From:	Jon Goldstein
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Subject:	[EXT] Joint Comments on Methane Waste Rule
Date:	Wednesday, September 16, 2020 3:51:53 PM
Attachments:	EDF Comments OCD rule.pdf EDF OCD Attachment 1.pdf

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Ms. Polak,

Please find attached joint comments and an exhibit submitted on behalf of EDF, The Wilderness Society, National Parks Conservation Association and Audubon New Mexico regarding the state's draft methane waste rules.

Please let us know if you have any questions and we look forward to continued engagement as this proposal moves forward.

Jon

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ENVIRONMENTAL DEFENSE FUND, THE WILDERNESS SOCIETY, AUDUBON NEW MEXICO, NATIONAL PARKS CONSERVATION ASSOCIATION

Environmental Defense Fund (EDF) The Wilderness Society (TWS), Audubon New Mexico and the National Parks Conservation Association greatly appreciate the opportunity to submit comments on New Mexico Oil Conservation Division's (OCD) Proposed Rules on Venting and Flaring of Natural Gas, Title 19, Chapter 15, Part 27.

EDF is a national membership organization with more than 2.5 million members residing throughout the United States and more than 18,000 residing in the state of New Mexico, many of whom are deeply concerned about the pollution emitted from oil and natural gas sources. EDF brings a strong commitment to sound science, collaborative efforts with industry partners, and market-based solutions to our most pressing environmental and public health challenges.

In New Mexico, EDF has been active in NMED rulemakings and participated as a member of the Methane Advisory Panel (MAP), which lead to the creation of the MAP White Paper.

The Wilderness Society (TWS) is a non-profit organization dedicated to uniting people to protect America's wild places. TWS is one of America's leading public lands conservation organizations. Since 1935, TWS has been dedicated to protecting America's wild places for current and future generations, which requires eliminating climate-changing emissions. We are committed to smart and sensible regulation and work to ensure that public resources are used effectively, efficiently, and responsibly. TWS has offices throughout the country, including an office Albuquerque, New Mexico. TWS has several thousand members in New Mexico and over one million members and supporters nationwide.

Audubon New Mexico is the statewide office of the National Audubon Society, a national nonprofit conservation organization dedicated to protecting birds and the places they need, now and in the future, throughout the Americas, using science, advocacy, education, and on-the-ground conservation. Founded in 1905, Audubon has approximately 1.7 million members nationwide, including more than 13,000 in New Mexico. Its state/regional offices, nature centers, chapters, and partners give Audubon an unparalleled wingspan that reaches millions of people each year to inform, inspire, and unite diverse communities in conservation action. Audubon has been engaging in research, education, advocacy and restoration activities with regards to oil and gas issues for many years and will continue to do so.

Formed in 1919, the National Parks Conservation Association's mission is to protect and enhance America's National Park System now and for future generations; our nearly 1.4 million members and supporters nationwide continue to fulfill this mission by working to connect our national parks with their surrounding landscapes.

I. Introduction

Governor Lujan Grisham committed to reducing methane emissions and preventing waste as part of the state's efforts to combat climate change.[1] One of the Governor's first actions was to sign an Executive Order pledging to achieve statewide reductions in greenhouse gas emissions of at least 45% by 2030 as compared to 2005 levels.[2] Per her Executive Order the Governor directed the New Mexico Environment Department and Energy, Minerals and Natural Resources Department to develop "a statewide, enforceable regulatory framework to secure reductions in oil and gas sector methane emissions and to prevent waste from new and existing sources and to enact such rules as soon as practicable."[3]

The OCD has a duty to prevent waste.[4] Indeed, courts have found prevention of waste to be one of the OCD's *primary and major* duties. *Santa Fe Exploration Co. v. Oil Conservation Com'n of State of N.M.*, 835 P.2d 819 (1992) ("The Oil and Gas Act gives the Commission and the Division the two major duties: the prevention of waste and the protection of correlative rights."); *Swepi, LP v. Mora County*, N.M., 81 F.Supp.3d 1075, 1196 (D.NM 2015) ("*The Oil and Gas Act is focused primarily on the prevention of waste and the drilling and maintenance of oil-and-gas wells*."); *El Paso Natural Gas Co. v. Oil Conservation Commission*, 414 P.2d 496 (1966) ("A review of the history of our oil and gas legislation reveals the **primary concern in eliminating and preventing waste** in the pool so far as it can practicably be done, and next the protection of the correlative rights of the producers from the pool.") (*emphasis added*).

Flaring and venting of natural gas incontrovertibly constitutes surface waste. The Oil and Gas Act defines surface waste" to include "***the loss or destruction, without beneficial use, resulting from*** evaporation, seepage, leakage or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating or producing, well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil or natural gas in excess of the reasonable market demand...".[5] (emphasis added). Venting gas constitutes a loss as the gas is simply vented straight to the atmosphere. Combustion and flaring are forms of destruction.

Deep cuts in emissions from the oil and natural gas sector are critically necessary in order to meet the governor's methane reduction goal and the Act's waste prevention mandate. Methane, the primary component of natural gas, is a powerful greenhouse gas, 84 times more powerful in trapping heat in the Earth's atmosphere over a 20-year timeframe than carbon dioxide.[6] The oil and gas sector is the largest source of industrial methane emissions in the state, accounting for 57% of industrial emissions.[7] According to EDF's analysis, actual methane emissions are

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[1] New Mexico Climate Strategy, Initial Recommendations and Status Update, p. 3 (2019), available at https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf
[2] Exec. Order No. 2019-003, Executive Order On Addressing Climate Change And Energy Waste Prevention (Jan. 29, 2019).
[3] Exec. Order No. 2019-003, Executive Order On Addressing Climate Change And Energy Waste Prevention (Jan. 29, 2019).
[4] NM STAT 70-2-11.
[5] *Id*. at 70-2-3.
[6] IPCC, Changes in Atmospheric Constituents and in Radiative Forcing, 214, https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf
[7] New Mexico Climate Strategy, Initial Recommendations and Status Update, p. 13 (2019), available at https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf

significantly higher than industry reported data. EDF's analysis, which is based on measurements taken by University of Wyoming researchers in the Permian Basin, its review of peer-reviewed scientific studies, EPA data and national estimates of oil and gas methane emissions, concludes that the New Mexico oil and gas industry vents and leaks approximately 1,000,000 tons of methane every year. Notably, these emissions are equivalent to the climate impact of approximately 22 coal-fired power plants.[8] A recent study involving site-level measurements of over 70 Permian Basin well pads found that methane emissions are higher than in most other measured basins.[9]

A study from the Western Regional Air Partnership — a collaboration of state, tribal, and local air agencies, the Environmental Protection Agency, federal land managers, and other local stakeholders —found similarly high emissions from New Mexico's oil and gas facilities. The WRAP inventory, which draws on data reported by states, tribes, and operators, found oil and gas companies emitted 816,980 tons of methane and smog-forming pollution in 2014. This number is also significantly higher than what the industry reported to the EPA.[10]

