record. NMOGA also recommends removing the vague "date(s) any subsequent analyses were performed (if applicable)" because they are covered by the general duty to keep maintenance records. Absent a definition of "qualified" entity, the requirement should be deleted. NMOGA believes that "qualified" is best defined by the person requesting the service.

In D(1)(d), the parameters should be specified as those required in the company's maintenance plan, permit or regulation.

In D(2), the vague requirement about "operating conditions existing" should be removed as it is unclear what this requirement requires or supports.

D(3) should be eliminated as all required records are set forth in 20.2.50.13.D.

G. 20.2.50.14 COMPRESSOR SEALS

1. 20.2.50.14.A. Reciprocating compressors used as control devices or that do not have a rod packing, such as VRU compressors, should not be subject to this section.

Under the draft rule, these compressors would be required to comply with monitoring and recordkeeping requirements, even though they control emissions or do not generate them. These compressors are designed to operate with crank case vents, and emissions should be mitigated through proper maintenance practices on the seals. By design, there will be emissions from the vents and operation of the compressors may be hindered if vents are subject to any backpressure. NMOGA requests that these units be exempted from this section.

2. 20.2.50.14.A. NMOGA requests an exemption consistent with 40 C.F.R. 60.5365

Under 40 C.F.R. 60.6365(b) and 60.6365a(b), a "centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not" subject to the NSPS standards. Similarly, under 40 C.F.R. 60.6365(c) and 60.6365a(c), a "reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not" subject to the NSPS standards. NMOGA requests that NMED adopts these exemptions.

3. 20.2.50.14.A. Centrifugal compressors subject to NSPS standards should be exempted from the proposed standard.

Under 40 C.F.R 60.5380(a)(1) and .5380a(a)(1), owners and operators are already required to reduce VOC emissions from each centrifugal compressor wet seal fluid degassing system by 95 percent or greater. The NSPS standards include monitoring, recordkeeping and reporting requirements to ensure the 95% reduction is enforceable. Redundant regulation under this rule will not further reduce emissions and is unnecessary. As Appendix B illustrates, compressors account for approximately 1% of methane emissions from the oil and gas industry, which tracks closely with VOC emissions.

4. 20.2.50.14.A. The draft rule should not require more than 95% control for centrifugal compressors.

The draft rule proposes that a subset of NSPS units (those constructed after the effective date of the rule) be subject to a more stringent 98% control efficiency. However, the NSPS 95% reduction standard is based on a "best system of emissions reduction" technology review, a standard more stringent than RACT. Similarly, EPA's CTGs sets RACT for centrifugal compressors at 95% control efficiency. Accordingly, NMOGA requests NSPS centrifugal compressors, including those constructed after the effective date of this rule, be exempt from the proposed standards under 20.2.50.14.

5. 20.2.50.14.B(1). The prescriptive control requirements under B(1) should be removed.

As outlined above, NSPS units are already subject to the same control requirements under federal law, making this standard redundant for these units. For pre-NSPS centrifugal compressors, the proposed control approach is not economically feasible. The population of these units is very low. The retrofit and replacement effort this would require would be very costly in relation to the minimal emissions benefit that would be realized.

6. 20.2.50.14.B(1). If B(1) is retained, NMOGA has concerns about the fuel cell option in B(1), B(2)(b), B(3), B(4)(b), and D(1)(d).

While NMOGA appreciates NMED's effort to give operators flexibility, the option to route emissions to a fuel cell does not reflect commercially available, demonstrated technology. Although fuel cells have been proven effective in controlled and laboratory conditions, their viability in the oil and gas context remains to be seen. NMOGA does not believe this is a commercially or economically viable solution and requests that this concern be reflected in subsequent versions of the rule.

7. 20.2.50.13.B(2)(b), (4)(b). The requirement to collect emissions from the rod packing of a reciprocating compressor under negative pressure is not technically feasible.

Operating a reciprocating compressor under negative pressure has the potential to allow oxygen to enter the system and closed vent system (CVS), creating an explosion hazard. Consequently, NMOGA requests that 20.2.50.14.B(2)(b) and (4)(b) be removed or revised accordingly.

8. 20.2.50.14.C(3). NMOGA requests removal of the semiannual negative pressure evaluation requirement under 20.2.50.14.C(3).

As discussed above, operating the reciprocating compressor under negative pressure creates an explosion hazard. In addition to the safety hazard, operators are already required under the rule to replace the rod packing at specified intervals. This rigorous changeout schedule adequately ensures compliance with the substantive standards, rendering the semiannual monitoring unnecessary. Accordingly, NMOGA requests that the semiannual monitoring requirement and related recordkeeping and reporting be removed from the rule.

9. 20.2.50.13.B(2)(a), (4)(a). NMOGA requests additional flexibility on rod packing replacement.

The current standard requires owners and operators to replace the reciprocating compressor rod packing after every 26,000 hours of compressor operation or every 36 months, whichever is reached later. NMOGA requests an alternative compliance option for existing compressors not subject to NSPS standards under Subpart OOOO or OOOOa. For these units, NMOGA requests that rod packing replacement be required only every 44,000 operating hours or 60 months where a low-emissions rod packing is in use. Low-emissions rod packing eliminates leak paths, and thereby meaningful reduces fugitive emissions from these sources. Due to the lower emissions potential per unit of time, a longer rod packing changeout threshold is justified, particularly for this limited subset of units. If the compressor is modified or reconstructed, the NSPS would be triggered, and this option would no longer be available.

H. 20.2.50.15 STANDARDS FOR CONTROL DEVICES

1. 20.2.50.15.A. Section 20.2.50.15 should only apply to equipment designed and operated as air pollution control equipment.

As drafted, the rule applies to equipment “used to comply with the emission standards and emission reduction requirements” of the rule, even if the equipment was not designed for the purpose of controlling air pollution. As discussed in the definition section, the rule should only apply to equipment designed to operate as air pollution control equipment, not process equipment.

2. 20.2.50.15.B(1). NMOGA requests B(1) be revised to not require reliance on manufacturer specifications.

As discussed in the general comments, for many pieces of equipment, particularly equipment purchased before the applicability of this rule, manufacturer specifications may not be readily available. In addition, experience in the field sometimes dictates adopting procedures that differ in some respects from manufacturer recommendations. To account for this potentiality, NMOGA requests the phrase "maintained consistent with manufacturer specifications and good engineering and maintenance practices" be revised to "maintained consistent with manufacturer specifications or good engineering and maintenance practice."

NMOGA also has general concerns about the use of these types of general duty clauses. Where possible, NMOGA requests the rule avoid these general pronouncements and specify what is required so that the regulated community has fair notice of their obligations.

3. 20.2.50.15.B(2). NMOGA requests B(2) be revised to acknowledge unexpected or uncontrollable fluctuations in VOC or NOx inlet concentrations or volumes.

This provision currently requires air pollution control equipment to be designed and sized to "handle fluctuations in emissions of VOC or NOx." NMOGA requests this language be revised to "handle the reasonably expected range of inlet VOC or NOx concentrations and volume". NMOGA believes that a reasonable design range is sufficient.

4. 20.2.50.15.B(5). NMOGA requests B(5) be deleted or revised to reflect applicable control efficiencies.

As written, the standard appears to require 100% capture and control of emissions from all equipment fitted with controls, including combustion devices. This is not achievable in practice or consistent with the scientific literature. In EPA's Control Techniques Guidelines for the Oil and Natural Gas Industry, EPA recognized that "combustion devices that are designed to meet a 98 percent control efficiency may not continuously meet this efficiency in practice, due to factors such as variability of field conditions."[15] Because flares and other combustion devices are not capable of destroying all emissions routed to them, they should not be considered a "closed vent system." NMOGA requests the provision be deleted or revised to reflect that 100% control efficiency cannot be achieved and is not required. The control efficiency required by the draft rule should instead be a requirement that applies to combustion of gases routed to the flare, but it should not apply to "capture and combustion."

This provision also appears to forbid the use of pressure/vacuum relief valves. These valves are essential for maintaining a safe operating pressure and preventing rupture. If this provision is retained, NMOGA requests that it permit the use of pressure/vacuum relief valves so that operators can ensure the process remains safe for its employees and others.

[15] EPA, Control Techniques Guidelines for the Oil and Natural Gas Industry 2-6 (2016) ("2016 CTG"), Docket ID: EPA-HQ-OAR-2015-0216-0236.

5. 20.2.50.15.B(6). NMOGA requests removal of the requirement to have manufacturer specifications on file for all control equipment under B(6).

As outlined in the general comments, for existing sources, manufacturer's specifications may have never existed, may have been lost, or may no longer be maintained by the manufacturer. Moreover, even where these specifications do exist, they may not be appropriate for some equipment due to enhancements in technology or information gleaned based on company or industry experience using the equipment in our specific service. To the extent that these specifications are needed to demonstrate compliance with technical standards, the rule should permit alternative means of demonstrating compliance.

6. 20.2.50.15.E(1)(b). Redundant VRUs should not be required under E(1)(b).

During SSM or other VRU downtime events, the circumstances causing downtime on the primary VRU are likely to equally affect a redundant VRU. For this reason, the redundant VRU requirement will not have a meaningful impact on reducing emissions. If anything, it will increase the incidence of excess emissions reporting submissions. NMOGA does not believe this is NMED's intent and requests removal of the provision.

7. 20.2.50.15.C(1)(a), D(1)(a). NMOGA requests that NMED adopt a technically feasible control efficiency for combustion control equipment.

Under proposed 20.2.50.15.C(1)(a) and 20.2.50.15.D(1)(a), owners and operators would be required to combust "all gas" sent to the control equipment, implying a 100% control efficiency. According to EPA, while combustion equipment has achieved control efficiencies in excess of 99.9 percent in test sites, the control efficiency achieved in the field is lower. At best, EPA estimates that these units can achieve "95 percent control continuously and 98 percent control on average when designed and properly operated to meet 98 percent control." EPA reached this conclusion after extensive study and review of the performance of 19 different makes/models of combustor control devices. Based on this evaluation, EPA concluded that "a continuous 95 percent reduction of VOC emissions . . . is a reasonable recommended RACT level of control."

As this discussion demonstrates, 100 percent control efficiency is not achievable, technically feasible, or consistent with RACT. NMOGA requests that NMED eliminate the requirement to "combust all gas" sent to the control device in C(1)(a) and D(1)(a).

8. 20.2.50.15.C(1)(b). NMOGA supports transitioning away from manual flares.

Operators should only be using manual ignition flares in situations where it is technically infeasible to use a combustion device equipped with either an auto-igniter or continuous pilot. Manual ignition flares are not as reliable in ensuring combustion as continuous pilot and auto-igniter flares. Additionally, the OCD rule does not allow for stationary manual ignition flares, and both rules should be aligned, where appropriate.

9. 20.2.50.15.C(1)(b)(ii) - The requirement to install a system to ensure a flame is present at all times should be limited to new combustion devices with a continuous pilot.

Retrofitting existing combustion devices would require significant facility modifications, such as the installation of telemetry, thermocouples, and alarm systems, among others. There are adequate procedures in place for existing continuous pilot flame and combustion devices to ensure environmental protection and control performance.

10. 20.2.50.15.C(1)(b)(iii)-(iv). Owners and operators should be permitted to retrofit existing flares with continuous pilot flares, instead of only allowing auto-igniter flares.

NMOGA appreciates the ability to use auto-igniters under the draft rule. Operators, in preparation for implementation of the BLM's proposed Waste Reduction Rule, upgraded flares with auto-igniters and would like to ensure they preserve the right to keep those upgrades in place. NMOGA would also like the flexibility to use continuous pilots in some circumstances. NMOGA is not aware of any demonstration that continuous pilot systems do not provide adequate performance, and several examples indicate allowing continuous pilot flares is consistent with an assumption of reasonably available control technology that is technologically and economically feasible. For example, in a Federal Implementation Plan (FIP) proposed for oil and gas production in the Uintah Basin (a Marginal ozone nonattainment area under the 2015 ozone standard), EPA allows either continuous pilot or auto-ignition. 85 Fed. Reg. 3519-20 (Jan. 21, 2020). In justifying the continuous pilot option, EPA explained, "automatic ignition devices may not be reliable in the field to ensure that there is an ignition source at all times." *Id.* at 3520. In addition, the MACT standard under 40 CFR Part 63, Subpart CC allows continuous pilots for flares used at petroleum refineries. NMOGA also notes that the OCD's draft rule allows continuous pilot flares. If continuous pilots are sufficient in an ozone nonattainment area and for MACT sources, NMOGA does not see a basis for disallowing this approach for sources subject to RACT in the attainment areas affected by this rule.

11. 20.2.50.15.C(1)(b)(iv). The implementation timeline for retrofitting manual flares should be extended from one year to three years.

This extension is needed for the reasons outlined in the general comments regarding implementation timing.

12. 20.2.50.15.C(1)(c), D(2)(b). The requirement to maintain visual or instrumental observation of the flare during operation should be removed.

Many facilities are remotely located and unstaffed. Moreover, a continuous monitoring device for visible emissions on a flare will not achieve the desired outcome for such a site because the site has no means of communication with a staffed location, e.g. no cell service. To address this concern, NMOGA requests that the last sentence in C(1)(c) and D(2)(b) be struck.

13. 20.2.50.15.C(2)(a), D(2)(a). The requirement to continuously monitor the presence of a pilot flame in C(2)(a) and D(2)(a) should be revised to apply only to combustion devices with a continuous pilot.

Auto-igniter flares do not have a continuous flame and should not be included in this provision. NMOGA also requests this provision be revised consistent with the discussion above to not require retrofitting for existing facilities.

14. 20.2.50.15.C(2)(c), D(d)(b). Owners and operators should be permitted to terminate Method 22 observations when a violation is recorded.

Under the proposed standard, if 60 seconds of visible emissions are observed during a 15-minute period, further evaluation is not necessary to evaluate compliance with the standard. As written, the rule appears to require the observation to continue, even if visible emissions violating the standard are observed. NMOGA would prefer the flexibility to end the observation once a violation is observed so that it can begin to address the underlying cause. Accordingly, NMOGA requests that C(2)(c) and D(2)(b) be revised to allow terminating the observation if a violation is recorded.

