

CLIMATE ADVOCATES AND EDF'S FINAL PROPOSED RULE FOR PART 27

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JUSTIFICATION: This is the definition used by the Colorado Air Quality Control Commission in its completions rule, 5 C.C.R. 1001-9 Part D.VI.A.2.

FH. “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 the tubing head.

GI. “Exploratory well” means a well located in a spacing unit the closest boundary of which is two miles or more from:

(1) the outer boundary of a defined pool that has produced oil or gas from the formation to which the well is or will be completed; and

(2) an existing gathering pipeline as defined in 19.15.28 NMAC.

HJ. “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) except as provided in subparagraph (4), 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) venting or flaring of natural gas for more than four hours after notification that is caused by an emergency, unscheduled maintenance, or malfunction of a natural gas gathering system;

(5) the operator’s negligence, including a recurring equipment failure;

or

(6) three or more emergencies within a single reporting area pursuant to Subsection A of 19.15.27.9 NMAC 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.

IK. “Flare” or “Flaring” means the controlled combustion of natural gas in a device designed for that purpose.

JL. “Flare stack” means a device equipped with a burner used to flare natural gas.

M. “Flowback” means the process of allowing fluids and entrained solids to flow from a well following stimulation, either in preparation for a subsequent phase of treatment or in preparation for cleanup and placing the well into production. Flowback ends when all temporary flowback equipment is removed from service. Flowback does not include drill-out.

JUSTIFICATION: This is the definition used by the Colorado Air Quality Control Commission in its completions rule, 5 C.C.R. 1001-9 Part D.VI.A.4, and is supported with testimony from EDF and Climate Advocates’ experts on our proposed modifications to the provisions governing completions and recompletions. See Justification below for 19.15.27.8.C NMAC.

N. “Flowback Fluid” means the gases, liquids, and entrained solids flowing from a well after drilling or hydraulic fracturing or refracturing.

JUSTIFICATION: This is the definition contained within the Colorado Air Quality Control Commission’s definition of “Flowback” in its completions rule, 5 C.C.R. 1001-9 Part D.VI.A.4, and is supported with testimony from EDF and Climate Advocates’ experts on our proposed modifications to the provisions governing completions and recompletions. See Justification below for 19.15.27.8.C NMAC.

KO. “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.

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LP. “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.

MQ. “Malfunction” means a sudden, unavoidable failure or breakdown of equipment beyond the reasonable control of the operator that substantially disrupts operations, 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.

NR. “N₂” means nitrogen gas.

OS. “Natural gas” means a gaseous mixture of hydrocarbon compounds, primarily composed of methane, and includes both casinghead gas and gas as those terms are defined in 19.15.2 NMAC.

PT. “Production operations” means the period that begins 31 days following the commencement of initial flowback and concludes when the well is plugged and abandoned.

QU. “Producing in paying quantities” mean the production of a quantity of oil and gas that yields revenue in excess of operating expenses.

RV. “Separation flowback” means the period during completion operations that begins when it is technically feasible for a separator to function and concludes no later than 30 days after the commencement of initial flowback.

SW. “Vent” or “Venting” means the release of uncombusted natural gas to the atmosphere.
[19.15.27.7 NMAC – N, xx/xx/xxxx]

19.15.27.8 VENTING AND FLARING OF NATURAL GAS:

A. Venting or flaring of natural gas during drilling, completion, or production operations that constitutes waste as defined in 19.15.2 NMAC is prohibited. The operator has a general duty to maximize the recovery of natural gas and minimize the waste of natural gas through venting and flaring. During drilling, completion and production operations, the operator may vent or flare natural gas only as authorized in Subsections B, C and D of 19.15.27.8 NMAC.

JUSTIFICATION: According to the World Bank, “routine flaring” occurs during the normal production of oil and in the absence of sufficient facilities to utilize gas on site, dispatch it to market, or reinject it. Routine flaring of associated gas, that is, gas that is co-produced with oil, results in the destruction of large quantities of salable gas. It is not due to technological constraints. It is a business practice designed to maximize profits from oil production. As such, it is the epitome of waste. Tr. 1-13-21 at 148:23-149:24 (Teitz).

In 2019, operators in New Mexico reported flaring over 30 billion cubic feet of natural gas. This tremendous volume, which is likely an underestimate, would be enough to supply about 80 percent of New Mexico's households with their home heating and cooking needs. Id. at 150:2-10 (Teitz); Climate Advocates’ Ex. 16, Table 1. Much of this flaring appears to be routine in nature. Indeed, Climate Advocates’ witness, Dr. Thomas Singer, found in his analysis of C-129 forms that operators secured flaring authorizations for wells continuously over periods lasting multiple years and at times over the productive life of a well. Tr. 1-13-21 at 285:12-17, 291:14-300:10 (Singer); Climate Advocates’ Ex. 18, Routine Flaring table.