New Mexico is already experiencing the harmful effects of climate change. As the sixth-fastest-warming state in the nation, the average annual temperature has increased about 2.7ºF in New Mexico since 1970.[11] Citizens of New Mexico are witnessing these changes through hotter and longer summers, more intense storms, and more frequent droughts. The harvests of agricultural products are less predictable and there is an increase of natural disasters like flash floods and brushfires. Warmer year round temperatures mean additional energy costs to keep residences and businesses cool.[12] Infrastructure and resource-management plans designed for the conditions of the past may not meet the future needs of New Mexico's residents.[13] As a result, critical infrastructure in New Mexico is vulnerable, including roads, overpasses, bridges, and rail; electrical power distribution systems; drinking water and sewer pipes; and flood control and drainage systems. Declining air and water quality are disrupting natural habitats and ecosystems, leading to bark beetle infestations, fish habitat reduction, and fewer alpine meadows.[14]

Regulatory action by OCD will be critical in order to meet the governor's climate directive. However, several improvements must be made to the OCD proposal in order for it to be

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[8] EDF website, Explore New Mexico's oil and gas pollution, available at https://www.edf.org/energy/explore-new-mexicos-oil-and-gas-pollution

[9] Anna Robertson et al. New Mexico Permian Basin Measured Well Pad Methane Emissions are a Factor of 5 – 9 Times Higher Than US EPA Estimates. Environmental Science & Technology (accepted). Measurements were taken in 2018.

[10] EDF Website, New regional emissions study offers insights into New Mexico's oil and gas emissions problems (Apr. 5, 2018), available at http://blogs.edf.org/energyexchange/2018/04/05/new-regional-emissions-study-offers-insights-into-new-mexicos-oil-and-gas-emissions-problems/?_gl=1*1pk5vla*_gcl_aw*R0NMLjE1ODAzNDU0NzEuQ2p3S0NBaUE5OFR4QlJCdEVpd0FWUkxxdTllZmlxYWxPVHR0RUh5SzlHbUNhYkx2b1Q5WHhuWkx6NmF5M1FnRXFwNW4wb0NlYWt5TzJ4b0NmR3dRQXZEX0J3RQ

[11] Confronting Climate Change in New Mexico, Action needed today to prepare the state for a hotter, drier future, (May 2, 2016), available at https://www.ucsusa.org/resources/confronting-climate-change-new-mexico

[12] New Mexico Climate Strategy, Initial Recommendations and Status Update, p. 4 (2019), available at https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf

[13] Id.

[14] Id.

effective. EDF's comments below focus on five main areas of concern in the draft OCD rule and suggest improvements.

At a high level, we recommend:

(1) A clear prohibition on venting, other than where necessary for safety or during an emergency or where explicitly authorized by OCD;

(2) A prohibition of routine flaring from new and existing wells

(3) A requirement to use enclosed combusters or flares equipped with auto igniters or continuous pilots and capable of achieving a 98% destruction removal efficiency

(5) Deletion of the ALARM provision

Attachment A reflects our suggested revisions to the rule that reflects these main points, as well as other suggestions intended to ensure the rule meets the Act's waste prevention mandate and the Governor's climate goals.

II. New Mexico Must Reduce Methane in Order to Achieve The Governor's Climate Goals And Prevent Waste

1. Venting and Flaring Constitute Impermissible Waste and Erode Royalty and Tax Revenue

Venting and flaring natural gas during drilling, completions and production constitute waste of a valuable resource and contribute to harmful air pollution that threatens public health and the environment. Venting and flaring of associated gas from wells in New Mexico contributed 5,500 MT CH_4 in 2017.[15] Recent studies indicate the actual numbers are likely even greater because emissions of uncombusted methane from unlit flares are significantly higher than previously thought.[16]

EDF estimates that the systematic venting, leaking, and flaring of natural gas costs New Mexico taxpayers up to $43 million in lost taxes and royalty revenues per year.[17] This number is based on our estimate that operators waste $275 million of natural gas (based on our estimate that operators waste 92 million Mcf of natural gas a year valued at $2.98/ Mcf).[18] Natural gas that isn't wasted can be used or sold, to the benefit of New Mexico citizens. Implementing common sense, economically sensible regulations is smart policy for New Mexico.

2. Flaring and venting contribute to dangerous air pollution that contributes to climate change and threatens public health and the environment

[15] EDF website, New Mexico Oil and Gas Data, available at https://www.edf.org/nm-oil-gas/ emissions/. These emissions are included in the "other" category.

[16] State of New Mexico Environment Department, Embracing innovation and technology, the Environment Department identifies potential emissions violations, available at https://www.env.nm.gov/wpcontent/ uploads/ 2020/0l/ 2020-0l-14-Methane-Map-Updates-final.pdf

[17] EDF website, New analysis reveals growing methane problem, available at https://www.edf.org/nm-oil-gas/

[18] *Id.*

a. Methane is a powerful driver of climate change

Venting and flaring emit methane ("CH_4") and carbon dioxide, respectfully—two greenhouse gases that contribute to climate change. Burning natural gas in flares produces carbon dioxide. Because no flares are 100% efficient in combusting natural gas, flaring also is a significant source of methane emissions. This is particularly the case when flares are operated improperly or allowed to extinguish. Several studies demonstrate flares routinely malfunction, releasing significant tons of climate altering pollution into the atmosphere. EDF researchers conducted three separate helicopter surveys of hundreds of flares in the Permian Basis in February through early July in 2020. Researchers found that 11% of flares surveyed had combustion issues, including 5% that were unlit and venting gas.[19] In one of the helicopter surveys it was found that 25% of unlit or partially lit flares identified during a prior survey remained problematic at subsequent surveys. These findings indicate that malfunctioning flares are a recurring and persistent problem.[20] This underscores the need for routine inspections of flares, which can be done as part of regular LDAR, and that ensure minimal downtime, as well as requirements that ensure flares and combustion devices meet strict destruction removal requirements of 98% and are equipped with auto-igniters.

A recent New Mexico Environment Department study had similar findings. Per this study, 2.5% of flares surveyed were venting completely unlit.[21]

Methane is a dangerous and powerful greenhouse gas that is eighty-seven (87) times more potent than carbon dioxide on a molecule per molecule basis in a 20-year timeframe, and up to 36 times more potent over a 100-year time frame.[22] Methane is a short-lived GHG, lasting only approximately a decade.[23] This makes reducing methane emissions critical for achieving short-

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[19] EDF, With Initial Data Showing Permian Flaring on the Rise Again, New Survey Finds Malfunctioning or Unlit Venting Unburned Methane into the Air 1 in 10 Flares, July 22, 2020, https://www.edf.org/media/initial-data-showing-permian-flaring-rise-again-new-survey-finds-1-10-flares-malfunctioning

[20] *Id.*

[21] Kendra Chamberlain, NMED Discovers More Potential Methane Emissions Violations, The NM Political Report website (Jan. 16, 2020), https://nmpoliticalreport.com/2020/01/16/nmed-discovers-more-potential-methane-emission-violations/

[22] Wuebbles, Donald, et al., U.S. Glob. Change Research Program, Climate Science Special Report (CSSR) (fifth order draft) (final clearance June 28, 2017); https://assets.documentcloud.org/documents/3920195/Final-Draft-of-the-Climate-Science-Special-Report.pdf; Myhre, Gunnar, et al., Anthropogenic and Natural Radiative Forcing in: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, at ch. 8, https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf ("Myhre et al. 2013"); Bradbury, James et al., Dep't of Energy, Office of Energy Policy and Systems Analysis, Greenhouse Gas Emissions and Fuel Use within the Natural Gas Supply Chain – Sankey Diagram Methodology, at 10 (July 2015), https://www.energy.gov/sites/prod/files/2015/07/f24/QER%20Analysis%20-%20Fuel%20Use%20and%20GHG%20Emissions%20from%20the%20Natural%20Gas%20System%2C%20Sankey%20Diagram%20Methodology_0.pdf (explaining how the effects of oxidation increase the IPCC's global warming potential values for methane to 87 over a 20-year timeframe an 36 over a 100-year timeframe).