15. 20.2.50.15.C(3)(a)(i). The requirement to keep records of alarm activation should be clarified to refer to thermocouple or other flame detection device alarm activation.

For flares where thermal monitoring is appropriate, NMOGA agrees monitoring alarms is appropriate. The regulation should include a qualifier to clarify the narrow scope of this requirement (e.g., "thermocouple or other flame detection device alarm activation"). NMOGA also requests the provision not require recording false alarms due to wind or other weather-related events. For example, wind may create distance between the thermocouple and the flame and trip the alarm, even though the flame continues to be ignited.

16. 20.2.50.15.C(3)(a)(iii). The requirement to keep records of gas analyses should be removed.

Section 20.2.50.15 does not require conducting gas analysis, so it is not clear what gas analyses would need to be recorded. NMOGA requests that these provisions be removed or revised for clarity. NMOGA notes that, if NMED intends to require gas analysis in circumstances where a flare is being used to control vapors from storage tanks, VOC content and heating value from modeling or other means used to permit the facility would suffice in lieu of collecting a sample.

I. 20.2.50.16 STANDARDS FOR EQUIPMENT LEAKS

NMOGA supports leak detection and repair as part of a VOC reduction strategy and as good operating practice. In the NMOGA Methane Roadmap, NMOGA recommended annual

leak detection and repair across a wide range of operations.[16] NMOGA offers suggestions to the draft rules below to target the most effective mitigation, improve the ability of operators to efficiently

1. 20.2.50.16.A. To avoid duplication and align with federal standards, NMOGA recommends exempting sites subject to leak monitoring requirements in NSPS OOOO, NSPS OOOOa, NSPS VV, NSPS VVa or NSPS KKK.

These standards are based on a "best system of emissions reduction" technology review and are sufficient to meet the reasonably available control technology requirements mandated under New Mexico law.

2. 20.250.16.A. The equipment leak standards should not apply to wellheads.

When developing NSPS OOOOa in 2015, U.S. EPA recognized that wellheads contain a very small number of components and have a relatively small number of leaks. *See, e.g.*, 80 Fed. Reg. 56593, 56612 (Nov. 17, 2015). Surveying wellheads adds significant costs, particularly if the wellhead is not co-located with other production equipment. It also appears to add little emissions benefit. Recognizing these issues, EPA exempted from Subpart OOOOa well sites that only contain one or more wellheads. 40 C.F.R. 60.5365a(i)(2). NMOGA requests that NMED adopt the same exemption. NMOGA has also requested adopting the definitions for "wellhead only site" and "major production and processing equipment" to facilitate implementation of this exemption.[17]

3. 20.2.50.16.A. The term "associated piping" should be clarified.

This term could be misconstrued as applying the equipment leak standards to items such as compressed air piping. The likely target of the "associated piping" phrase is the gas gathering piping. To make this clear, NMOGA requests replacing "associated" with "gas gathering."

4. 20.2.50.16.A. The rule should not apply to components that do not contain VOCs.

NMOGA requests adding the following language to exempt these components from the rule: "A component is subject to the monitoring requirements if it is a gas vapor or light liquid component that contacts a process fluid that is at least 10% VOC by weight. Heavy liquid components are exempt from the monitoring requirements."

5. 20.2.50.16.C(2)(a)(iv). A single positive audible, visual, or odorous indication should not be considered conclusive evidence of an equipment leak.

An audible, visual, and olfactory (AVO) inspection is a valuable tool to screen for leaks, malfunctions, and unexpected operating conditions. However, an AVO alone is not always enough to determine if there is a leak. For example, an odor could be from a nearby site or a

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[16] NMOGA, "Methane Mitigation Roadmap" at 7-10, https://www.nmoga.org/methaneroadmap.

[17] New Mexico Environment Department and New Mexico Energy, Minerals and Natural Resources Department, "Methane Advisory Panel", at 56 (2019), https://www.env.nm.gov/new-mexico-methane-strategy/wp-content/uploads/sites/15/2019/08/MAP-Technical-Report-December-19-2019-FINAL.pdf ("MAP Technical Report").

truck driving by. A sound could be compressed air opening an actuator. The language as currently written does not allow operators discretion to continue to investigate. NMOGA requests the following revision to C(2)(a)(iv): "When two or more audible, visual, or odorous indicators are positive, the equipment shall be deemed leaking. All AVO leaks shall be tracked and reported."

6. 20.2.50.16.C(2)(b) Leak monitoring requirements should not apply to piping.

Piping is already subject to a variety of inspection and monitoring requirements under other state and federal programs. Regulation under this standard would be redundant.

7. 20.2.50.16.C(2)(b)(i)(A). NMOGA requests adjustment to the inspection frequencies for well production and tank battery facilities, gathering and boosting sites, and transmission compressor stations.

NMOGA recognizes the value of instrumented leak detection. However, data shows there are diminishing returns from each subsequent emissions inspection, yet the cost of each inspection remains the same.[18] To better reflect the benefits of these inspections, NMOGA recommends the following changes to frequency by threshold: (1) Annually at facilities with a potential to emit equal to or greater than 15 tpy and less than 25 tpy VOC; and (2) semiannually at facilities with a potential to emit equal to or greater than 25 tpy VOC."

8. 20.2.50.16.C(2)(c)(ii)(B). OGI leak detection should be limited to detection of emissions.

Optical gas imaging technology can detect invisible emissions, but can also detect water vapor, temperature differentials, or even glint from sunlight. NMOGA requests the following revision to C(2)(c)(ii)(B) to clarify that a leak only occurs when the OGI detects emissions: "A leak is detected when emissions are imaged by the OGI instrument that are not associated with temperature, water vapor, or normal equipment operation, such as pneumatic device actuation and crank case ventilation."

9. 20.2.50.16.C(2)(d)(i). Owners and operators should not be required to obtain scissor lifts or hydraulic type scaffolds to conduct leak inspections.

It is generally considered unsafe to monitor leaks that require elevating personnel more than two meters above ground level. NMOGA finds language around scissor-lifts confusing and potentially asks operators to conduct unsafe work at unsafe heights. This practice is not routine and is done only when necessary with significant safeguards. These safeguards, such as spotters and shutting in equipment, are generally not factored into cost-benefit and likely results in very little additional emissions reduction. Inspectors are regularly able to find leaks on top of storage tanks from the ground, without risking work at heights. To address these concerns, NMOGA requests removing the following from C(2)(d)(i): "or are unable to be reached via a wheeled scissor-lift or hydraulic type scaffold that allows access to components up to 7.6 meters (25 feet) above the ground."

[18] https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0483-0801, see Attachments A and B

10. 20.2.50.16.C(3)(a)(ii). An authorized representative should be permitted to certify compliance with an approved alternative equipment leak monitoring plan.

Requiring a responsible official to certify alternative monitoring plans is burdensome and unnecessary. Unlike a traditional industrial facility, most oil and gas operations do not have an on-site "responsible official" and there are relatively few responsible officials given the number of sites. In many cases, the authorized representative will be in a better position to certify such plans. NMOGA requests that C(3)(a)(ii) be revised to allow an authorized representative to complete this certification on behalf of the owner or operator. NMOGA is providing detailed comments on the Alternative Equipment Leak Monitoring Plans elsewhere in these comments.

11. 20.2.50.16.D(1)(a). NMOGA requests additional flexibility in tagging leaking equipment.

NMOGA strongly supports and understands the need to track leaking components between detection and repair. While visible tagging is currently the most utilized method, digital tagging and other options that are in early phases may provide a more efficient option in the future. NMOGA asks that D(1)(a) be revised as follows to provide for this flexibility: "The owner or operator shall track the leaking component until the component has been repaired."

12. 20.2.50.16.D(1)(b)-(d). Leak repair timelines should be extended to 30 days for all leaks regardless of detection method.

NMOGA does not understand why there is a difference in repair timelines between a leak detected via optical gas imaging and a leak detected using other methods. Moreover, for all leaks, additional time may be needed to complete repairs despite diligent efforts. Leak repair can be a labor-intensive, costly process and may necessitate mobilizing equipment and/or personnel to remote locations. While large leaks are prioritized for safety and operational reasons, smaller leaks may need additional time for ordering parts or requisitioning specific labor. Accordingly, NMOGA requests that D(1)(b) and (d) be revised to allow 30 days to complete leak repair and D(1)(c) be revised to require re-monitoring within 30 days.

13. 20.2.50.16.C(2)(c)(i). The upper span calibration gas for RM 21 monitors should be more consistent with the leak detection threshold of 500 ppm.

Calibration gases at or near 10,000 PPM may not provide enough precision to ensure proper operation of the system. NMOGA requests this be revised to at or near 500 ppm.

14. 20.2.50.16.C(2). Leak survey specifications should be consistent with NSPS Subpart OOOOa and recent federal revisions.

On September 15, 2020, EPA published a final rule revising portions of the leak survey specifications. *See* 85 Fed. Reg. 57398 (Sep. 15, 2020)*;* 40 C.F.R. 60.5397a(a)-(i). NMOGA requests that NMED ensure these revised procedures are aligned with the draft rule to avoid unnecessary complexity.

15. 20.2.50.16.E(3)(c)(ii). NMOGA requests the ability to use electronic signatures.

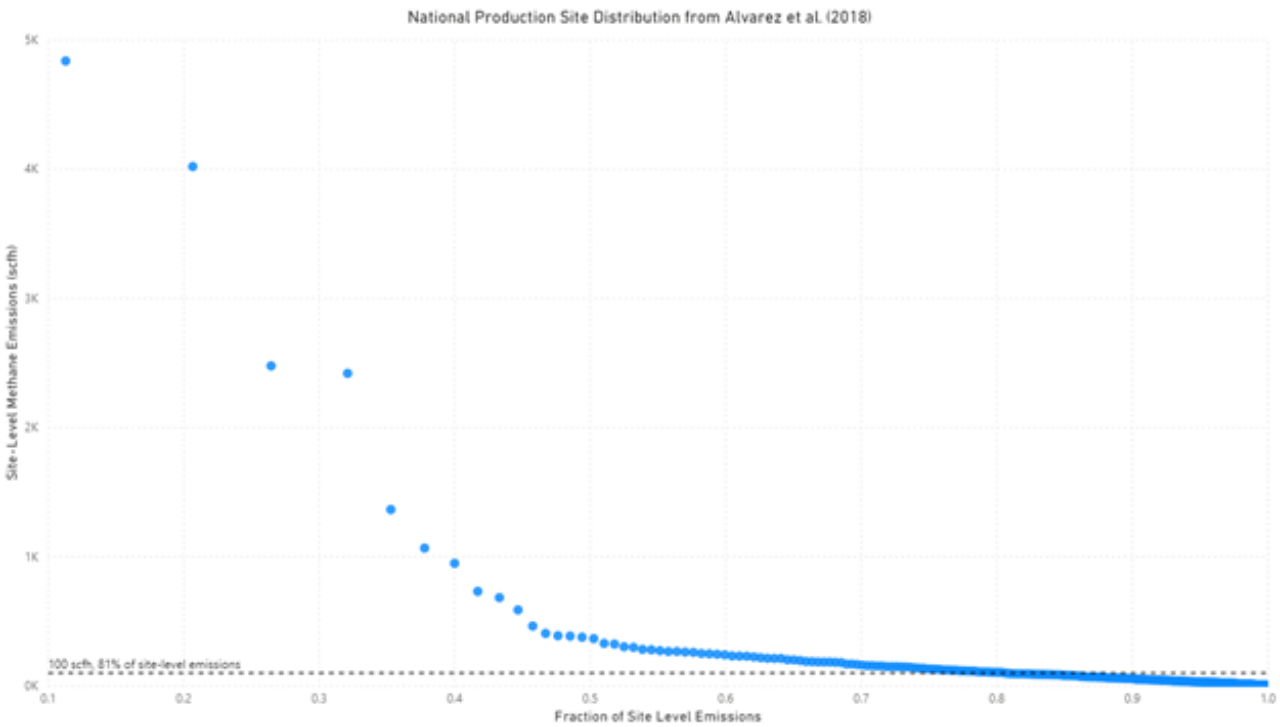
More and more of our daily work is transitioning from paper to digital, and authorizing electronic signature in E(3)(c)(ii) will assist NMOGA in eliminating inefficiencies.

16. 20.2.50.16.C(3). NMOGA is supportive of the alternative equipment leak monitoring plan option but urges caution as these emerging technologies continue to develop.

The promise of alternative monitoring technologies is that they can help to more efficiently identify unexpected/fugitive methane emissions from a site and direct repair activities to the largest sources of methane emissions, which studies have shown will typically drive regional emissions. The technology standards (Method 21 and OGI) that were available when many states and EPA were making initial oil and gas regulations are not the most promising options that are available today as a result of research and development efforts funded by the Federal Government, producers, NGOs, and other stakeholders. A good regulation would focus on using the best tools available and not be wed to past technology, which may reduce innovation and decrease the effectiveness of emission reduction programs.

Emission Distribution. While we may not agree with all of the analysis from the Environmental Defense Fund and their conclusions around the level of methane emissions in New Mexico, we will focus our recommendations on distributions used in their work so that NMED can make direct comparisons between our proposed monitoring solutions and the emission distributions that they have provided in the process and in their models. To the extent that large fugitive sources of methane exist in oil and gas operations in New Mexico, monitoring approaches should prioritize finding and rectifying those approaches.

Minimum Detection Limit. Published emission distributions from groups like EDF are generally based on off-site emission quantification methods that provide a snapshot of site-level emissions with high uncertainty bounds. Generally, such approaches are not useful to identify the specific cause of the leak (i.e. maintenance, equipment, etc.). The minimum detection limit for a technology should be based on what is feasible in the commercial market and meaningful in terms of monitoring the distribution of site-level emissions. Based on the emission distribution for Alvarez et al. (2018), a technology with the ability to reliably detect emissions of at least 100 scfh should be able to identify approximately 20% of sites that are 80% of emissions. This would focus efforts on finding and fixing the largest sources of methane emissions.



Repair Timelines. Alternative monitoring techniques may have a different repair philosophy than traditional LDAR programs as the technologies have the potential to see both fugitive and expected emission sources on a given site. Thus, not every detection would lead to the need to make a repair in the field. In addition, some alternative approaches (like aerial techniques) would cover a large number of sites (up to many hundreds) in a given day versus traditional ground crews, meaning that there would be a need to prioritize repair actions versus a program that may be getting information about leaks from a few sites per day and have longer repair timelines than traditional LDAR approaches.

We propose that repair timelines would be governed by plans that companies would be required to create and follow, leak minimization plans. We provided an example rubric below. Operators should prioritize repair opportunities within their own operations based on the magnitude of emissions, focusing repair opportunities sooner on larger events but completing all within the timeline (subject to whatever delay of repair piece is being proposed).

Final data is expected approximately 1-2 weeks after the completion of the flyovers, depending on selected vendor. The review of reports and data will begin within 1 business day of receipt. All sites will be categorized into high, medium and low priority sites for subsequent root cause analysis (AVO, OGI or other) with the following time frames /criteria dictating deadlines for any necessary corrective action/repair.

Emerging technologies (e.g. aerial or satellite leak detection) can have significant delays, often two weeks or more, between the date a potential leak is observed and the date when the operator receives the final report about each verified leak.

Classification	Site VOC Potential to Emit	First attempt at repair deadline	Repair deadline*
High	≥ 100 TPY	7 days	15 days
Medium	<100 TPY & ≥25 tpy	20 days	45 days
Low	All others	45 days	90 days

17. 20.2.50.16.C(3)(a). Compliance with NSPS Subpart OOOOa monitoring requirements should be a pre-approved "equivalent means of compliance" under C(3)(a).

As noted elsewhere, NSPS requirements are based on a "best systems of emissions reduction" technology review. Accordingly, compliance with NSPS monitoring requirements should be sufficient to comply with the draft rule, which is based on RACT. To this end, NMOGA requests that compliance with NSPS Subpart OOOOa monitoring requirements be deemed an equivalent (or better) means of compliance.

18. 20.2.50.16 D.(1)(d). Revise "next process unit shutdown" to "next planned process unit shutdown".

The draft rule requires "repair delayed" equipment to be repaired before the end of the next process unit shutdown. However, repairs are generally only done during *planned* process unit shutdowns, not during unplanned process unit shutdowns. NMOGA requests that NMED revise the provision to reflect this practice.

19. 20.2.50.16.E(2)(a). NMOGA requests clarification that the unique inventory number referenced in E(2)(a) is that of the leaking equipment.

This can be clarified by adding the descriptor "the leaking equipment's" in front of the "unique inventory control number". Tagging every component with a unique control number would be unduly burdensome and does not appear to be required under the rule.

J. 20.2.50.17 STANDARDS FOR NATURAL GAS WELL LIQUIDS UNLOADING

NMOGA supports the Methane Advisory Panel paper on Liquids Unloading which demonstrates the complexities in managing manual liquids unloading on natural gas wells.[19] Managing liquids in a wellbore is a complex reservoir management issue. Operators are already incentivized to minimize emissions as natural gas is the primary product for natural gas wells, and returning the well to normal production operations as soon as possible is the goal of a liquids unloading. Recognition by the agency of best management practices identified by the Methane Advisory Panel demonstrates a strong technical foundation for the requirements in the draft rule.

[19] *See* MAP Technical Report at 198.

1. 20.2.50.17.B(3), C(3). Remove B(3) and C(3) consistent with general comments on EMITT system.

Liquids unloading by definition occurs in a wellbore. Every well has a unique identifier known as the API Well Number or US Well Number. These numbers are permanent, transparent and stay with the well through any ownership or status changes. Adding a separate EMITT tracking tag is unnecessary and duplicative of existing well identification requirements and could introduce confusion with reporting based on the well number. NMOGA requests the requirements for EMITT tagging and reporting in 20.2.50.17 B(3) and C(3) be removed.

2. 20.2.50.17.C(4). Remove general monitoring requirements in C(4).

NMOGA requests removal of the monitoring requirement in 20.2.50.17 C(4), which incorporates general provisions at 20.2.50.12. Section C(1) and (2) already provide process-specific monitoring requirements, rendering the general requirements duplicative and unnecessary.

K. 20.2.50.18 STANDARDS FOR GLYCOL DEHYDRATORS

1. 20.2.50.18. NMOGA recommends removing glycol dehydrators from the regulation.

The Methane Advisory Panel (MAP) document path forward did not propose any additional controls for glycol dehydrators and indicated that current regulations found in 40 CFR 63, Subpart HH (MACT HH), which regulate both Area Source and Major Source glycol dehydrator units, sufficiently regulates VOC and HAP emissions from existing and new units.[20] This draft rule goes beyond the MAP recommended path forward for this emission source. Additional emission reductions beyond MACT HH requirements would be not be cost effective and would not significantly reduce VOC emissions in New Mexico beyond what has already been achieved under MACT HH. The 2016 Control Technique Guidelines also did not include any recommended emission reductions for dehydration units.

In addition, NMED has not provided cost justification for requiring controls on all dehydration units with a potential to emit over 2 tons per year of VOC. The emission reductions from controlling small glycol dehydrators will be small in comparison to other emission sources. NMED should quantify the emissions from glycol dehydration units not already controlling emissions to this level and estimate costs to control these emission sources to justify these controls. Existing sources will cost more to add controls and may require operating downtime in

[20] "MACT HH for Oil and Natural Gas Production Facilities distinguishes between 'Large' and 'Small' glycol dehydration units. Large units are defined as units that process >85,000 standard cubic meters per day and emit greater than 1 tpy benzene. Both new and existing small glycol dehydrators at major sources must meet the unit-specific BTEX (benzene, toluene, ethylbenzene and xylene) limit for emissions that is based on the unit's natural gas throughput and gas composition. Newly constructed "small" glycol dehydrators (dehy), built after August 23, 2011, must meet the exemption requirement to demonstrate the gas throughput is less than 85,000 standard cubic meters per day or emit less than 1 tpy benzene. To ensure compliance, this exemption demonstration should be reviewed and documented on an annual basis. If the small dehy does not meet the emission control exemption, the unit must meet the control standards upon startup. Existing small glycol dehydrators were required to be in compliance by October 15, 2015."

order to install the controls. This will result in VOC and/or NOx emissions from excess emissions during site downtime to add controls, a factor that should be considered in evaluating the feasibility of regulation. NMED has also not determined if the areas are NOx or VOC limited. If the area is NOx limited, controlling VOC emissions by adding additional NOx emissions from combustion sources will not improve the ozone levels in the state.

Because MACT HH provides adequate controls and the proposed standards have not been demonstrated to be economically feasible, NMOGA requests that NMED remove section 20.2.50.18 and the definition of glycol dehydrator in 20.2.50.8.R in their entirety. If NMOGA persists in adopting requirements that exceed MACT HH, it must justify why meeting MACT HH is not sufficient to demonstrate progress towards meeting the 95% ozone threshold. NMOGA has additional comments to improve implementation, as outlined below.

2. <u>20.2.50.18.A(1). If retained, the draft rule should include an additional throughput exemption for smaller glycol dehydrators in 20.2.50.18.A(1).</u>

The draft rule proposes to require controls for all new and existing glycol dehydrators with a potential to emit greater than 2 TPY VOC. If NMED recommends regulating glycol dehydrators beyond MACT HH requirements, the draft rule should include a throughput exemption for smaller dehydrators that is not based solely on VOC emission rates. NMOGA recommends NMED revise applicability threshold to include an exemption for small dehydrators less than 3 MMSCFD to align with MACT HH regulations as outlined below:

> All new and existing glycol dehydrators that (1) have a potential to emit equal to or greater than 2 tpy of VOC<u>, (2) have an actual annual average flowrate of natural gas to the glycol dehydration unit of greater than 3 MMscfd,</u> and (3) <u>are</u> located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to the requirements of 20.2.50.18 NMAC.

NMOGA also requests the exemption in B(4) appear in the applicability section.

3. <u>20.2.50.18.B(3)(b). Backup control for glycol dehydrators should not be required.</u>

Under 20.2.50.15.E(1)(b), owners and operators must control SSM and VRU downtime with a backup control device or redundant VRU. However, under 20.2.50.18(B)(3)(b), the "VRU must only meet 95% operational time resulting in a capture and control efficiency of 95%," thus allowing for VRU downtime without a backup control. NMOGA recommends adding a statement that 20.2.50.15.E(1)(b) is not applicable to VRUs controlling dehydrator emissions as follows:

> If a VRU is used, it shall consist of a closed loop system of seals, ducts, and a compressor that will reinject the natural gas into the process stream or the natural gas gathering pipeline. The VRU shall be operational at least 95 percent of the time the facility is in operation, resulting in a minimum combined capture and control efficiency of 95 percent. The VRU shall be installed, operated, and maintained according to the manufacturer's specifications. **The VRU controlling a glycol dehydrator shall be exempt from the requirement in 20.2.15.E(1)(b).**

4. <u>20.2.50.18.B(3)(c). NMED should clarify or remove the venting prohibition.</u>

Under 20.2.50.18.B(3)(c), "the still vent and flash tank emissions shall not be vented to the atmosphere." At the same time, under 20.2.50.18.(B)(3)(b), a Vapor Recovery Control Unit

is permitted 5% downtime. NMOGA is concerned these statements may be inconsistent in practice if the venting prohibition is applied too broadly to prohibit unavoidable releases inherent in the industry's processes. For example, common releases that will consume the 5% downtime include emissions from periods of startup or shutdown, emissions vented via air pollution control equipment to the atmosphere, or other emissions during periods of startup for certain types of air pollution control equipment (e.g., thermal oxidizers). The rule should make clear that these unavoidable releases are not prohibited under the venting prohibition.

For these reasons, NMOGA recommends the department remove the venting prohibition altogether. Alternatively, NMED should clarify the scope of the venting concept and revise the venting prohibition to only require controls during normal operations. NMOGA requests the following revision to 20.2.50.18.B(3)(c):

> "The still vent and flash tank emissions shall not be vented <u>directly</u> to the atmosphere <u>during normal operation</u>."

5. <u>20.2.50.18.C(1). NMED should allow for representative annual extended analysis rather than site-specific analysis.</u>

Conducting an extended gas analysis as required in 20.2.50.18.C(1) on the inlet of each glycol dehydrator increases compliance costs to the owners and operators without providing any reduction in emissions. NMED should allow representative extended analyses to be used in lieu of glycol dehydrator-specific inlet analyses. Under this approach, owners and operators would conduct a gas analysis on a representative inlet and apply this concentration to other units that, within the engineering judgment of the source, would exhibit comparable characteristics.

6. <u>20.2.50.18.D(1)(g). The rule should allow for alternatives to manufacturer's recommended operation and maintenance.</u>

The current rule does not account for glycol dehydrators that often have useful service lives that extend beyond a single site. As a result, the initial design and operating procedures may or may not be appropriate for a particular dehydrator. NMED should allow owners and operators to develop maintenance and operating procedures based on site-specific factors and industry's extensive experience operating this type of equipment. NMOGA requests that operator developed plans be an alternative as discussed in the General Comments.

L. 20.2.50.19 STANDARDS FOR HEATERS

NMOGA agrees that heaters above 10 mmBtu/hr should be addressed, but believes that some significant changes are needed.

1. <u>20.2.50.19.B. Emissions standards for new heaters are not practical or cost effective.</u>

It appears that the rationale for the standard (>40 MMBTU/HR for 0.036 lb/mmbtu) is for new, large sources exceeding 40 mmBtu/hr. Installing the controls to achieve this low level is not practical or cost effective on smaller units between 10 and 40 mmBtu/hr. NMOGA recommends that new heaters 40 mmBtu/hr or less use low NOx burners.

2. 20.2.50.19.B. Retrofitting existing heaters is cost prohibitive, and these units should demonstrate compliance through work practices or use of pipeline quality natural gas.

We do not believe this provision should be applicable to retrofitting existing heaters, especially small heaters. NMOGA has received estimates of ~$200,000 to control large heaters to 0.036 lb/mmbtu. Given that many of these units are likely around 0.1 lb/mmBtu already, this is a large cost that would result in only minimal reductions in NOx emissions. The cost for smaller units, if the technology is even available, would be even more prohibitive.

The draft rule should consider a single CO limit, consistent with the approach used in many federal standards for combustion optimization. This reduces testing time and costs and provides a good indicator of combustion efficiency.

Instead of a specific limit for existing units, NMOGA recommends compliance with work practices (i.e. periodic tune-ups). As new heaters are purchased, they can be designed to meet new emission limits; however, it may be technically and/or economically infeasible to physically modify existing heaters to meet the proposed new and strict emission limits. It is likely that once every 2.5 years would be sufficient to meet a periodic tune-up requirement to maintain good burner control for these smaller units. An additional alternative compliance option may be to use "pipeline quality natural gas," which has a lower higher heating value and is more consistent quality. Allowing for the use of pipeline quality natural gas will reduce the VOC emissions generated from using raw gas. NMOGA recommends making both options available to operators. Pipeline quality gas must be an option and not a requirement as it is not available at many sites.

3. 20.2.50.19.C(1)(b). NMED should allow revisions to the operator's maintenance plan and manufacturer's specifications.

Manufacturer's specifications may not always be available or may not be appropriate for the current use. If NMED adopts the recommendation for periodic tune-ups outlined above, then the tune-up inspection should fulfill the requirement and there should be no additional inspection.

4. 20.2.50.19.C-.D. NMED should make additional conforming changes.

NMOGA does not believe that C(4) adds anything and is wholly redundant with C(1). It should be deleted. Consistent with NMOGA's general comments, all references to EMITT should be deleted.

If NMED adopts the tune-up or pipeline quality natural gas proposals above, then these options should be added to the recordkeeping requirements. In addition, in D(1)(c), the obligation should apply to maintenance and not inspections, except that, in the case of a tune-up, it would be appropriate to track corrective actions resulting from the tune-up.