[23] Atmospheric Lifetime and Global Warming Potential Defined, https://www.epa.gov/climateleadership/atmospheric-lifetime-and-global-warming-potential-defined.

term GHG reductions and slowing the rate of climate change.[24] Methane emissions account for approximately 25% of manmade global warming being experienced today,[25] and the oil and gas industry is the largest industrial source of methane emissions.[26] Thus, reducing methane from oil and gas operations is absolutely critical to combating and slowing the rate of climate change

Flaring also contributes to black carbon—another driver of climate change.[27] Black carbon is a major component of airborne particles that are commonly referred to as "soot." Black carbon is a product of incomplete combustion of fossil fuels and biomass, and its absorption properties make it a warming influence on climate. It is also harmful to human health when inhaled.[28]

b. Flaring and venting contribute to Ozone Pollution

Flaring emits oxides of nitrogen ("NOx") and volatile organic compounds ("VOCs") that contribute to ground-level ozone and cause adverse health impacts. Ground-level ozone is a dangerous air pollutant. Exposure to elevated concentrations of ozone lead to serious, adverse health effects, including asthma, increased emergency room visits, and premature death - impacts that are particularly severe in sensitive populations, like children and the elderly.[29] Ozone also causes direct harm to the environment by impeding plant growth and vitality and decreasing crop yield.[30] Air quality in the six counties in New Mexico is dangerously close to failing to meet federal health-based standards for ozone.[31] These counties represent 72.9% of wells and 83.4% of production, based on EDF preliminary analysis.[32] Much more must be done to protect healthy air and to protect against air quality degradation in New Mexico. Robust rules that limit flaring are essential to protecting air quality.

c. Flaring and venting contribute to Regional Haze

In addition to being an ozone precursor, the NO_X pollution emitted from flares contributes to poor visibility conditions in Class I areas (national parks and wilderness areas) and nitrogen deposition in sensitive ecosystems. NM is home to nine mandatory Class I federal areas protected by the Regional Haze Program that will benefit from improved visibility as a result of decreases in flaring.[33]

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[24] Smith, Kirk R., et al., U.S. Climate Change Science Programs Synthesis and Assessment Product 3.2, Climate Projections Based on Emissions Scenarios for Long-Lived and Short Lived Radiatively Active Gases and Aerosols at 64-65 (2008).

[25] Myhre et al. 2013; calculation by EDF Methane: The Other Important Greenhouse Gas, https://www.edf.org/methane-other-important-greenhouse-gas.

[26] *Id.*

[27] Schwartz, et al., Black Carbon Emissions from the Bakken Oil and Gas Development Region, *Environ. Sci. Technol. Lett.* 2015, 2, 10, 281-285 (Sept. 3, 2015), https://pubs.acs.org/doi/abs/10.1021/acs.estlett.5b00225

[28] CIRES, Emissions of Black Carbon from Flaring in the Bakken Oil and Gas Fields (Sept. 9, 2015).

[29] 80 Fed. Reg. 65292, 65322 (Oct. 26, 2015).

[30] *Id*. at 65369, 65370.

[31] New Mexico Environmental Improvement Board, Preamble, https://www.env.nm.gov/new-mexico-methane-strategy/wp-content/uploads/sites/15/2020/07/Draft-Ozone-Precursor-Rule-for-Oil-and-Natural-Gas-Sector-Version-Date-7.20.20.pdf

[32] EDF analysis of 2017 design values.

[33] https://www.env.nm.gov/air-quality/reg-haze/

d. Flaring and Venting Release Air Toxics and Particulate Matter

Flaring also releases hazardous air pollutants ("HAPs") including known carcinogens such as benzene and particulate matter.[34] HAPs and particulate matter contribute to cancer and other serious health effects, including damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory and other health problems, including premature death.[35]

III. Technical Comments

1. Venting Must Be Prohibited Unless Necessary for Safety or During Emergency or Where Explicitly Authorized or Allowed by OCD, NMED or Federal law

In order to prevent waste and minimize the release of harmful pollutants, OCD's rules must clearly reflect the following hierarchy of actions:

- First, operators must capture, re-inject, or put to beneficial use all natural gas encountered during pre-production and production activities
- Second, operators must flare, rather than vent, any natural gas that cannot be captured, injected, or put to beneficial use
- Third, venting is only permissible in limited, explicitly enumerated instances such as where necessary for safety, temporarily during an emergency, or where authorized by OCD or another agency such as during downhole liquids unloading activities. Where venting is allowed, operators must use all reasonable efforts to minimize the amount and duration of venting.

We have suggested revisions to 19.15.27.8 that reflect these principles.

Second, we recommend OCD add a requirement to Section 19.15.27.8.D. that requires operators combust, not vent, emissions during initial flowback. Current EPA requirements do not require combustion during initial flowback. To address this gap in the federal reduced emission completion requirements the Colorado Air Pollution Control Division has proposed a new requirement that requires operators to control emissions during initial flowback by 95%. Operators that use a combustion device to meet the control requirements must use a combustion device with a design destruction efficiency of at least 98% for hydrocarbons. In addition, owners or operators must use enclosed flowback vessels.[36]

3. OCD must prohibit routine flaring from new and existing wells.

We recommend a number of revisions to the rule to reflect the fact that routine flaring is impermissible waste and needless pollution.

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[34] 81 Fed. Reg. 83008, 83069 (Nov. 18, 2016).
[35] EPA website, Health and Environmental Effects of Particulate Matter (PM), https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm; EPA website, Health and Environmental Effects of Hazardous Air Pollutants, https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants
[36] 5 C.C.R. 1001-9, Section D.VI.D.1.a.(i) (proposed July 30, 2020)

We have suggested revisions to 19.15.27.8.E.p. to make it clear that flaring is prohibited unless specifically allowed by the rules. OCD should not allow any routine flaring from wells that are permitted after the effective date of the proposed rules. Thus, OCD must deny an APD in the event an operator fails to submit a gas management plan demonstrating that the operator "will have adequate natural gas takeaway capacity" or otherwise have a plan for using or injecting natural gas.[37] We have suggested conforming changes to 19.15.27.8.E to reflect this prohibition on routine flaring from new wells.