NMOGA believes that the only reporting requirements should be submission of initial and periodic performance tests and reports that tune-ups are completed.

M. 20.2.50.20 STANDARDS FOR HYDROCARBON LIQUID TRANSFERS

1. 20.2.50.20.A. NMOGA proposes that hydrocarbon liquid transfer operations with a potential to emit equal to or less than 5 tpy VOC be exempt from section 20.2.50.20.

This exemption will better serve the ends of the rule—to reduce VOC emissions through application of reasonably available, economically feasible controls—and will mitigate safety concerns for low flow loading occurring at liquid transfer operations.

Establishing a 5 tpy applicability threshold ensures that the stringent 98% control requirement would not be applied where minimal emissions reduction benefit will be realized. Such costly controls are economically infeasible for these smaller units from a cost-per-ton perspective. From a safety perspective, when conveying waste gas to a combustor in a low flow loading operation, the introduction of ambient air to process vessels through infiltration or forced/induced draft would create an explosion hazard. These high volumes of air introduce excess oxygen into the process or existing vapor controls for rich gas streams, creating a potentially explosive environment in the process and a risk of fire or explosion. Further, excess oxygen exacerbates corrosion and presents risks of potential loss of primary containment.

For these reasons, NMOGA requests that NMED exclude from section 20.2.50.20 all liquid transfer operations with a potential to emit less than 5 TPY.

2. 20.2.50.20.B. NMOGA requests shifting the control requirement from 98% to 95% and eliminating the prescriptive control standards in B(2)-(7)

The proposed 98% destruction efficiency and controls at B(2)-(7) are more stringent than similar provisions promulgated in nonattainment areas or under more stringent control technology standards. For example, the FIP for the Uintah Basin ozone nonattainment area did not impose a control efficiency requirement and merely stipulated that tank trucks must be loaded using bottom filling or a submerged fill pipe. 85 Fed. Reg. at 3532. Similarly, Utah conducted a "Best Available Control Technology" review for tank truck loading of hydrocarbon liquids and only imposed a 95% VOC destruction efficiency and a bottom filling or a submerged fill pipe requirement. U.A.C. R307-504-4.

Thus, although NMED is proposing RACT standards for an attainment area, its standards are more stringent than those set for nonattainment areas and those set pursuant to BACT, a more stringent control technology standard. For these reasons, NMED has not justified the stringency of the proposed standards, and NMOGA does not believe they are appropriate at this juncture.

NMOGA also believes the requested revisions are reasonable because they are consistent with design requirements for other equipment subject to this rule. For example, NMED has determined that 95% control is appropriate for storage tanks with a potential to emit between 2-10 TPY, an emissions range that is consistent with the potential emissions of many hydrocarbon liquid transfer operations.

3. 20.2.50.20.B(1). Remove vapor recovery as an option.

Vapor recovery would introduce oxygen to the product stream and potentially not meet sales specifications. This would require shut-ins or flaring, ultimately creating emission events.

4. 20.2.50.2.B. Infrequent hydrocarbon liquid transfer operations from the emissions standards should be exempt.

Hydrocarbon liquid transfers may be required during infrequent, non-routine operating scenarios. For example, LACT downtime may lead to emergency hydrocarbon liquid transfers. Similarly, hydrocarbon liquid transfers may be required during infrequent condensate loads at compressor stations where flares may not otherwise be present. In these scenarios, adding a vent to combustion or vapor balance is not cost effective. NMOGA requests that such operations be exempted from the control requirements in 20.2.50.2.B or that NMED set an appropriate threshold for applicability.

5. 20.2.50.20.B. Replace the term "transfer vessel" with the term "tank trucks or tanker rail cars" throughout 20.2.50.20.

NMOGA believes this term more closely aligns with common industry usage and eliminates confusion.

6. 20.2.50.20.C(1). NMOGA recommends removing or revising C(1) to require a monthly visual inspection for staffed locations and a semiannual visual inspection for unstaffed locations.

Monitoring requirements in C(1) are redundant with AVO provisions in 20.2.50.16C(2)(a). Further, C(1) implies that inspections must occur during every loading event. However, this is not practicable as some facilities may not be staffed during all hydrocarbon liquid transfer operations. If it is NMED's intent to require inspections during loading events, NMOGA requests that a more reasonable inspection frequency be established. NMOGA believes a monthly visual inspection for staffed locations and a semiannual visual inspection for unstaffed locations would be appropriate.

NMOGA is also concerned with the requirement to repair leaks before the next transfer operation. While NMOGA members can take measures to prevent leaks from reoccurring, a permanent fix may not be feasible or realistic before the next transfer operation. If NMED retains this provision, NMOGA suggests the following revision:

> "All leaking components shall be repaired to prevent dripping or leaking before the next transfer operation or proper measures must be implemented to mitigate leaks until the necessary repairs can be completed."

7. 20.2.50.20.C(2). NMOGA recommends removing or revising the requirement to rely on manufacturer specifications.

Consistent with the General Comments, NMOGA has concern about manufacturer specifications. While operators strive to establish appropriate operating, maintenance, and repair procedures, we may learn through our unique operating experience with the equipment that something different than the manufacturer's specifications should be followed. Furthermore, small details in manufacturer's specifications should not be enforceable regulatory requirements.

If this provision is retained, NMOGA requests that it be given flexibility to revise these specifications based on its experience with the equipment. Please see the General Comments for more detail.

8. 20.2.50.20.C(3). NMOGA recommends removing the vapor tightness testing requirements.

NMOGA strives to work with its contractors to ensure compliance with all applicable laws. However, contractors, which are generally the owners and operators of the loading equipment, are in the best position to ensure adequate vapor tightness. While NMOGA would support a vapor tightness recordkeeping requirement, it is not appropriate to impose vapor tightness performance standards on oil and gas operators. NMOGA also believes this provision represents a level of stringency incompatible with RACT for an attainment area as neither the EPA in the Uintah Basin nor Utah in implementing its BACT program imposed such requirements.

9. 20.2.50.20.D(2). Recordkeeping requirements in D(2) should not require documenting the inspection of third party equipment.

Inspection records of the tankers/trucks should be the responsibility of the third party, which is in the best position to understand the condition of the equipment and ensure its fitness.

10. 20.2.50.20.D(3). NMOGA recommends removing the requirement to maintain an annual emissions inventory.

Because this rule does not establish emissions limits on the hydrocarbon loading operations, maintenance of an annual emissions inventory is not a reasonable recordkeeping obligation. NMOGA would support a similar requirement to demonstrate eligibility for the 5 tpy VOC exemption, if adopted.

11. 20.2.50.20.D(4). NMOGA requests removal or clarification of the gas analysis recordkeeping requirement.

As noted elsewhere, section 20.2.50.15 requires records of gas analysis, but does not impose any independent obligation to perform a gas analysis. NMOGA therefore requests removal of the gas analysis recordkeeping provisions. NMOGA also notes that getting a representative sample during loading operations is impractical due to high air content at the beginning of the operation and higher btu towards the end of the loading. Moreover, these facilities, often remotely located, do not have the appropriate staff or equipment needed to properly collect, preserve and ship the sample according to requirements.

N. 20.2.50.21 STANDARDS FOR PIG LAUNCHING AND RECEIVING

NMOGA requests removal of the draft rule's pig launching and receiving provisions. NMOGA does not believe these standards are consistent with a reasonably available level of control considering technological and economic feasibility. Illustratively, the CTG—a document reflecting EPA's effort to make reasonably available control technology recommendations for

the oil and natural gas industry—does not include standards for pig launching and receiving. In explaining the sources selected for EPA's 2016 review, the agency explained, "[t]hese sources were selected for RACT recommendations because current information indicates that they are significant sources of VOC emissions." NMOGA concurs with EPA that pig launching and receiving are not generally significant sources of VOC emissions and imposition of controls is not compatible with RACT. As further support, NMOGA notes that similar rulemaking efforts recently undertaken for nonattainment areas do not include provisions for pig launching and receiving. *See, e.g.*, 85 Fed. Reg. 3492 (Jan. 21, 2020).

While NMOGA urges NMED to remove these provisions, if NMED elects to retain them, NMOGA has several suggestions for improvement, as outlined below.

1. <u>20.2.50.21.A. Several additional types of pig launching and receiving operations should be exempt from 20.2.50.21.</u>

If the pig launching and receiving standards are retained, NMOGA does not believe the 1 TPY potential emissions rate is the appropriate threshold for regulation. The significant cost of adding controls is incongruous with the minimal emissions reductions that will occur from sources with higher emissions potential. Other types of pig launching and receiving operations also do not merit regulation due to their inherently low emissions potential, such as pig launching and receiving in oil pipeline service. To address these concerns, NMOGA requests that the following pig launching and receiving operations be exempted from the rule: (1) individual pig launcher or receivers with potential VOC emissions less than 2 TPY VOC; (2) all pig launcher and receivers within the property boundary with actual VOC emissions less than 5 TPY of VOC; (3) flowlines originating from the wellhead to the tank battery; and (4) pig launchers & receivers in oil pipeline service.

2. <u>20.2.50.21.A. If retained, NMED should clarify how the 1 TPY threshold should be analyzed.</u>

The rule is unclear as to whether it applies to each launcher or receiver individually with emissions equal to or greater than 1.0 TPY VOC or all site-wide pig launcher and receiver equipment combined having total VOC emissions equal to or greater than 1.0 TPY.

3. <u>20.2.50.21.B(1). The capture and reduction efficiency for pig launching and receiving operations should be revised from 98% to 95%.</u>

To comply with this standard, NMOGA anticipates that installation of combustion control technology may be required. As NMOGA has indicated previously, the CTG study does not support applying a 98% control efficiency as RACT for this equipment. Moreover, because the draft standard requires a combined capture *and* control efficiency of 98%, owners and operators would have to achieve 100% capture to meet the standard, even with a combustion device achieving 98% destruction efficiency. This is not technically feasible and should be revised as requested. In addition, the regulation should be clear that what is required is a control efficiency, not a combined capture and control efficiency. Determining capture efficiency is fraught with technical difficulties.

4. 20.2.50.21.B(1). The efficiency standard in B(1) will require three years to implement.

To comply with this standard, many owners and operators would have to install control and related ancillary equipment. This process requires time to allocate budgets, complete design, procure equipment, develop contracts with a suitable construction company, acquire right of way, install the equipment, develop procedures, train operating personnel, and startup. NMOGA anticipates this process will require at least three years to complete and requests this extension.

5. 20.2.50.21.B(2)(c). The requirement to recover and dispose of all receiver liquids in a manner that prevents emissions to the atmosphere is not technically feasible.

While NMOGA agrees that emissions can be minimized through proper recovery of receiver liquids, fugitive emissions that are impractical to prevent may occur. NMOGA requests this provision be revised as follows:

"Recover and dispose of receiver liquids in a manner that minimizes emissions to the atmosphere."

6. 20.2.50.21.C(1). Owners and operators should be permitted to calculate, rather than monitor, volumes from pig launching and receiving operations.

It will not be possible or practicable to monitor many or all of these volumes. NMOGA therefore requests that owners and operators be permitted to calculate the volumes as an alternative.

7. 20.2.50.21.C(2). NMOGA requests removal of the leak inspection requirements.

This monitoring is overly burdensome and economically infeasible. Under the leak provisions in 20.2.50.16, leak monitoring frequency is based on PTE thresholds. While that approach attempts to match the monitoring burden to the emissions reduction potential, the approach under the pig launching and receiving provisions is indiscriminate, requiring monitoring during every event. This proposed standard would require highly trained personnel with specialized, expensive equipment in hand at the pig launching or receiving site for any pigging activity, adding exceptional cost without commensurate environmental benefit. For these reasons, NMOGA requests removal of C(2).

O. 20.2.50.22 STANDARDS FOR PNEUMATIC CONTROLLERS AND PUMPS

NMOGA supports efforts to reduce emissions from pneumatic devices. NMOGA proposes the following revisions to the draft rule which support our shared aim and improve the ability to successfully implement the rules. The approach to focus on continuous-bleed controllers is a reasonable and practical approach. The draft monitoring and recordkeeping requirements also seem to reflect an intent to focus on continuous-bleed controllers by referencing a bleed rate, which does not apply to intermittent controllers.

1. 20.2.50.22.B. The pneumatic controller standards should not apply unless 10 or more controllers are located onsite.

For newly constructed facilities with access to reliable grid power electricity and 10 or more controllers, NMOGA supports requiring use of instrument air or other controllers with no natural gas emissions (i.e., mechanical or electric controllers). NMOGA also notes that these limitations could appropriately be applied to natural gas processing plants under B(3)(a), which may operate fewer than 10 pneumatic controls or have issues with reliable electric power access.

For facilities with less than 10 controllers, requiring use of instrument air or other zero emission controls is not economically feasible. The costs of electricity and acquiring and installing a single air compressor package are high, approximately $50,000. The air compressor package equipment alone includes a compressor, pressure storage tank, and a moisture removal system. Bringing electricity to a site is also highly variable, expensive and involves several challenges and uncertainties. NMOGA does not believe these technical and economic challenges are worth the minimal reduction in emissions that would be achieved from sites with less than 10 controllers.

While NMOGA agrees the exception for natural gas stripper wells and facilities with site-wide VOC potential to emit less than 15 TPY helps mitigate these concerns to an extent, facilities may exceed the stripper well threshold and yet contain only a handful of controllers (such as a pad with a single vertical well, for example). We therefore are proposing 10 as the threshold number of controllers required before instrument air or other no-emissions controllers would be required, even if electricity is available.

NMOGA believes this approach must respond to changing circumstances. Whereas facilities with less than 10 controllers on the date of the rule would not be subject to this requirement, the facility may later become subject if additional controllers are added after the rule's effective date. For example, if the facility initially contains fewer than 10 controllers, but controllers are added later that equal 10 or more in the aggregate, then instrument air or other no-emissions controllers would be required at that time. NMOGA requests one year to complete this transition. Similarly, where electricity is not initially available but later becomes so, the facility must transition to instrument air or other controllers with no natural gas emissions at that time. If reliable electricity becomes available, NMOGA proposes allowing 90 calendar days to transition controllers.

2. 20.2.50.22.B. NMED should clarify that "access to electric power" means access to reliable and sufficient electric grid power.

To effectively operate zero-emission pneumatic controllers and diaphragm pumps, owners and operators must have access to electric power that is reliable and sufficient to provide the requisite energy. To address this concern, NMOGA proposes the phrase "access to electric power" be replaced with the phrase "access to reliable and sufficient power from the electric grid." Not only must power be available, but it must be the right phase type and have adequate stability to be usable in a control system.

3. 20.2.50.22.B(3)(b)-(d), (4)(b)-(d). Natural gas processing plants should not be subjected to different pneumatic controller standards.

Pneumatic controllers at natural gas processing plants should be subjected to the same standards and limitations as other equipment. To address this inconsistency, NMOGA requests adding natural gas processing plants to the description of equipment in B(3)(b)-(d) and B(4)(b)-(d) and eliminating B(3)(a) and B(4)(a).

4. 20.2.50.22.B(3)(b)-(d). Intermittent bleed pneumatic devices, regulators and back pressure regulators should be allowed subject to periodic OGI assessment.

Intermittent bleed pneumatic devices, regulators and back pressure regulators present a much lower environmental profile than continuous bleed pneumatic controllers. Regulators and back pressure regulators, in particular, emit tiny amounts of VOC and practically cannot be retrofitted by electric or instrument air solutions. They should be excluded from the draft rule altogether except for a requirement to check them for leaks while conducting an OGI.

5. 20.2.50.22.B(4). Revise the zero emission and control device requirements for natural gas-driven diaphragm pumps.

NMOGA proposes that only newly constructed natural gas driven diaphragm pumps be required to install instrument air or electrical pumps. For the reasons discussed above, installation of instrument air or electric pumps on existing equipment is not technically feasible. Under this proposal, where electricity is not initially available but later becomes so, the facility must transition to instrument air or electrical pumps at that time. While newly constructed facilities meeting the criteria would be required to install zero-emission pumps, NMOGA proposes that all natural gas driven diaphragm pumps with an emission rate greater than zero be required to route emissions to a control device when a control device is available and it is technically feasible to do so. However, to ensure the control measures are consistent with the emissions reductions achievable, NMOGA requests an exemption for natural gas driven diaphragm pumps that operate for less than 90 days or 2,160 hours per calendar year.

6. 20.2.50.22. Bleed rate should be based on manufacturer's design bleed rate.

Many provisions in this section depend on the bleed rate of the unit. NMOGA requests clarification that it may rely on the manufacturer's representations regarding the bleed rate of the equipment. This is consistent with the approach taken under Subpart OOOO and OOOOa. *See, e.g.,* 40 C.F.R. 60.5410a(d), 60.5420a(c)(4). If no manufacturers bleed rate is available, NMOGA recommends use of engineering judgment to determine the bleed rate.

7. 20.2.50.22.C(2). Remove or clarify the requirement to conduct AVOs in C(2).

Under 20.2.50.16, AVO inspections must be performed on all "pumps" and "associated equipment." NMOGA is concerned that these terms may be broad enough to include pneumatic controllers. If so, owners and operators would be required to conduct weekly inspections under 20.2.50.16 and monthly inspections under 20.20.50.22. To eliminate this redundancy, NMOGA requests that NMED remove the AVO inspection requirement in C(2) or clarify that the standard AVO inspection requirements in 20.2.50.16 do not apply to pneumatic controllers.

8. 20.2.50.22.C(2). Remove items that are not maintenance oriented.

Under C(2), owners and operators must perform several maintenance tasks. However, NMOGA requests removal of the tuning to operate over a broader range of proportional band item and the eliminating unnecessary valve positioner item. These requirements are unrelated to maintenance and do not further the objectives of the rule.

9. 20.2.50.22. Intermittent bleed controllers should only be subject to OGI monitoring requirements when not actuating.

During the annual inspections, if utilizing optical gas imaging, we support surveying intermittent bleed pneumatic controllers when they are not actuating. When that controller is not actuating, emissions detected with an optical gas imaging camera would indicate a possible malfunction or leak. NMOGA does not support separate LDAR site visits solely to examine intermittent bleed controllers as the devices do not have a high enough potential to emit to warrant a separate site inspection.

10. 20.2.50.22.D(2)(e). Owners and operators cannot determine the discrepancy in bleed rate with an AVO inspection.

It is not possible for an inspector to determine the level of discrepancy in bleed rate with an AVO inspection, and NMOGA requests that NMED remove this item.

11. 20.2.50.22.D(4)(c). An in-house engineer should be authorized to certify the technical infeasibility engineering assessment.

NMOGA requests that owners and operators be permitted to have the engineering assessment certified by a professional engineer or an in-house engineer with expertise on the design and operation of the equipment. Obtaining PE certifications can be difficult and adds little to the rule where an engineer with the requisite expertise can provide an adequate evaluation. EPA added this flexibility in the technical amendments to Subpart OOOOa published on August 13, 2020. *See* 40 CFR 60.5393a(b)(5)(i).

P. 20.2.50.23 STANDARDS FOR STORAGE TANKS (NOTE: NMOGA RECOMMENDS STORAGE VESSELS)

For the reasons outlined in 20.2.50.8, NMOGA believes that "storage vessel" is a more appropriate term than "storage tank." Accordingly, NMOGA will discuss storage vessels throughout this comment.

As discussed in the applicability section, the applicability threshold appears to be based on PTE for an individual storage vessel. NMOGA's understanding, which it seeks to confirm, is that 20.2.50.25 would apply to facilities or sites with one or more storage tanks, and that as long as an individual tank is part of a facility with at PTE below 15 tpy, such that the facility would be covered only by the requirements of 20.2.50.25, all tanks at such a facility would not be subject to 20.2.50.23. NMOGA also requests that NMED consider an alternative performance standard, similar to the NMOCD draft rule, that would consider emissions reductions on an operator-wide

basis, rather than for each individual tank. NMOGA also recommends that the applicability threshold for existing tanks be increased form 2 tpy to 6 tpy to better align the rule with the federal NSPS (40 CFR Part 60, Subparts OOOO and OOOOa). In addition, NMOGA recommends a longer and more flexible compliance period for consistent implementation with the NMOCD draft rule and to avoid well shut-ins.

In reviewing the draft rule and these requests for revision, NMED should also consider the relatively small emissions contribution from storage vessels. As the 2018 GHG report demonstrates, storage vessels in the oil and gas industry only account for approximately 4% of methane emissions, which is a reasonable indicator of VOC contributions. *See* Appendix B. Given this small contribution, some controls will not be economically feasible.

1. <u>20.2.50.23.A. NMED should clarify that the lower thresholds for storage tank applicability do not override the 15 tpy site-wide exemption.</u>

NMOGA understands, based on 20.2.50.6, that if a facility's site-wide PTE for VOCs is less than 15 tpy, the Storage Tank requirements under 20.2.50.23 are not applicable, even if an individual tank's PTE is above the 2 tpy tank threshold set in proposed 20.2.50.23.A. NMOGA would appreciate concurrence from NMED on this point.

2. <u>20.2.50.23.A. The applicability threshold should be increased consistent with Subparts OOOO and OOOOa.</u>

NMOGA recommends increasing the applicability threshold for new and existing storage tanks to align with federal standards, but applicable to new and existing tanks. This change would bring this draft rule in line with the applicability threshold for new storage vessel affected facilities found in 40 CFR 60 (NSPS) Subparts OOOO and OOOOa. However, unlike NSPS Subparts OOOO and OOOOa, the draft rule also would apply to storage vessels constructed, modified, or reconstructed prior to August 23, 2011. Also, increasing the applicability threshold from 2 tpy to 6 tpy would avoid trading off VOC emissions from low emitting storage vessels with NOx and CO_2 emissions from combustion-based air pollution control equipment without a guaranteed improvement in ozone precursors. A threshold of 6 tpy would still enable a significant reduction in emissions, would be more cost effective, and would align with NSPS OOOOa. As discussed elsewhere in these comments, increasing NOx while decreasing VOC could have the opposite effect on ozone levels if areas turn out to be NOx limited.

The language of 20.2.50.23.B(5) may be more appropriate for the applicability section than the standards section.

NMOGA assumes that an existing storage vessel with controls meeting the standards in 20.2.50.23.B(1) or (2) complies with the rule and no further control is required. NMOGA also believes that combining paragraphs (1) and (3) and paragraphs (2) and (4) could occur because the standards are the same for new or reconstructed storage vessels.

3. 20.2.50.23.B. NMOGA recommends that the term "overall capture and control efficiency" be replaced with "control efficiency" and tied to performance of the emission control device.

Determining capture efficiency is a challenging process. Instead, simple performance standards such as "no uncontrolled openings to the environment" and a control or destruction/removal efficiency standard should suffice.

4. 20.2.50.23.B(2), (4). NMOGA recommends the control efficiency be changed from 98% to 95%.

Consistent with comments throughout, NMOGA requests that the control efficiency be changed from 98 percent to 95 percent.

5. 20.2.50.23.B(1), (2), (9). Section B should be reorganized, and the reference to 20.2.50.15 should be revised,

NMOGA also recommends that current paragraph (9) be moved to immediately following the associated control paragraphs (proposed B(1) and (2) or existing B(1) through (4)) and revised to read "where flares and enclosed combustors are used to control emissions from hydrocarbon liquid storage vessels, they shall be subject to the requirements of 20.2.50.15 and not this section."

6. 20.2.50.23.B(6). Shutting in wells is generally disfavored as a compliance option under this standard

The draft rule provides an "alternative" compliance standard in paragraph B(6) for existing tanks by shutting in wells. Shutting in a well not only affects the operator and the owner of the mineral rights, but also can affect state revenues by decreasing royalties and taxes. There are solutions that could be used to address delay without requiring shutting in production. One option would be to allow for reduction of production, rather than well shut-in. Another option would be to allow for an extension request.

7. 20.2.50.23.B. Additional time is needed to implement storage vessel standards.

Consistent with the General Comments, sufficient time is needed to meet new control requirements. Time is needed for engineering/design, budgetary allocations, equipment acquisition, contracting and potential pad modification/expansion. Given the blanket applicability of the control requirements, the compliance of installing the necessary controls will be significantly dependent upon availability of such equipment and the potential shortage of equipment. If pad expansion is required to allow for the additional control equipment, sufficient time will be needed, particularly if the acquisition of additional/adjacent land is required. Shutting in wells will pose safety concerns as prolonged time of such on legacy wells will pose sustained pressure on wellbore and thus potentially compromise its integrity. Shutting in production can also impact lease agreements. In addition, start-up emissions after such a timeframe is completed will result in an emission disbenefit.

8. 20.2.50.23.B(7)-(9). Paragraphs (7)-(9) should be removed or revised.

Paragraph 7 should be removed in its entirety because it is not technically feasible to install a control device on a thief hatch.

Paragraphs (8) through (9) should be modified to impose the compliance obligation only on the operator as discussed elsewhere in these comments. Also, paragraph (8) should be deleted as discussed in the General Comments regarding the EMITT concept.

9. 20.2.50.23.C(1). Owners and operators should be permitted to calculate, rather than monitor, volume throughput.

NMOGA requests modification of the paragraph C(1) requirement related to throughput. Unloading operations are typically conducted by third parties, rather than the operator, and are subject to separate requirements. Also, because the operator does not necessarily know when the third-party service provider will appear, the operator will not have sufficient notice to conduct monitoring. Accordingly, a calculation based on input or output should be acceptable.

10. 20.2.50.23.C(2)-(3). NMOGA requests elimination of redundant requirements in C(2) and (3).

The inspections in paragraph (3) are duplicative of what is required under paragraph (2). Paragraph C(3) should be deleted.

NMOGA does not believe this requirement is necessary for emissions reduction or verifying compliance, and it is duplicative of section 20.2.50.12. If maintained, NMOGA requests one year to develop systems, work practices and recordkeeping options.

11. 20.2.50.23.C(2)-(3). NMOGA requests minor changes to recordkeeping requirements.

In paragraph D(2), records of input volumes or output volumes, at the operator's election, and the supporting calculations should be all that is required.

In paragraph D(3), the only inspections outside of potential LDAR requirements are the AVO inspections required under 20.2.50.23.C(2). Therefore, inspection records should only reflect the AVO's results and corrective actions.

Q. 20.2.50.24 STANDARDS FOR WORKOVERS

1. 20.2.50.24. NMOGA generally supports the draft rule requirements for workovers in 20.2.50.24.

NMOGA generally supports the draft rule requirements for workovers in 20.2.50.24, with modifications to section (E)(2) and the addition of a definition for "well workover" discussed above in 20.2.50.8. Workovers are a relatively small contributor to emissions, as indicated by the EPA Subpart W emissions summary. Because emissions are associated primarily with the release of natural gas, the VOC emissions are not elevated compared to other sources. With the implementation of best management practices as described in the draft rule, emissions will be

further reduced. NMED and EIB will need to ensure that there are sufficient VOCs from workover operations to justify controls.

2. 20.2.50.24.E(2). NMOGA recommends that paragraph E(2) concerning notice to local residents be omitted from the rule.

The notice required under E(2) is not practical. Schedule of workover rigs can be fairly unpredictable depending upon availability and specific rig requirements. For this reason, it is not practically feasible to notify residents with a firm date prior to the workover event. Also, as discussed above, VOC emissions from workovers are minimal because emissions are composed primarily of natural gas from the well that contains low levels of VOCs compared to other sources. The best management practices required by the draft rule will further reduce emissions.