For operators with existing wells at the time OCD finalizes its rules, we propose operators may seek a one-time approval from the Director to flare for up to six months. Operators of existing wells should be held to the same standard as operators of new wells. However, in recognition of the fact that existing well operators may need some time to execute a plan for capturing gas we recommend a six-month lead in time. That should provide operators sufficient time to make arrangements to use onsite gas capture technologies, inject the gas, connect to a pipeline. After this time period operators must shut in wells if they are unable to capture, rather than waste, the gas. Operators seeking permission to flare from existing wells must submit a gas management plan demonstrating their plan to capture, inject or put to beneficial use natural gas as part of their request for approval to flare in order to demonstrate to OCD the operator's commitment to ending routine flaring, and plan for how to do so.

4. 98% Capture Goal

EDF supports the proposed statewide 98% natural gas capture requirement as an important pillar of OCD's multi-pronged approach to ending wasteful venting and flaring. However, this alone is not sufficient to reduce flaring in a meaningful way. In 2019, eighteen operators in New Mexico flared less than 2% of their gas, according to EDF's analysis of reported flaring data, showing that further reductions are achievable. Accordingly, we have recommended a clear prohibition on routine flaring coupled with enforceable gas management plans.

OCD should, however, make explicit the regulatory consequences for operators that fail to meet the capture requirements. Fines, oil production curtailment and shut-ins should all be available to the Division in order to enforce the capture requirements.

We are also concerned that statewide application of the gas capture targets may result in flaring hotspots near disadvantaged communities. We request additional stakeholder discussions to ascertain the proper geographic basis for this requirement (i.e., basin wide, pool, by lease, etc.)

5. Flares

[37] See proposed revisions to NMAC § 19.15.27.9.D(6).

The OCD rules should specify a design destruction efficiency of at least 98% for all flares and combusters. COGCC draft rules require this destruction efficiency,[38] as do Colorado AQCC rules.[39]

To address the problem of partially lit and unlit flares identified in recent EDF and NMED flyovers of the Permian, the gas management plan should include a certification by an engineer that all flares or combustors will have sufficient and consistent gas flow and heat content to achieve the 98% design destruction efficiency.

Lastly, also in recognition of the results of the recent flyover studies, all flare stacks should be retrofitted with an automatic ignitor or continuous pilot expeditiously. We suggest striking the provision that ties the requirement to retrofit an existing flare at a low producing well with an occurrence of replacement as this could delay the implementation of this important provision for years.

6. ALARM

We have suggested deleting the provision in the rule that allows operators to obtain a credit for fixing leaks detected with advanced leak and repair monitoring methods. First, we understand that this provision is intended to fill in gaps left by the NMED rule with respect to leak detection requirements. We have suggested improvements to the NMED rule that address these gaps; namely, deletion of the stripper well and low-producing well exemptions that carve out the vast majority of wellheads, production sites and associated emissions from the NMED LDAR (and other control) requirements. With this significant flaw in the NMED proposal remedied, there is less of a need for a provision like ALARM in the OCD rule. Second, the rule does not provide any clear or verifiable method for operators to estimate vented gas due to detected leaks for purposes of obtaining a credit. Indeed, we are concerned that verifying the amount of gas lost due to observable leaks will prove quite challenging, even to a third-party verifier. Advanced leak detection methods do not quantify leaks over specific periods of time and from specific sources (such as a thief hatch on a storage tank). Rather, some (but not all) advanced forms of leak detection can quantify site-level emissions. However, the high temporal variability of leaks precludes a simple before leak and after repair comparison, as envisioned by the draft rule. Thus, it will be up to the operator to estimate the amount leaked for which it claims a credit. This is problematic as the methods for estimating vented gas amounts can be quite uncertain, and as noted above, any estimates must be verified in order for OCD to reasonably rely on them. Last, while we support voluntary leak detection efforts, we see no role for such efforts to be included in a regulatory framework.

IV. Conclusion

We commend OCD on proposing a strong, multi-pronged draft rule to reduce waste and methane emissions from venting and flaring. The proposal is a significant improvement on the current regulatory framework. However, improvement is necessary to comport with the waste

[38] Colorado Oil & Gas Conservation Commission, Draft Rule 903.d.(5) (June 26, 2020).
[39] 5 CCR 1001-9, Part D, §§ I.D.3.a. (Storage Tank Control Strategy), II.C.1 (Emission reduction from storage tanks at oil and gas exploration and production operations, well production facilities, natural gas compressor stations, and natural gas processing plants.).

prevention mandate in OCD's enabling statute and to meet the Governor's goal of promulgating leading methane rules. We urge OCD to adopt the suggested revisions in our attached redline in order to fulfill these important duties.

Thank you for consideration of these comments. We look forward to working with OCD to strengthen and finalize these rules.

Sincerely,

Jon Goldstein
Director, Regulatory & Legislative Affairs
EDF

Elizabeth Paranhos
Attorney Consultant, EDF

Michael Casaus
State Director
The Wilderness Society

Judy Calman
Director of Policy
Audubon New Mexico

Emily Wolf
New Mexico Senior Program Coordinator
National Parks Conservation Association

OCD DRAFT
July 20, 2020

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AN GAS
PART 27 VENTING AND FLARING OF NATURAL GAS

19.15.27.1 ISSUING AGENCY: Oil Conservation Commission.
[19.15.27.1 NMAC – N, xx/xx/xx]

19.15.27.2 SCOPE: 19.15.27 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.27.2 NMAC – N, xx/xx/xx]

19.15.27.3 STATUTORY AUTHORITY: 19.15.27 NMAC is adopted pursuant to the Oil and Gas Act, Section 70-2-6, Section 70-2-11 and Section 70-2-12 NMSA 1978.
[19.15.27.3 NMAC – N, xx/xx/xx]

19.15.27.4 DURATION: Permanent.
[19.15.27.4 NMAC – N, xx/xx/xx]

19.15.27.5 EFFECTIVE DATE: [DATE], unless a later date is cited at the end of a section.
[19.15.27.5 NMAC – N, xx/xx/xx]

19.15.27.6 OBJECTIVE: To regulate the venting and flaring of natural gas from wells and production equipment and facilities to prevent waste and protect correlative rights, public health and the environment.
[19.15.27.6 NMAC – N, xx/xx/xx]

19.15.27.7 DEFINITIONS: Definitions shall have the meaning specified in 19.15.2 NMAC except as specified below.

~~**A. "ALARM"** means advanced leak and repair monitoring.~~

B. "Average daily production" has the same meaning as in Subsection A of 19.15.6.7 NMAC.

C. "AVO" means audio, visual or olfactory.

D. "Completion operations" means the period that begins with the initial perforation of the well in the completed interval and concludes on the earlier of 30 days after commencement of initial flowback or when permanent production equipment is in use at the well.

E. "Drilling operations" means the period that begins when a well is spud and concludes when casing and cementing has been completed and casing slips have been set to install tubing head in the well.

F. "Emergency" means a temporary, infrequent and unavoidable event in which the loss of natural gas is uncontrollable or necessary to avoid a risk of an immediate and substantial

adverse impact on safety, public health or the environment, but does not include an event arising from or related to:

(1) the operator's failure to install appropriate equipment of sufficient capacity to accommodate the anticipated or actual rate and pressure of production;

(2) the operator's failure to limit production when the production rate exceeds the capacity of the related equipment or natural gas gathering system as defined in 19.15.28 NMAC, or exceeds the sales contract volume of natural gas;

(3) scheduled maintenance;

(4) the operator's negligence, including a recurring equipment failure; or

(5) two or more emergencies experienced by the operator within the preceding 60 days, unless the division determines the operator could not have reasonably anticipated the current event and it was beyond the operator's control.