R. 20.2.50.25 STANDARD FOR OIL AND NATURAL GAS STRIPPER WELLS AND FACILITIES WITH SITE-WIDE VOC < 15 TPY

1. 20.2.50.25. NMOGA generally supports the draft rule's provisions subjecting stripper wells to a reduced set of requirements as specified in this section

NMOGA generally supports the draft rule's provisions subjecting stripper wells to a reduced set of requirements as specified in this section, as further discussed in NMOGA's comments on the applicability section above, 20.2.50.6 subsections C and D. By definition, stripper wells individually produce relatively small volumes of oil and gas. Stripper wells are defined by the federal tax code as any oil or natural gas well property whose maximum daily average production does not exceed 15 barrels of oil or any natural gas well whose maximum daily production does not exceed 90 Mcf per day during any 12-month consecutive period. The CTG recommends using these threshold volumes. In New Mexico, these wells typically are older, conventional vertical wells that originally produced higher volumes of oil and gas.

Stripper wells should be treated differently from other wells for several reasons. In the context of air emissions, because these wells are low producers, they typically have correspondingly low emissions. Also, many stripper wells also are marginal wells where the cost of production approaches the revenue from the well, particularly during periods of lower prices. Consequently, it can be economically infeasible to retrofit such wells to meet new requirements, so operators may be forced to shut-in and/or abandon such wells if new regulations impose additional costs such that continued operation is not economically justifiable. That would create a substantial hardship for stripper well operators, who typically are local, small producers, and those that depend upon the royalty income such wells generate.

2. 20.2.50.25.A. The rule should define "stripper wells" consistent with the CTG recommendation.

Paragraph (1) should define stripper wells consistent with the CTG recommendation of 15 BOPD, rather than 10 BOPD. Also, there is a flaw in the definition as drafted. By combining the definition of "oil and gas well" and then referring to the limits of 10 barrels of oil per day and 60,000 Mcf limits, an oil well producing more than 60 Mcf of natural gas, and a gas well producing less than 10 barrels of oil per day, arguably would not qualify as stripper wells. Furthermore, the draft definition is unclear regarding the period of time for measurement of the

productive levels. Finally, as a matter of drafting, this should be written in the singular, not the plural. NMOGA recommends revising 20.5.50.25(A)(1) to read:

> "A stripper well, defined as any oil or natural gas well whose maximum daily average production does not exceed 15 barrels of oil or any natural gas well whose maximum daily production does not exceed 90 thousand cubic feet of natural gas per day during any 12-month consecutive period, is subject only to the requirements of 20.2.50.25 NMAC."

3. <u>20.2.50.25.A(2), (4). Consistent with comments above, compliance should be the operator's responsibility, and the compliance schedule in the draft rule is too short.</u>

Paragraph (2) should be revised in several ways. For clarity, it should be drafted in the singular rather than the plural. Also, due the large number of stripper wells that may be operated by any single operator, as well as the length of time needed to develop the necessary information for older legacy wells (see below), a one-year compliance schedule is too short. As indicated above, there are over 30,000 thousand wells for which documentation would be required under the draft rule. NMOGA recommends revising 20.5.50.25(A)(2) to read:

> The operator of a stripper well shall comply with the requirements of 20.2.50.25 NMAC no later than one year after the effective date of this Part, unless the operator operates more than 20 stripper wells, in which case the operator shall comply with respect to 50% of the operated wells within one year and the remaining wells within two years after the effective date of this Part."

Paragraph (4) should be revised consistent with the revisions to paragraph (2) as explained above:

> "The operator of a facility with a site-wide annual PTE of less than 15 tons per year of VOC shall comply with the requirements of 20.2.50.25 NMAC no later than one year after the effective date of this Part, unless the operator operates more than 20 such facilities, in which case the operator shall comply with respect to 50% of the facilities within one year and the remaining wells within two years after the effective date of this Part."

4. <u>20.2.50.25.B(1). The draft rule should be revised to reflect that manufacture specifications may be unavailable.</u>

Consistent with the General Comment on manufacturer's specifications, many of these facilities, particularly stripper wells, are legacy assets for which manufacturer specifications are no longer available or obtainable. In that case, the operator will have to develop good engineering and maintenance practices independent from manufacturer specifications. As editorial comments, this should be rewritten so that the operator, not an owner, is responsible for compliance, and in the singular.

5. <u>20.2.50.25.B(2). Compliance demonstration deadlines should be set for the second quarter to coordinate with other legal requirements.</u>

Paragraph (2) should be modified consistent with the editorial comments above. Also, NMOGA recommends changing the emission calculation and annual compliance demonstration deadline to June 30th of each year (*i.e.* end of second calendar quarter) for two reasons. First, the deadlines in these provisions overlap with the annual reporting deadlines in established environmental regulations (e.g. Tier II, Subpart W, TRI, and state emission inventory). Adding another layer of environmental reporting due by March 31 each calendar year will overburden an

operator's environmental reporting staff, in particular those stretched thin due to staffing constraints. Adding a requirement to perform calculations for hundreds of low PTE facilities may cause teams already stretched thin to sacrifice quality for speed in order to meet the reporting deadlines. To ensure teams have sufficient time to provide accurate environmental reports, NMOGA requests the deadline to perform, record, and provide VOC and NOx calculations and a description of management practices be extended to the end of the second quarter of each calendar year. Also, NMOGA recommends that NMED consider reducing the annual compliance demonstration to once every three years, given the large number of wells involved and the reasons discussed above.

6. <u>20.2.50.25.B(3). The purpose of "companywide" recordkeeping is unclear and would create compliance problems.</u>

Paragraph (3) should be revised to eliminate the "companywide" language and to refer to records, not a "database." Unless a company has adopted a "company-wide" alternative limit as discussed in the General Comments, a "companywide" requirement is confusing and complex to administer due to assets changing hands. The word "database" in the draft rule language may imply that operators are required to maintain information in a specific electronic format. This would require operators to have an environmental information management system (EIMS) for stripper wells. Also, this provision is essentially a recordkeeping requirement, so it could be moved to subsection D.

7. <u>20.2.50.25.C. Most requirements of subsection C relate to, and are duplicated in, the recordkeeping section.</u>

NMOGA finds the requirements of this subsection confusing, as most of the requirements appear to specify the form of recordkeeping, which are duplicated in subsection D, rather than monitoring. For this reason, paragraph C(1) can be eliminated. NMOGA's detailed comments on paragraph C(1) are addressed below with respect to subsection (D).

NMOGA understands that NMED intends for only the provisions in 20.2.50.25 NMAC to apply to stripper wells and facilities with a site-wide PTE less than 15 tpy VOCs. The preliminary draft of NMED's O&G Precursor rule could be interpreted to also require stripper wells and low PTE facilities to comply with the rule's general provisions found in 20.2.50.25.12. These include requirements associated with emissions limitations that should not apply to facilities covered by 20.2.50.25 and requirements to implement the equipment information tagging and tracking tag system. Consequently, paragraph (2) of this subsection also should be eliminated. If there are any specific monitoring requirements from 20.2.50.12 that are appropriate for facilities covered by 20.2.50.25, those should be put into this subsection rather than cross-referencing subsection 12. NMOGA, however, has not identified any such provisions.

8. <u>20.2.50.25.D. All recordkeeping requirements should be placed in this subsection, and this subsection should be revised in several respects for clarity and consistency with other rules.</u>

As discussed above, the draft rule would be clearer if overlapping and duplicative provisions in subsections (B) and (C) were consolidated in this subsection.

In paragraph (1), NMOGA recommends additional clarity to define the information in the following subparagraphs:

> "(1)(a)(I) the unique identifier of the stripper well or facility (~~number and name~~ Operator Name/ID-Equipment-Number, as applicable);"
>
> "(1)(a)(iii) for each well, the total annual ~~well~~ production in barrels of oil per year and natural gas production in thousand standard cubic feet."

With regard to subparagraph (1)(a)(iv), as written the requirement would be difficult to implement and redundant with excess emission event reporting requirements. NMOGA requests this provision be removed to avoid duplicative recordkeeping and reporting. In the alternative, if retained, NMOGA requests the provision be revised to address only emissions from produced gas streams and not other approved events, such as swabbing or workover operations when the wellbore is open to atmosphere. NMOGA recommends that subparagraph (iv) be revised to read:

> "(1)(a)(iv) Dates, duration, and VOC emission calculation of any venting or flaring event where produced gas stream was not sent to sales lasting longer than eight (8) hours, and the cause of the event. "

As discussed above with regard to subsection B, paragraph (2), NMOGA recommends that calculations regarding these facilities be performed in the second calendar quarter, rather than the first. For consistency with the above change, paragraph (3) should also be changed to the second quarter. Paragraph (4) should be deleted as most of the requirements in 20.2.50.12 should not apply to facilities subject to 20.2.50.25 and, therefore, there should be no cross-reference to 20.2.50.12. NMOGA recommends that all recordkeeping requirements for these facilities should be stated in this subsection D.

9. 20.2.50.25.E. Because this section contains the requirements for stripper wells and low emission facilities, there should be no cross-reference to other rule sections, including 20.2.50.12, much of which is not applicable.

As discussed above, some of the reporting requirements in 20.2.50.12 are not applicable to stripper wells and low emissions facilities. It would be clearer to include the relevant requirement in this subsection rather than cross-referencing 20.2.50.12, and NMOGA opposes such cross-referencing.

S. 20.2.50.26 STANDARDS FOR EVAPORATION PONDS

1. 20.2.50.26. The draft rule standards for evaporation ponds propose control methods that are technically and economically infeasible and are unsupported by available scientific information.

NMOGA does not believe that there is sufficient information or studies concerning the nature and extent of potential emissions from evaporation ponds or the available and feasible best management practices or possible controls for emissions to serve as a basis for rules at this time. There is no commercially available control technology available that would allow operators to capture and control emissions from evaporation ponds as would be required by the draft rule. The control measure in 20.2.59.26(B)(3) of the draft rule, installation of an impermeable continuous barrier or cover, is technically and economically infeasible for

evaporation ponds. Assuming that it would be technically possible and economically feasible to construct a barrier or cover, such a method would defeat the purpose of an evaporation pond, which relies on exposure of liquids (primarily water) to solar energy and the air to achieve evaporation. Consequently, a requirement for mandatory impermeable covers or barriers would likely eliminate the use of evaporation ponds. Furthermore, such measures and the associated costs, if applied to ponds used to store produced water for recycling, would reduce or eliminate the goal of recycling produced water for drilling operations.

2. 20.2.50.26. The proposed approach is inconsistent with recycling water and preserving fresh water.

The control measures and the associated costs, if applied to ponds used to store produced water for recycling, would reduce or eliminate the goal of recycling produced water for drilling operations, inconsistent with the Legislature's intent in the Produced Water Act If applied to the industry's produced water recycling containments, the requirements in the draft rule would be detrimental to water recycling programs for which the industry has spent billions of dollars to construct, connect to infrastructure, to install water treatment equipment, and to engineer drilling and completion programs based on the quality of the water, all with the urging and support of the State. Importantly, the produced water recycling containments facilitate industry's reuse of produced water, thereby conserving fresh water resources so important to New Mexico. NMOGA urges NMED to reconsider the impact on water recycling and the goals of the Produced Water Act.

The industry produces formation water with the oil and natural gas when it is extracted. Water also is a key component to drilling and completion activities. Using innovation and technology, operators have found ways to utilize produced water to accommodate the water needs, but these programs depend upon treated water being available in the quantities demanded just in time for the operations. This is why these produced water containments are important.

Each operator has different water recycling programs with containments of various sizes. However, many of the NMOGA members operating these systems have constructed them according to NMOCD recycling facility requirements (Rule 34). The NMOCD requires visual inspections, maintaining freeboard, and liner inspections. If these ponds are considered to be evaporation ponds, per the draft rule language, they would have to be covered with a continuous impermeable liner over the entire surface of the pond, some of which are one million barrels or more in size. For operation and to comply with NMOCD requirements, the ponds require hoses and valves to control water entering and pumped from the containments. Installation of impermeable covers and capture and control of any low-level VOC emissions from such a large surface area is not technically feasible. As another example, if a flare or combustor is used as a control device, it would have to be supplied with assist gas to ensure combustion. Given the low organic content of the vapors, other control options would be even less likely to be feasible. Furthermore, the continuous cover of the containment could result in souring of the pond thus creating other hazards and potentially making the water unsuitable or less desirable for use.

3. 20.2.50.26. A revised definition is imperative if regulation is contemplated.

If NMED determines to proceed with a rule for evaporation ponds, NMOGA recommends that "recycling facility" and "recycling containment," as defined in 19.15.34

NMAC, be excluded from the applicability of 20.2.50.26. It might be possible that controls for VOCs could be feasible at water treatment facilities associated with containment ponds. However, additional time is needed to identify and evaluate potential control options and at what level they would render the entire recycling operation to be infeasible. Consequently, if NMED would like to consider such controls, further study should be conducted.

T. 20.2.50.27 PROHIBITED ACTIVITIES AND CREDIBLE INFORMATION PRESUMPTIONS

1. NMOGA opposes subsections 20.2.50.27(B) and (C) of the draft rule because they would establish legally invalid presumptions and fail to define "credible information" for purposes of either establishing or rebutting such a presumption.

The draft rule would establish a presumption of noncompliance based "credible evidence" received from a third-party. However, the rule fails to define "credible information" and "credible evidence," and places potentially insurmountable burdens on operators to provide evidence to rebut an allegation by either the Department or the public. Information used for enforcement must be scientifically reliable, legally defensible, and subject to defined methods of detection and reporting. However, the draft rule would establish a presumption of noncompliance based on undefined "credible information" received from a third party. The draft rule similarly fails to define what will be considered "credible evidence" sufficient to rebut this presumption. This lack of specificity places potentially insurmountable burdens on operators to provide evidence to rebut an allegation by either the Department or the public. Such a rule, if adopted, would violate operators' due process rights. More specifically:

1. "Credible Information" and "Credible Evidence" are not defined terms. "Credible information" would apply to information obtained by NMED and information provided to NMED by the public. "Credible evidence" would apply to rebuttal of "credible information." Are these meant to be the same, regardless of who obtains the information?

3. The draft rule includes burdensome (both for resources and cost) and/or technically infeasible and impractical recordkeeping, reporting, monitoring, repair, and testing requirements and timeframes that could be significantly streamlined and still serve to demonstrate compliance, as discussed in the above comments. The breadth of compliance information already submitted and readily available to the Department weighs against a presumption of noncompliance based on third-party information. This is particularly so given that the third-party "credible information" is not subject to any requirements related to quality control—e.g., data collection method, chain of custody documentation, etc. Technology to detect emissions is evolving (satellites, flyovers, drones, etc.) and the oil and gas industry has partnered with vendors, NGOs and academic institutions to assess the usefulness of new technology. However, as discussed in the "Leak Detection and Repair"[21] technical paper prepared during the MAP process, many of these alternative methods of detection are not commonly available or not yet capable of providing data that can be used to determine compliance. New technologies

[21] MAP Technical Report at 52-56.

have shown great promise in detecting emissions at a lower cost, but there is generally a trade off in terms of detection limit and ability to pinpoint the location of a leak.

4. Regardless of the method of detection, it is critical to understand how to use the technology and to ensure that it is properly functioning and calibrated so that the resulting data is reliable and, if necessary, replicable. Users must document how the method was used, confirm the tool was working correctly, and demonstrate a chain of custody.
5. If an operator does not obtain the "credible information" until days, weeks, months or years after it was created, it will be difficult, if not impossible, to verify (or refute) the credibility of the information through subsequent investigation.
6. Without establishing minimum criteria, the burden of proof for credibility is a low and easy threshold to surpass, allowing almost any type of accusation of non-compliance by NMED or the public to be alleged.
7. The "credible information provided by a member of the public" provision of the draft rule will undoubtedly create situations that put members of the public in immediate danger, as well as operators' employees and contractors. During state and federal regulatory or enforcement agency inspections, an operator representative must be allowed to accompany a trained, experienced inspector. Encouraging citizen inspections, without appropriate safeguards, may lead to situations where untrained, inexperienced members of the public are trespassing by attempting to enter on or come near facilities to collect information, putting not only themselves, but operators and other community members at risk.
8. The draft rule is inconsistent with the Department's current regulation for use of credible evidence in 20.2.72.218 NMAC. That existing rule provides that credible evidence may be used for the purpose of establishing whether there has been a violation; however, it only establishes a presumption of noncompliance for specific methods, including monitoring required by an operating permit and compliance methods in the State Implementation Plan as well as data from federally enforceable monitoring or test methods under 40 CFR Parts 51, 60, 61 and 75 and other test or monitoring methods that produce comparable date to the above.[22] This is vastly different from the draft rule where the Department has not included any boundaries (technical or procedural) around what may be credible information.

If the Department wants to encourage the use of credible evidence of compliance issues, it must develop criteria for how the evidence is collected, by both the agency and the public, and how it will be used by the agency. For example, the Texas Commission on Environmental Quality's (TCEQ) complaints protocol, https://www.tceq.texas.gov/compliance/complaints/protocols, establishes criteria and procedures for the collection of information that may be used by TCEQ in enforcement. TCEQ requires the use of agency protocols, procedures or guidelines when collecting and submitting information or evidence, proper chain of custody and, perhaps most importantly, does not presume a violation upon receipt of information or evidence. Instead, the agency will evaluate the information and require the person submitting the information to authenticate the information and participate in an enforcement hearing if one is necessary and thus subject to cross-examination. NMOGA

[22] 20.2.72.218 NMAC

recommends that the credible information sections 20.2.50.27 B and C be removed from the rule or significantly revised to address the concerns noted above.

V. Acknowledgements

NMOGA would like to acknowledge the generosity of the Western Energy Alliance in making their economic model available to NMOGA and JDA for this effort.

Appendix A. John Dunham & Associates, Report on Estimated Costs of Two Potential Regulations on Oil and Natural Gas Development in New Mexico

JOHNDUNHAM & ASSOCIATES
The Winning Side of Economics

MEMORANDUM

TO: New Mexico Oil & Gas Association
FROM: John Dunham, Managing Partner
DATE: September 14, 2020
RE: Estimated Costs of Two Potential Regulations on Oil and Natural Gas Development in New Mexico

The state of New Mexico is considering promulgating two regulations that will impact the development of the petroleum industry in that state. The first, would establish emissions standards for volatile organic compounds and nitrogen oxides for oil and gas production and processing sources located in certain areas of the state, while the second would require the capture of up to 98 percent of all natural gas produced in the state.

To date, no official rulemaking process has begun, however, the state has produced initial drafts and has opened a pre-petition comment period to seek public input on the proposed rule language to assist in identifying potential regulatory and technical issues, and areas that require additional clarification or modification.

The following is an examination of the potential cost of these two rules on oil and natural gas producers in New Mexico, along with an initial economic impact analysis of the effects of these costs. The analysis is being done using a model developed for the Western Energy Alliance by John Dunham & Associates in 2018, updated to reflect current well counts and petroleum prices in the state of New Mexico.

Summary

Based on data gathered from operators in New Mexico, the state and federal governments, and a model developed for the Western Energy Alliance in 2018, the two potential rules being proposed in New Mexico would cost operators as much as $3.4 billion to comply with in the first year, and a discounted $4.0 billion over the course of 5 years.

Table 1
Summary of Costs to the Oil and Natural Gas Industry in New Mexico Resulting from Potential Rules

		Total
Administrative Costs	$	611,620
Operational Costs	$	3,424,150,330
Total Costs	$	3,424,761,950
5-Year Costs	$	4,053,257,881
NPV 5-Year Costs	$	4,017,144,587

The increased costs would force operators to shut down marginal wells and forfeit the development of new plays in the state. This could lead to a loss of as many as 264 jobs in the petroleum production industry in New Mexico and cost the state's economy $56.5million annually. In addition, the state and its localities would receive $1.9 million less in tax revenue

from businesses and employees in the oil and gas industry. This does not include reduced royalty and severance tax revenues resulting from lower production.

Table 2
Economic Cost of Potential Rules on New Mexico's Economy

	Jobs		Wages		Economic Output
Direct	(96)		(9,103,692)		(29,996,499)
Supplier	(52)	$	(3,293,948)	$	(10,001,515)
Induced	(116)	$	(5,217,366)	$	(16,456,673)
Total	(264)	$	(17,615,005)	$	(56,454,687)

State and Local Business and Personal Taxes	$	(1,914,553)

The Model

In order to determine the economic impact of the two potential rules on the oil and natural gas industry in New Mexico, it is necessary to determine exactly how they would impact overall costs. As costs for developing projects rise, the number undertaken will fall. The key is to determine how the restrictions will impact:

1. Direct costs: For example, costs related to additional equipment;
2. Financial costs: Or those related to the cost of money resulting from increased delays;
3. Input prices: Higher costs for equipment and crews resulting from increased demand;
4. Revenues: Reduced revenues resulting from both wells not drilled and delays in well servicing.

These additional costs are run through the oil and natural gas well model developed for Western Energy Alliance by John Dunham & Associates (JDA) in 2018. The model was updated to reflect the current number of operating oil and natural gas wells in New Mexico,[1] as well as 2019 average prices for oil at the wellhead in New Mexico, and the citygate price for natural gas in the state.[2]

These figures are linked to the economic impact model and from that an estimate of lost jobs, economic activity and taxes are developed.[3]

The Western Energy Alliance model is based on a wide range of data sources and assumptions, each of which impacts the final results. JDA has strived to ensure that the assumptions are as cautious as possible leading to what is likely a low estimate of the overall cost of the proposed rule. Each of these assumptions, along with the data used in the development of the models, is detailed below:

1 *OCD Well Statistics*, State of New Mexico, Oil Conservation Division, August 3, 2020 at: http://www.emnrd.state.nm.us/OCD/statistics.html.
2 Wellhead price data are not available.
3 Western Oil & Natural Gas Employs America, produced by John Dunham & Associates for Western Energy Alliance, 2018, at: https://legacy.westernenergyalliance.org/employsamerica

Average Drilling Costs are estimated based on data derived from the US Department of Commerce, Bureau of Economic Analysis, by the Minnesota IMPLAN Group in 2016. These data come from the Input/Output accounts of the United States. These data present detailed figures on the input costs for oil and gas well drilling including wages, capital costs, leasing costs, and costs of various materials and services used in the drilling and completion of oil and gas wells. The data are from 2016. The figures used in this model are based on the average cost per dollar of output (basically sales) multiplied by the estimated sale of oil and natural gas in each state as of 2019, which are the latest data available. Annual average prices and production volumes by state are gathered from the US Department of Energy.[4] Costs are divided between exploration/leasing/permitting, drilling and completion, with the distribution between these two processes based on the type of input and labor costs. About 52.4 percent of the drilling/ completion cost assumed to be for drilling and the rest for completion.[5]

Production Costs are estimated based on data derived from the US Department of Commerce, Bureau of Economic Analysis by the Minnesota IMPLAN Group in 2016. These data come from the Input/Output accounts of the United States. These data present detailed figures on the input costs for oil and gas production including wages, capital costs, leasing costs, and costs of various materials and services used in the exploration/leasing/permitting, production, infrastructure development and reclamation of oil and gas plays. The data are from 2016. The figures used in this model are based on the average cost per dollar of output (basically sales) multiplied by the estimated sale of oil and natural gas as of 2019 which are the latest data available. Annual average prices and production volumes by state are gathered from the US Department of Energy.[6] Costs are divided between different activities based on the type of input and labor costs are divided based on input commodity and service costs.

Anticipated Revenues are based on data from the US Department of Energy. It is simply equal to the annualized price of either oil or natural gas at the wellhead (by state), multiplied by annual production.[7] Revenues per well cannot be derived simply by dividing this by the number of producing wells since oil and gas wells tend to have either a hyperbolic or an exponentially declining production trend. Based on discussions with industry principles, a well will generally not be drilled and put into production unless it can recoup at least the direct drilling costs in the first year after completion. Using this assumption and a simple declining exponential function, the model suggests that about 97 percent of the production occurs in the first 4 years after drilling. The four-year production total (multiplied by the current price of either oil or gas) was used to estimate total revenue per well. Operating costs were then multiplied by 4 to reflect the economic life of each well.

The Number of Wells To Be Drilled is estimated based on data from individual state permitting authorities. Each authority uses different methods to identify whether wells are gas or oil (or both) and the wells' stage in the production process. While complete standardization between the states is not possible, in general it is possible to label a well as oil or gas, or as being in some stage of pre-production.

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4 See for example: *Domestic Crude Oil First Purchase Prices by Area*, US Department of Energy, Energy Information Administration, at: www.eia.gov/dnav/pet/pet_pri_dfp1_k_a.htm

5 The model is based on average costs and revenues. These can vary greatly by play, product and individual well.

6 See for example: *Domestic Crude Oil First Purchase Prices by Area*, US Department of Energy, Energy Information Administration, at: www.eia.gov/dnav/pet/pet_pri_dfp1_k_a.htm

7 Ibid.

The Number of Producing Wells is also estimated based on data from individual state permitting authorities. Again, each authority uses different methods to identify whether wells are gas or oil (or both) and the wells' stage of production. While complete standardization between the states is not possible, in general it is possible to label a well as oil or gas, and that it is in some stage of production. Water wells, disposal wells, capped wells, injection wells, and other operations not directly used to extract petroleum are not included.

Table 3 below outlines the number of oil and natural gas wells used in the model, as well as the estimated production and prices.

Table 3
Annual Production Statistics and Assumptions for New Mexico (2019 Data)

	Oil	Natural Gas	Total
Number of Wells			
High Production	32	219	252
Medium Production	6,725	17,550	24,276
Low Production	24,826	33,185	58,011
Total Wells	31,584	50,955	82,539
Production	Barrels	Million (Cu Ft)	
High Production	11,194,661	201,570	
Medium Production	229,452,338	1,307,450	
Low Production	90,254,701	310,514	
Total Production	330,901,700	1,819,534	
Prices	$53.01	$2.74	
Revenue	$17,541,099,117	$4,985,523	$17,546,084,640

On a per well basis, the data suggest (Table 4) that the vast majority of oil and natural gas wells generate very little in the way of revenue, and the potential costs of the rules under consideration would be so high as to encourage operators to simply cap the wells rather than continue to produce.[8]

Table 4
Average Estimated Production and Revenues by Well Type

	Oil	Natural Gas
Annual Production Per Well	Barrels/Yr	Million Cu Ft/Yr
High Production	347,723	918
Medium Production	34,117	74
Low Production	3,635	9
Average Annual Revenue Per Well		
High Production	$18,432,771	$2,516,432
Medium Production	$1,808,535	$204,121
Low Production	$192,715	$25,638

8 Based on data originally developed for Western Energy Alliance, 2018. These data represent production figures across most of the western part of the country. A high production oil well is considered to be one producing over 400 barrel of oil equivalent (BOE) per day, a low production well is considered to be one producing between 1 and 15 BOE per day. Data taken from *Distribution and Production of Oil and Gas Wells by State*, EIA website: http://www.eia.gov/pub/oil_gas/petrosystem/petrosysog.html. Data retrieved 05/06/2014

As the analysis below will show, as wells become uneconomical due to higher regulatory costs, production slows and jobs in the industry are eliminated. Based on a model developed for Western Energy Alliance in 2018, the oil and natural gas industry is a major part of the New Mexico economy, directly employing nearly 7,740 FTE people, and creating a total of almost 25,820 FTE jobs.[9] All told, the industry generates almost $6.9 billion in economic activity in the state, and firms and their employees pay state and local governments $233.4 million in taxes.[10]

Table 5
Economic Impact of Oil and Natural Gas Industry in New Mexico (2018 Baseline)

	Jobs		Wages		Economic Output
Direct	7,737	$	751,669,030	$	3,978,310,389
Supplier	6,917	$	436,862,521	$	1,326,459,201
Induced	11,165	$	500,176,207	$	1,577,661,247
Total	25,818	$	1,688,707,759	$	6,882,430,838
State and Local Business and Personal Taxes				$	233,404,461

Potential Rules

Ozone Non-Attainment Avoidance (VOC / NOx Rule)
The New Mexico Environmental Impacts Board is contemplating issuing rules restricting the emission of volatile organic compounds (VOCs) and nitrogen oxides (NOx) from sources located within counties that have areas with ambient ozone concentrations in excess of ninety-five percent of the national ambient air quality standard for ozone, including but not limited to Chaves, Eddy, Lea, Rio Arriba, Sandoval, and San Juan counties. Wells located in Bernalillo County, on Tribal Lands, and in other areas that are not within the Board's jurisdiction are expected to be excluded from the rules. These rules would impact roughly 97.3 percent of the existing oil and natural gas wells in New Mexico, with the remaining facilities operating in parts of the state that are excluded from the requirements.