G. **"Flare stack"** means an appropriately designed stack equipped with a burner used for the combustion and disposal of natural gas.

H. **"Flare" or "Flaring"** means the controlled combustion of natural gas in a device designed for that purpose.

I. **"Gas-to-oil ratio (GOR)"** for purposes of 19.15.27 NMAC means the ratio of natural gas to oil in the production stream expressed in standard cubic feet of natural gas per barrel of oil.

J. **"Initial flowback"** means the period during completion operations that begins with the onset of flowback and concludes when it is technically feasible for a separator to function.

K. **"Malfunction"** means a sudden, unavoidable failure or breakdown of equipment beyond the reasonable control of the operator that substantially disrupts operations and requires correction, but does not include a failure or breakdown that is caused entirely or in part by poor maintenance, careless operation or other preventable equipment failure or breakdown.

L. **"N_2"** means nitrogen gas.

M. **"Natural gas"** means a gaseous mixture of hydrocarbon compounds, primarily composed of methane, and includes both casinghead gas and gas as defined in 19.15.2 NMAC.

N. **"Production operations"** means the period that begins on the earlier of 31 days following the commencement of initial flowback or when permanent production equipment is in use at a well and concludes when the well is plugged and abandoned.

O. **"Routine flaring"** is the flaring of natural gas during the normal course of oil and gas operations for reasons other than safety and emergencies and other conditions outside of the control of the operator.

O. **"Separation flowback"** means the period during completion operations that begins when it is technically feasible for a separator to function and concludes on the earlier of 30 days after initial flowback begins or when permanent production equipment is in use at the well or production facility.

P. **"Vent" or "Venting"** means the release of uncombusted natural gas to the atmosphere.

[19.15.27.7 NMAC – N, xx/xx/xx]

19.15.27.8 VENTING AND FLARING OF NATURAL GAS:

A. Venting and flaring of natural gas during drilling, completion or production operations constitutes waste and is prohibited except as authorized below. When non-capture of natural gas is permissible under these rules, operators must flare rather than vent any natural gas that is not captured, except as specifically authorized below. An operator has a general duty to maximize the recovery of natural gas and to minimize the release of natural gas to the atmosphere.

B. Venting and flaring during all operations. The operator must flare rather than vent any gas that is released except:

(1) during an emergency or malfunction, but only to avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment;

(2) to unload or clean-up a well to atmospheric pressure:

(a) if the operator allows the well to vent only so long as necessary to achieve a stabilized rate and pressure;

(b) for liquids unloading by manual purging, when the operator remains present on-site until the end of unloading and takes all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time and minimizes venting to the maximum extent practicable;

(c) for a well equipped with a plunger lift system or an automated control system, when the operator optimizes the operation of the system to minimize the venting of natural gas; or

(d) during downhole well maintenance, if and only when the operator uses a workover rig, swabbing rig, coiled tubing unit, or similar specialty equipment, and minimizes the venting of natural gas to the extent consistent with safe operation and best management practices; and

(3) during the following activities to the extent authorized by applicable state or federal law regulating the emission of hydrocarbons and volatile organic compounds:

(a) gauging or sampling of a storage tank or other low-pressure production vessel;

(b) ~~loading out liquids from a storage tank or other low-pressure production vessel to a transport vehicle~~;

(c) normal operation of a gas-activated pneumatic controller or pump in compliance with all applicable laws and regulations;

(d) normal operation of a storage tank or other low-pressure production vessel in compliance with all applicable laws and regulations, but not including venting from a thief hatch that has not been fully and timely closed or from a seal that has not been maintained on an established schedule;

(e) a bradenhead test, provided it lasts no longer than a thirty-minute continuous period;

(f) a packer leakage test;

(g) a production test that does not exceed 24 hours unless the division requires or approves a longer test period; and

(h) during maintenance activities where it is not technically feasible to reroute the gas back into the gas line, otherwise beneficially use the

Commented [A1]: NMED proposed rules require control so OCD should not allow venting

gas or use a portable flare to combust it; Volume of vented gas shall be minimized to the maximum amount practicable according to best management practices, which may involve flaring down to the lower pressure limit of the combustion device;

(4) from a leak, provided that the operator is in full compliance with all applicable requirements related to leak detection and repair pursuant to State and Federal requirements

(5) when a release of gas is uncontrollable and flaring is prohibited by Federal, State, local or Tribal law, regulation, or enforceable permit term.

C~~B~~. Venting and flaring during drilling operations.

(1) An operator shall comply with the requirements of this section, as well as all other applicable requirements, during drilling operations

(2)~~(1)~~ The operator shall capture or combust natural gas escaping from the well using best available control technologies.

(3)~~(2)~~ A flare stack shall be located at a minimum of 100 feet from the nearest surface hole location and shall be enclosed and equipped with an automatic ignition system or continuous pilot.

(4)~~(3)~~ In an emergency or malfunction, the operator may vent natural gas to avoid a risk of an immediate and substantial adverse impact on safety, public health or the environment. The operator shall

(a) notify the division of the venting or flaring as soon as possible by email, but no more than two hours following discovery of the emergency or malfunction;

(b) make all reasonable efforts to immediately notify members of the public residing, working, or otherwise within 2 miles of the drilling location following discovery of the emergency or malfunction that presents a risk to public health or safety;

(c)~~(b)~~ file a form C-129 no later than 24 hours after commencing to vent or flare pursuant to Subparagraph (4) of Subsection E of 19.15.27.8 NMAC;

(d)~~(c)~~ notify the division and, where the emergency or malfunction presented a risk to public health or safety, members of the public residing, working, or otherwise within 2 miles of the drilling location, as soon as practicable after it stops venting or flaring; and

(e)~~(d)~~ comply with the applicable requirement to report a release pursuant to 19.15.29 NMAC.

C. Venting and flaring during completion and re-completion operations.

(1) An operator shall comply with the requirements of this section, as well as all other applicable requirements, during completion and re-completion operations.

(2)~~(1)~~ During initial flowback, the operator shall route flowback fluids into an enclosed completion or storage tank and commence operation of a separator as soon as it is technically feasible for a separator to function.

(3) During initial flowback operators must collect and control emissions from each enclosed completion or storage tank by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of at least 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons.

(4)~~(2)~~ During separation flowback, the operator shall capture and route recovered natural gas to a gas flowline or collection system, re-inject it into the well or it use on-site as a fuel source or for another purpose that a purchased fuel or raw material would serve.

(5)~~(3)~~ The operator may route recovered natural gas to a flare if routing or using the natural gas as described in Subparagraph (2) of Paragraph C of 19.15.27.8 NMAC poses a risk to safe operation or personnel safety, provided that the flare is equipped with an automatic igniter or continuous pilot.

(6)~~(4)~~ The operator may vent natural gas only if capturing or flaring the natural gas poses a risk to safe operations or personnel safety, and venting is safer than capturing and flaring.

E~~D~~. Venting and flaring during production operations.