Based on a reading of the language currently being proposed by the agency, oil and natural gas producers in these areas would face a minimum of 23 new administrative requirements that will need to be adhered to, as many as 23 provisions that will require additional equipment to be installed and maintained, and 15 provisions that will lead to new operational costs.

Venting and Flaring Rule
The New Mexico Oil Conservation Commission is examining two possible rules that would regulate the venting, flaring and collection of natural gas from oil and natural gas wells located in the state. In addition, the adoption of these two rules would lead to changes in at least three existing rules impacting oil and natural gas operations in the state.

Based on a reading of the language currently being proposed by the agency, oil and natural gas producers in these areas would be impacted by a wide range of requirements. According to the language in the document, there would be a minimum of 50 new administrative requirements that will need to be adhered to, as many as 10 provisions that will require additional equipment

[9] See: Western Oil & Natural Gas Employs America, prepared by John Dunham & Associates for Western Energy Alliance, 2018, https://legacy.westernenergyalliance.org/employsamerica
[10] Not including taxes and royalties on oil and natural gas production.

to be installed and maintained, 5 provisions that will require construction of new facilities, and 18 provisions that will lead to new operational costs.

These rules would impact the operation and maintenance of approximately 82,600 oil and natural gas wells in the state of New Mexico and would lead to a reduction of further development in the state.

Costs Associated With Potential Rules

Administrative Costs

The potential VOC / NOx rule changes imply that oil and natural gas producers in the state will be required to abide by approximately 25 new administrative requirements. Each of these will require that operators dedicate staff time that could otherwise be directed toward more productive activities. In its Regulatory Impact Analysis of similar rules conducted in 2015, the US Environmental Protection Agency (EPA) stated that recordkeeping and reporting requirements would equate to 92,658 labor hours for 2,552 facility owners and operators.[11] There is no source for where this data came from.

The analysis below uses wage rates from the Bureau of Labor Statistics for May of 2019, inflated to July 2020 dollars.[12] A mathematical average wage per hour for the occupations identified below is used. The median wage is multiplied by 1.3 to account for social insurance taxes, benefits, unemployment insurance and other labor costs assumed by the employer.

Table 6
Wage Rates Used in Analysis of Administrative Expenses (Annual)

Occupation	Median Wage	Adjusted All-in Median Wage
Accountants and Auditors	$ 59,620	$ 78,413
Engineers, All Other	$ 117,310	$ 154,287
Lawyers	$ 87,690	$ 115,331
Bookkeeping, Accounting, and Auditing Clerks	$ 37,400	$ 49,189
Information and Record Clerks, All Other	$ 41,710	$ 54,857
Legal Secretaries and Administrative Assistants	$ 36,900	$ 48,531
Average		$ 83,435
Hourly		$ 40.11

Based on the EPA analysis, the average number of recordkeeping hours per operator would be 36.3 per year. According to the most recent data from the Bureau of Labor Statistics, there are 193 establishments involved in the production of oil and natural gas in New Mexico.[13]

Assuming a similar administrative burden as the federal rule would mean that companies would spend 7,006 hours a year to comply. Since this rule would apply only to wells being operated in

[11] *Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector*, U.S. Environmental Protection Agency, Office of Air and Radiation and Office of Air Quality Planning and Standards, August 2015.

[12] May 2019 State Occupational Employment and Wage Estimates: New Mexico. These are the latest data currently available.

[13] *Quarterly Census of Employment and Wages*, US Department of Labor, Bureau of Labor Statistics, at: https://www.bls.gov/cew/data.htm

specific counties, the requirement should be adjusted to account for those operations that are in other areas. Based on wells operating in New Mexico in 2018, 97.3 percent of the operations would be covered by the rule, reducing the administrative requirement to 6,817 hours. At a wage rate of $40.11, this equals $273,420 in administrative costs per year.

The potential venting and flaring rule changes imply that oil and natural gas producers in the state will be required to abide by approximately 50 new administrative requirements. Each of these will require that operators dedicate staff time that could otherwise be directed toward more productive activities. In its Regulatory Impact Analysis of similar rules conducted in 2016, the US Department of Interior, Bureau of Land Management (BLM) the BLM identified a total of 25 provisions that would impose administrative burdens on the industry. Many of these align with those being imposed by the NMOCC. The BLM estimated that the annual administrative burden of their natural gas collection rule would be 85,170 hours and that 2,000 companies would need to comply with those administrative rules, for an average of 42.59 hours of work per company. [14]

According to the most recent data from the Bureau of Labor Statistics, there are 193 establishments involved in the production of oil and natural gas in New Mexico.[15] Assuming a similar administrative burden as the federal rule would mean that companies would spend 8,332 hours to comply. At a wage rate of $40.11, this equals $338,200 in administrative costs per year.

Operational Costs

Using data from a survey of members conducted by the New Mexico Oil and Gas Association it is possible to calculate the operational costs that would be imposed by these rules on a per well basis.[16] Unfortunately, the survey data is aggregated and the effects of the two rules cannot be broken out separately. However, since the VOC / NOx rule applies to only certain parts of the state, those provisions are adjusted to account for those operations that are in other areas. Based on wells operating in New Mexico in 2018, 97.3 percent of the operations would be covered by the VOC / NOx rule.[17]

The preliminary proposed rules will place significant burdens on operators, both initially as wells are drilled and completed, and then over time, as operators are required to maintain systems and change their operational behaviors. The initial costs will consist mainly of new construction requirements as wells and collection systems are designed and built, and equipment requirements as old wells are retrofitted. According to the draft of the potential rulemaking, operators of oil and natural gas wells in New Mexico, as well as those operating gathering pipelines throughout the state, would be required to meet both the gas capture standards outlined by the state as well as the VOC and NOx requirements for 97.3 percent of the operations. Many of the same operational requirements (outside of administrative requirements) are included in both rules.

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14 *Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations) Additions of 43 CFR 3178 (Royalty-Free Use of Lease Production) and 43 CFR 3179 (Waste Prevention and Resource Conservation)*, U.S. Bureau of Land Management, November 10, 2016

15 Op. cit., *Quarterly Census of Employment and Wages*.

16 Survey data represents reporting by 10 companies.

17 Based on data from Western Oil & Natural Gas Employs America, produced by John Dunham & Associates for Western Energy Alliance, 2018, at: https://legacy.westernenergyalliance.org/employsamerica

Table 7
Additional Operational Costs Associated With Potential Rules

	Per Oil Well	Per Natural Gas Well	Oil Production Costs	Natural Gas Production Costs	Total Costs
RFID Tag	$ 281	$ 281	$ 8,635,476	$ 13,931,759	$ 22,567,236
Engines	$ 1,336	$ 1,336	$ 41,044,663	$ 66,218,047	$ 107,262,710
Compressors	$ 55	$ 55	$ 1,695,924	$ 2,736,064	$ 4,431,988
Open Flares	$ 6,152	$ 6,152	$ 189,056,185	$ 305,007,532	$ 494,063,717
Enclosed Combustion Devices (ECD) and Thermal Oxidizers (TO)	$ 9,681	$ 9,681	$ 297,513,847	$ 479,984,109	$ 777,497,956
Vapor Recovery Units	$ 5,866	$ 5,866	$ 180,281,569	$ 290,851,297	$ 471,132,867
Gas Well liquid Unloading	$ -	$ 2,813	$ -	$ 139,441,542	$ 139,441,542
Glycol Dehydrators	$ 9,681	$ 9,681	$ 297,513,847	$ 479,984,109	$ 777,497,956
Heaters	$ 86	$ 86	$ 2,647,521	$ 4,271,290	$ 6,918,811
Hydrocarbon Liquid Transfers	$ 2,813	$ -	$ 86,431,590	$ -	$ 86,431,590
pipeline pig launching and receiving	$ 2,813	$ 2,813	$ 86,431,590	$ 139,441,542	$ 225,873,132
pneumatic controllers and pumps	$ 1,689	$ 1,689	$ 51,917,957	$ 83,760,116	$ 135,678,073
Storage Tanks	$ 5,706	$ -	$ 175,352,753	$ -	$ 175,352,753
Stripper Wells	$ 1,966	$ 1,966	*	*	*
Total	$ 48,125	$ 42,419	$ 1,418,522,923	$ 2,005,627,407	$ 3,424,150,330

Note: Stripper well counts are not available

In sum, the operational and administrative costs of the potential rules could equal as much as $3.4 billion dollars in the first year, although they would fall significantly from then on.

NPV calculation

The costs of the two potential rules will not be one-time effects but will continue year after year. The bulk of the continuing costs would be administrative, however, there will be additional operational costs as well. Based on discussions with operators in New Mexico, JDA estimates that about 15.2 percent of the costs will continue each year, declining over time as wells are naturally removed from service. Over a 5-year period, assuming 2 percent inflation, the costs will equate to about $4.1 billion. Discounting this back to 2021 dollars using a discount rate of 5.54 percent,[18] the net present value of the stream of costs would be roughly $4.0 billion. See Table 8.

Table 8
Net Present Value of Costs Associated With Potential New Mexico Rules

	Total
Administrative Costs	$ 611,620
Operational Costs	$ 3,424,150,330
Total Costs	$ 3,424,761,950
5-Year Costs	$ 4,053,257,881
NPV 5-Year Costs	$ 4,017,144,587

[18] *ICE BofA US High Yield Index Option-Adjusted Spread*, Ice Data Indices, LLC, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/BAMLH0A0HYM2, September 9, 2020.

Conclusion: Economic Impact of Proposed Rules

Based on the Western Energy Model, if the costs outlined above are reflective of the entire industry in the state of New Mexico, the results could be devastating for the oil and natural gas sector of the economy. Were these costs to be incurred, it would be likely that 4.0 percent of the currently operating oil wells, and as many as 42.6 percent of the natural gas wells, would become unproductive in that they would lose money once the cost of the retrofits is put in place. These would predominately be the lower- and mid-range producing wells, so overall there would be a roughly 1.4 percent reduction in oil production and a 12.2 percent reduction in natural gas production.[19] Overall, there would be a 1.4 percent reduction in output of both oil and natural gas in terms of value.

Table 9
Economic Cost From Potential Regulations on the Oil and Natural Gas Industry in New Mexico

	Jobs		Wages		Economic Output
Direct	(96)		(9,103,692)		(29,996,499)
Supplier	(52)	$	(3,293,948)	$	(10,001,515)
Induced	(116)	$	(5,217,366)	$	(16,456,673)
Total	(264)	$	(17,615,005)	$	(56,454,687)

State and Local Business and Personal Taxes	$	(1,914,553)

As this impact passes through the economic system in New Mexico, it will surely lead to reductions in jobs. Looking at the baseline, there were about 25,820 jobs in the oil and natural gas industry in the state. The reduction would likely lead to 96 lost jobs directly in the oil and natural gas industry in the state, and a total of 264 lost jobs. The state economy would face a $56.5 million loss, and state and local taxes would fall by $1.9 million.

About John Dunham and Associates:

John Dunham and Associates (JDA) is a leading New York City based economic consulting firm specializing in the economics of fast-moving issues. JDA is an expert at translating complex economic concepts into clear, easily understandable messages that can be transmitted to any audience. Our company's clients have included a wide variety of businesses and organizations, including some of the largest Fortune 500 companies in America, such as:

- Altria
- Diageo
- Feld Entertainment
- Forbes Media
- MillerCoors
- Verizon
- Wegmans Stores

[19] Note that with the current slump in natural gas prices many of the existing natural gas wells are barely productive already.

John Dunham is a professional economist with over 30 years of experience. He holds a Master of Arts degree in Economics from the New School for Social Research as well as a Masters of Business Administration from Columbia University. He also has a professional certificate in Logistics from New York University. Mr. Dunham has worked as a manager and an analyst in both the public and private sectors. He has experience in conducting cost-benefit modeling, industry analysis, transportation analysis, economic research, and tax and fiscal analysis. As the Chief Domestic Economist for Philip Morris, he developed tax analysis programs, increased cost-center productivity, and created economic research operations. He has presented testimony on economic and technical issues in federal court and before federal and state agencies.

Prior to Phillip Morris John was an economist with the Port Authority of New York and New Jersey as well as for the City of New York.

Appendix B. Scaled-up 2018 GHGRP Methane Emissions

Scaled-up 2018 GHGRP Methane Emissions			
New Mexico Production Segment			
Metric Tonnes Methane			
	Permian	**San Juan**	**New Mexico**
Large Tanks	2,186	875	3,061
Small Tanks	361	5,318	5,679
Tanks	2,547	6,194	8,740
Liquids Unloading	377	22,002	22,379
Equipment Leaks	6,602	26,752	33,354
Pneumatic Controllers	20,302	91,255	111,557
Workover & Completion With HF	2,320	1,730	4,050
Workover & Completion w/o HF	1	126	127
Pneumatic Pumps	1,019	383	1,402
Associated Gas Flaring	4,476	0	4,476
Associated Gas Venting	1,179	362	1,541
Centrifugal Compressors	1,070	0	1,070
Reciprocating Compressors	173	477	650
GHGRP Summary Total[1]	48,805	151,283	200,089
Difference[2]	6,192	-4,190	2,002

[1]The GHGRP Summary Total is the NM allocated portion of the GHGRP summary methane emissions for the Permian and San Juan basins extracted from the GHGRP flight data.

[2]The difference is the NM allocated GHGRP basin summary total minus the sum of the NM scaled-up sources. It can be negative due to the sum of sources shown being greater than the NM allocated GHGRP summary total for the basins. This occurs because some sources can be directly aggregated at the state & basin combination level and hence the sum of sources will not exactly equal the allocated GHGRP basin summary emissions.