(1) Flaring during production operations is prohibited except under the following circumstances:

(a) an Emergency

(b) At wells that have Commenced Production Operations prior to November 2, 2020 that are not connected to a natural gas gathering line, the Operator may request permission from the Director for a one-time exception, not to exceed 6 months, to flare natural gas. Upon demonstration by the Operator that it is technically infeasible to produce a well without flaring the gas the Director, in his or her discretion, may approve a request to flare. Subsequent requests to flare beyond the first request will not be granted. Operators shall submit a gas management plan that contains all information required by 19.15.27.9.D.2., unless the well(s) for which the operator requests an exception are in production. Wells in production at the time of submission of a request to flare do not need to provide information required by 19.15.27.9.D.(2)(c),(d),(h).

(2) (c) ~~except~~ as authorized ~~below~~ in Subparagraph (2) of Subsection ~~D~~ B of 19.15.27.8 NMAC.

~~**(2)** The operator may vent or flare natural gas~~

~~**(a)** to the extent authorized by a valid federally enforceable air quality permit issued by the environment department;~~

~~**(b)** during an emergency or malfunction, but only to avoid a risk of an immediate and substantial adverse impact on safety, public health or the environment;~~

~~**(c)** to unload or clean-up a well to atmospheric pressure,~~

~~**(i)** if the operator allows the well to vent only so long as necessary to achieve a stabilized rate and pressure;~~

~~**(ii)** for liquids unloading by manual purging, when the operator remains present on-site until the end of unloading, takes all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time and takes all reasonable actions to minimize venting to the maximum extent practicable;~~

~~**(iii)** for a well equipped with a plunger lift system or an automated control system, when the operator optimizes the operation of the system to minimize the venting of natural gas; or~~

~~**(iv)** during downhole well maintenance, if and only when the operator uses a workover rig, swabbing rig, coiled tubing unit or similar specialty equipment, and minimizes the venting of natural gas to the extent consistent with safe operation and best management practices; and~~

~~**(d)** during the following activities to the extent authorized by applicable state or federal law regulating the emission of hydrocarbons and volatile organic compounds:~~

~~**(i)** gauging or sampling of a storage tank or other low-pressure production vessel;~~

~~**(ii)** loading out liquids from a storage tank or other low-pressure production vessel to a transport vehicle;~~

~~**(iii)** scheduled repair and maintenance, including blowing down and depressurizing production equipment to perform repair and maintenance;~~

~~**(iv)** normal operation of a gas-activated pneumatic controller or pump;~~

~~**(v)** normal operation of a storage tank or other low-pressure production vessel, but not including venting from a thief hatch that has not been fully and timely closed or from a seal that has not been maintained on an established schedule;~~

~~**(vi)** a bradenhead test;~~

~~**(vii)** a packer leakage test; or~~

~~**(viii)** a production test that does not exceed 24 hours unless the division requires or approves a longer test period.~~

(3) The operator shall conduct an AVO inspection on the frequency specified below to confirm that all production equipment is operating properly and there is no venting except as allowed by Paragraph (2) of Subsection D of 19.15.27.8 NMAC. The operator shall

(a) conduct the AVO inspection weekly ~~during the first year of production~~ at all wells;

~~**(b)** conduct the AVO inspection weekly on a well with an average daily production greater than 10 barrels of oil or 60,000 cubic feet of natural gas;~~

~~**(c)** conduct the AVO inspection once per calendar month, with at least 20 calendar days between inspections, on a well with an average daily production equal to or less than 10 barrels of oil or 60,000 cubic feet of natural gas; and~~

(d) make and keep a record of each AVO inspection for not less than five years and make such record available for inspection by the division upon request.

(4) For venting or flaring during an emergency or malfunction ~~pursuant to Subparagraph (b) of Paragraph (2) of Subsection D of 19.15.27.8 NMAC,~~ the operator shall

(a) notify the division of the venting or flaring by email as soon as possible, but no more than two hours following discovery of the venting or flaring;

(b) make all reasonable efforts to immediately notify members of the public residing, working, or otherwise within 2 miles of the drilling location following discovery of the emergency or malfunction that presents a risk to public health or safety;

(c)~~**(b)**~~ file a form C-129 no later than 24 hours after commencing to vent or flare;

(d)~~**(c)**~~ notify the division and, where the emergency or malfunction presented a risk to public health or safety, members of the public residing, working, or otherwise

within 2 miles of the drilling location, as soon as practicable after the cessation of venting and flaring; and

(d) comply with the applicable requirement to report a release pursuant to 19.15.29 NMAC.

(5) Performance standards for separation, storage tank and flare equipment.

(a) The operator shall design a temporary or permanent separation or storage tank to minimize the natural gas flashing and vapor accumulation.

(b) The operator shall equip a permanent storage tank associated with production operations that is installed after {effective date of rule} with an automatic gauging system to reduce the venting of natural gas.

(c) The operator shall combust all natural gas in a flare stack designed for and operated at maximum efficiency.

(i) A flare stack installed on or after [effective date of rule] ~~May 31, 2021~~ shall be equipped with an automatic ignitor or continuous pilot.

(ii) A flare stack installed before [effective date of rule] ~~June 1, 2021~~ shall be retrofitted with an automatic ignitor or continuous pilot no later than 60 days~~18 months~~ after {effective date of rule}.

(iii) ~~A flare stack located at a well with an average daily production of equal to or less than 10 barrels of oil or 60,000 cubic feet of natural gas shall be retrofitted with an automatic ignitor or continuous pilot if the flare stack is replaced after {effective date of the rule}.~~

(d) A flare stack located at a well spud after {effective date of rule} shall be adequately anchored and located at least 100 feet from the well and storage tanks.

(e) The operator shall inspect a flare stack at least once per week to confirm that it is being properly maintained and operated in conformance with its design, and shall make and keep a record of each inspection for not less than five years and make such records available for inspection by the division upon request.

E. Measurement and reporting of vented and flared natural gas.

(1) The operator shall measure the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations regardless of the reason or authorization for such venting and flaring.

(a) The operator shall install equipment to measure the volume of vented and flared natural gas from a well authorized by an APD issued after May 31, 2021 that has an average daily production greater than 10 barrels of oil or 60,000 cubic feet of natural gas.

(b) Measurement equipment shall be designed in accordance with the accuracy ratings and design standards in 43 C.F.R. § 3175.20.

(c) Measurement equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

(d) For a well that does not require measurement equipment, the operator shall estimate the volume of vented and flared natural gas based on the result of an annual GOR test for that well reported on form C-116.

(e) The operator shall install additional measurement equipment whenever the division determines that the existing measurement equipment or GOR test is not sufficient to measure the volume of vented and flared natural gas.

(2) The operator shall report the lost natural gas for each month on a volumetric and percentage basis on form C-115B.

(a) To calculate the lost natural gas on a volumetric basis, the operator shall deduct the volume of natural gas sold, used for beneficial use, vented or flared during an emergency and not suitable for transportation, from the natural gas produced.

(b) To calculate the lost natural gas on a percentage basis, the operator shall add the volume of natural gas sold, used for beneficial use, vented or flared during an emergency and not suitable for transportation, and divide by sum by the total natural gas produced.

(3) The operator shall report the volume of vented and the volume of flared natural gas separately for each month in each category in this subparagraph on form C-115B, and state whether the reported volume was estimated or measured. The operator shall make and keep records of the measurements and estimates, including how the estimated volumes were calculated, for not less than five years and make such records available for inspection by the division upon request. The categories are

(a) emergency;

(b) non-scheduled maintenance;

(c) equipment malfunction by operator;

(d) equipment malfunction by third party;

(e) drilling operations;

(f) completion operations;

(g) routine equipment repair and maintenance, including blowdown and depressurization;

(h) routine downhole maintenance, including operation of workover rigs, swabbing rigs, coiled tubing units and similar specialty equipment;

(i) pilot gas for combustion devices;

(j) purge gas to test or fuel combustion devices;

(k) manual liquid unloading;

(l) bradenhead tests;

(m) packer leakage tests;

(n) uncontrolled storage tanks;

(o) **for wells permitted before [the effective date of this rule] that have been granted a one-time exception to flare,** insufficient pipeline availability or capacity;

(p) natural gas quality that is not suitable for transportation and processing because of a high percentage of N_2 or H_2S;

(q) venting in excess of the design specifications of pneumatic controllers and pumps as a result of malfunction or improper or infrequent maintenance;

(r) commencing on January 1, 2022, venting as a result of normal operation of pneumatic controllers and pumps, except that

(i) in November 2021, the operator shall report the volume of vented natural gas that it reported to a state or federal agency, as revised to include data from

pneumatic controllers and pumps in use during 2021 that were not included in the 2020 report; and

(ii) an operator who vents or flares less than 500,000 cubic feet per year of natural gas is exempted from this subparagraph;

(s) thief hatches that are not properly closed or maintained; and

(t) other not described above.

(4) The operator shall notify the division of any period of venting and flaring that exceeds eight hours in any 24 hour period and of all venting or flaring attributed to emergency or malfunction of any duration by submitting a form C-129 no later than 24 hours after the commencement of venting and flaring.

(a) The operator's form C-129 shall provide and certify the accuracy of the following information:

(i) operator's name;

(ii) name and type of facility;

(iii) equipment involved;

(iv) compositional analysis of the vented and flared natural gas if the natural gas is vented or flared because the quality that is not suitable for transportation and processing because of a high percentage of N_2 or H_2S;

(v) date and time that venting or flaring occurred;

(vi) measured or estimated volume of vented or flared natural gas;

(vii) cause and nature of venting or flaring;

(viii) steps taken to limit the duration and magnitude of venting or flaring; and

(ix) corrective actions taken to eliminate the cause and recurrence of venting or flaring.

(b) At the division's request, the operator shall provide additional information by the specified date and a certification of the accuracy of the information.

(5) The operator shall report the vented and flared natural gas on a volumetric and percentage basis to all royalty owners in the mineral estate being produced by the well on a monthly basis, and keep such reports for not less than five years and make such records available for inspection by the division upon request.

(6) Upon the environment department's request, the operator shall promptly provide a copy of any form filed pursuant to 20.2.27 NMAC.

[19.15.27.8 NMAC – N, xx/xx/xx]

19.15.27.9 STATEWIDE NATURAL GAS CAPTURE REQUIREMENTS:

A. Statewide natural gas capture requirements. Commencing January 1, 2022, the operator shall reduce the annual volume of vented and flared natural gas on a statewide basis in order to capture ninety-eight percent of the natural gas produced from its wells no later December 31, 2026. The division shall calculate and publish each operator's baseline natural gas capture rate based on the operator's 2021 monthly data reported on form C-115B no later than March 1, 2022. In each calendar year between January 1, 2022 and December 31, 2026, the operator shall increase the percentage of natural gas captured based on the following formula: (2021 baseline loss rate) divided by five.

Commented [A2]: Per our comments we request further stakeholder discussions to ascertain the proper area for application of the gas capture targets to avoid impacting disproportionately impacted communities

(1) The following table provides examples of the formula based on a range of baseline natural gas capture rates.

Baseline Natural Gas Capture Rate	Minimum Required Annual Natural Gas Capture Percentage Increase
90-98%	0-1.6%
80-89%	>1.6-3.6%
70-79%	>3.6-5.6%
0-69%	>5.6-20%

(2) If the operator's baseline capture rate is less than sixty percent, the operator shall develop and submit to the division for approval a plan to meet the minimum required annual capture percentage increase.

(3) ~~An operator that acquires one or more wells from another operator shall comply with its statewide natural gas capture requirements no later than December 1, 2026 unless the division approves a later date.~~

B. Accounting. No later than 45 days after January 1, 2022 and each year thereafter, the operator shall submit a report certifying compliance with the statewide gas capture requirements. The operator's volume of vented and flared natural gas shall be counted as produced natural gas and excluded from the volume of natural gas sold or used for beneficial use in the calculation of its statewide natural gas capture requirements, except for the following.

(1) The operator may exclude from the volume of produced natural gas the volume of vented and flared natural gas pursuant to Subparagraph (a) of Paragraph (3) of Subsection E of 19.15.27.8 NMAC for which the operator timely filed, and the division approved, a form C-129.

(2) Subject to the division's approval, the operator may exclude natural gas from the volume of produced natural gas, specifically Subparagraph (p) of Paragraph (3) of Subsection E of 19.15.27.8 NMAC, provided that the operator identified the volume of natural gas, the reasons that the operator vented or flared the natural gas rather than capturing it and any other relevant information requested by the division.

(3) Subject to the division's approval, the operator may exclude natural gas that is beneficially used from the volume of produced natural gas, specifically Subparagraph (r) of Paragraph (3) of Subsection E of 19.15.27.8 NMAC, provided that the operator identified the volume of vented natural gas, the reasons that the operator vented the natural gas rather than capturing it and any other relevant information requested by the division.

~~**(4)** The operator may obtain a credit against its reported volume of lost natural gas by using a division-approved ALARM technology to monitor, discover, report, isolate and make repairs to prevent leaks of natural gas. To obtain a credit, the operator shall~~

~~**(a)** use ALARM technology at least two times per calendar year;~~

~~**(b)** make the initial discovery using the ALARM technology; and~~

~~**(c)** isolate the leak of natural gas from its own well within 48 hours of discovery and make the repair within 15 days of discovery.~~

~~**(5)** The operator may use a credit against its reported volume of lost natural gas loss no more than once in any 13 month period following the division's approval of such credit.~~

~~**(6)** The credit shall be determined as follows:~~

~~**(a)** a credit of thirty percent of the volume of natural gas discovered and isolated within 48 hours of discovery and timely repaired if the leak occurs at the operator's well or production facilities;~~

~~**(b)** an additional credit of ten percent if the operator uses ALARM technology no less than four times per year; and~~

~~**(c)** an additional credit of ten percent if the operator uses ALARM technology and, as a result of such use, provides credible information to an unaffiliated operator and the division that the unaffiliated operator's well has a leak of natural gas within five business days of discovery.~~

~~**(7)** To obtain a credit, the operator shall submit an application to the division describing~~

~~**(a)** the ALARM technology;~~

~~**(b)** the date of monitoring, discovery, isolation and repair;~~

~~**(c)** the estimated volume of the natural gas lost and isolated after the date of discovery;~~

~~**(d)** a summary of the actions the operator took to isolate and repair the leak;~~

~~**(e)** visual documentation of the discovery and isolation;~~

~~**(f)** a certification that the operator did not know or have reason to know of the leak of natural gas before the discovery using ALARM technology;~~

~~**(g)** if applicable, the dates of each use of the ALARM technology; and~~

~~**(h)** if applicable, a copy of the information provided to the unaffiliated operator.~~

~~**(8)** Credits shall be used only if approved by the division, and only by the operator, and cannot be traded or used by another operator.~~

C. Violation of natural gas capture requirement. The division shall not approve an APD if the operator is in violation of the natural gas capture requirement. Further, the division may pursue any action authorized by law against an operator that does not meet a statewide natural gas capture requirement, including to curtail a production allowance, order well shut-in, ~~withhold or deny a drilling permit,~~ suspend or revoke an authorization to transport or assess a civil penalty.

D. Natural gas management plan.

(1) After May 31, 2021, the operator shall file a natural gas management plan with each APD. The operator may file a single natural gas management plan for multiple wells or recompletions drilled from a single well pad or that will be connected to a central delivery point when those multiple wells or recompletions are to be completed concurrently or are reasonably foreseeable.

(2) The natural gas management plan shall describe the specific actions that the operator will take at each well to prohibit routine flaring and meet its statewide natural gas capture requirements, ~~reduce waste, eliminate venting and flaring of natural gas to the greatest extent possible and~~ maximize the efficient, safe and economic recovery of the state's oil and natural gas, and avoid or minimize the surface impacts of oil and gas infrastructure. The natural gas management plan for the well or wells, shall include the following information for each well:

(a) operator's name;

(b) name, API number, location and footage;

(c) drilling, completion and anticipated first production date;

(d) anticipated natural gas volume production in units of MCFD annually for the first three years of production;

(e) existing and reasonably foreseeable wells that either are connected or are anticipated to connect to the existing natural gas gathering system contracted or anticipated to contract to gather the natural gas from the well or wells included in the APD.

(f)~~**(e)**~~ existing or reasonably foreseeable natural gas gathering system contracted or anticipated to contract to gather the natural gas including

(i) natural gas gatherer's name;

(ii) name and location of the natural gas gathering system;

(iii) distance in feet of pipeline required to connect to the natural gas gathering system;

(iv) name and location of the natural gas processing plant contracted or anticipated to contract to process the natural gas;

(v) maximum daily capacity of the natural gas pipeline and compressors;

(vi) current throughput of the natural gas pipeline and compressors;

(vii) anticipated daily capacity of the natural gas pipeline and compressors on the date of first sale;

(viii) anticipated throughput of natural gas pipeline and compressors on the date of first sale;

(ix) reliability of the natural gathering system, including the average annual system downtime; and

(x) other issues and expansion plans affecting the gathering of natural gas in the general area;

(g)~~**(f)**~~ detailed map depicting each existing, planned and anticipated natural gas gathering system in the general area, including

(i) natural gas gatherer's name;

(ii) gathering pipelines;

(iii) approximate route of gathering pipeline connecting the well to the natural gas gathering system;

(iv) reliability of the natural gas gathering system, including the average annual system downtime; and

(v) name and location of the natural gas processing plant receiving or anticipated to receive natural gas from the natural gas gathering system;

(h)~~**(g)**~~ detailed flowback strategy, including

(i) temporary equipment to be used during flowback to reduce the venting of natural gas, including sand traps and settling tanks; and

(ii) measures to be used to flare natural gas if such natural gas cannot be routed immediately and directly to a sales line;

(i)~~**(h)**~~ **a detailed plan**~~options~~ for the beneficial use of natural gas that cannot be sold ~~connected~~ to a natural gas gathering system,~~; and~~ if the operator determines, based on the available information at the time of submittal, that a natural gas gathering system

may ~~will~~ not be available or may ~~will~~ not have capacity on the date of first production from the well to transport one hundred percent of the anticipated volume of natural gas produced the operator shall submit a venting and flaring plan, with the natural gas management plan, containing a detailed analysis of the potential alternative uses for the natural gas until a gathering system is available that describes how the operator will avoid venting and flaring natural gas from the well including

(i) power generation on lease;
(ii) power generation for grid;
(iii) compression on lease;
(iv) liquids removal on lease;
(v) reinjection for underground storage;
(vi) reinjection for temporary storage;
(vii) reinjection for enhanced oil recovery; and
(viii) other alternative uses approved by the division.

(j) a certification by an engineer that all flares or combustors will have sufficient and consistent gas flow and heat content to achieve the 98% design destruction efficiency.

(3) After the operator either submits or receives approval of the natural gas management plan, if the natural gas gathering system becomes unavailable or will not have capacity to transport one hundred percent of the production from the well, no later than 30 days after becoming aware of such information, the operator shall submit for the division's approval a revised venting and flaring plan to the division containing the information specified above in Paragraph (2) of Subsection D of 19.15.27.9 NMAC.

(4) The operator shall certify the following statements:

(a) the operator communicated with one or more operators of natural gas gathering systems in the general area about transporting natural gas from the well;

(b) the operator provided each operator of a natural gas gathering system in the general area with the location; dates of drilling, completion and anticipated first production; and anticipated volume of natural gas production in units of MCFD for the first three years of production of the well; and

(c) the operator determined that there is or will be

(i) a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas on the date of anticipated first production ~~of the~~ for new wells; or

(ii) a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas during the anticipated productive life of the well.

(d) the operator determined that the well is not expected to cause its other wells connected to the existing natural gas gathering system contracted or anticipated to contract to gather the natural gas to vent or flare;

(e) the operator has ceased, prior to the commencement of new drilling operations, or will cease, concurrent with the commencement of new drilling operations, venting or flaring from existing wells under the operator's control that either are connected or could reasonably be connected to the existing natural gas gathering system contracted or anticipated to contract to gather the natural gas; and

(f) the operator reached out to and solicited input from all residences, schools, businesses, hospitals, or public facilities that are lawfully occupied or licensed in accord with federal, tribal, or state law within 2 miles of the proposed well.

(5) The operator shall include a certification from each operator of a natural gas gathering system in the general area stating that

(i) the operator complied with Subparagraphs (a) and (b) of Paragraph (4) of Subsection D of 19.15.27.9 NMAC; and

(ii) the operator of the natural gas gathering system concurs in the operator's determination in Items (i) or (ii) of Subparagraph (c) of Paragraph (4) of Subsection D of 19.15.27.9 NMAC.

(6) If the operator does not make the certifications or submit an adequate venting and flaring plan, or if the division determines that the operator will not have adequate natural gas takeaway capacity at the time a well will be spud, the division ~~may~~ will

(a) deny the APD~~; or~~

~~**(b)** conditionally approve the APD~~.

(7) Once approved, the operator shall implement the natural gas management plan unless and until the operator submits a modified plan meeting the requirements of this section that is approved by the division. The operator may deviate from the approved natural gas management plan only if first approved by the division or, in the event of an emergency, to protect safety, public health, or the environment. If the operator deviates from the natural gas management plan, the division may order the operator to cease operations, comply with conditions on future operations, or shut-in the well.

[19.15.27.9 NMAC – N, xx/xx/xx]