While overall venting and flaring levels in New Mexico are high, the bulk of the venting and flaring problem, in terms of the absolute volume of gas vented and flared, is concentrated in just a few operators, demonstrating that reducing venting and flaring is achievable. Tr. 1-14-21 at 266:6-24 (Fleischman); Climate Advocates’ Ex. 16, Tables 2, 3, 4, 5a, and 5b. A recent report prepared by GaffneyCline underscores this conclusion. In its June 2020 report, “Tackling Flaring: Learnings from Leading Permian Operators,” GaffneyCline examined the commitment of five operators in the Permian Basin to reduce venting and flaring, finding that routine venting

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and flaring is unnecessary, wasteful, and preventable. Tr. 1-13-21 at 300:11-305:4 (Singer); Climate Advocates' Ex. 8.

Routine flaring is within the control of the operator. It is a matter of planning the timing, placement, and startup of new oil wells in coordination with gathering system capacity in order to take the gas away and sell it. Natural gas well operators don't conduct routine flaring because their operations are designed to capture and sell the gas. Oil well operators are fully capable of eliminating this wasteful practice, using the same types of equipment and without any extraordinary expense. Tr. 1-13-21 at 151:11-24 (Teitz).

Allowing routine flaring to continue effectively subsidizes the industry and shifts the costs onto the public. These costs include lost natural gas royalties, adverse climate impacts, and harmful air quality and public health impacts. The public health impacts are not generally distributed, but often disproportionately harm Native, Hispanic, and other communities suffering from environmental injustices and cumulative air pollution and health concerns. Tr. 1-13-21 at 158:14-159:21 (Teitz). Adella Begaye, a public health nurse who worked for Indian Health Services and a member of the Navajo Nation, testified about the direct harm experienced by the Navajo people as a result of oil and gas development in and around their lands. "The reality," she told the Commission, "is that our lands and people are left with polluted, desecrated land, air, water, and ill health effects, infirmities and co-morbidities that are significantly associated with industry pollution." Tr. 1-8-21 at 7:4-9:1 (Begaye); see Climate Advocates' Ex. 32.

In all circumstances, the operator shall flare rather than vent natural gas except when flaring is technically infeasible or would pose a risk to safe operations or personnel safety, and venting is a safer alternative than flaring.

JUSTIFICATION: The requirement to flare rather than vent, when technically feasible and safe, is a commonsense requirement based on longstanding industry and best practices for safety. Not only is flaring generally safer, it is better to flare rather than vent for climate and local air pollution impacts. Tr. 1-13-21 at 163:5-20 (Teitz). It is "well documented that venting is more destructive to the environment than flaring" and that "flaring is more safe than venting." Tr. 1-14-21 at 110:21-111:17 (Alexander). "[V]enting releases much higher quantities of methane," which is a much more powerful greenhouse gas than carbon dioxide, and "other hydrocarbons including [VOCs] and [HAPs]," which pose health and safety risks. Tr. 1-14-21 at 52:17-53:14 (Lyon). According to New Mexico Oil and Gas Association ("NMOGA") witness Joe Leonard, a Devon Energy Company facilities engineer, flaring is preferable to venting from a safety perspective. As he put it, "From a design stand point it is always my goal to minimize venting . . ." Tr. 1-12-21 at 46:8-47:3 (Leonard).

When the federal Bureau of Land Management ("BLM") was promulgating its 2016 Methane and Waste Prevention Rule, BLM was concerned that failing to require flaring over venting could create an inverse incentive that would encourage operators to vent rather than flare in situations where they might have flared before. Flaring is easy to detect from a distance, while venting requires specialized equipment or closer proximity. BLM was concerned operators not in compliance with the flaring limits might vent rather than flare to reduce the likelihood of attracting regulatory attention. Id. at 165:3-166:13 (Teitz).

The New Mexico Oil Conservation Commission ("Commission") has sufficient legal authority to require flaring over venting given its broad statutory authority to regulate oil and gas operations,

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NMSA 1978, § 70-2-6(B), and to prevent waste, NMSA 1978, § 70-2-11(B), along with specific statutory authorities that it exercises. See NMSA 1978, §§ 70-2-12(B)(21) & (22) (authority to protect “public health and the environment” when regulating nondomestic wastes); id § 70-2-12(B)(3) (authority to prevent fires); id. § 70-2-12(B)(7) (authority to prevent injury to neighboring leases or properties); see also Tr. 1-13-21 at 164:4-9 (Teitz).

*In fact, since at least 1972, the Commission has required by rule that operators flare, not vent, gas prior to connecting to a pipeline or if the Oil Conservation Division (“OCD”) approves an exception and allows operators to dispose of gas 60 days after completion. Almost 50 years ago, the Commission required that, “Pending connection of a well to a gas-gathering facility, or when a well has been excepted from the provisions [prohibiting flaring or venting of gas after 60 days following completion of a well], **all gas produced and not utilized shall be burned . . .**” OCD Ex. 56 (OCC Order No. R-4382, p. 3 (Sept. 1, 1972) (emphasis added)); see discussion between Commission Chair Adrienne Sandoval and NMOGA witness John Smitherman at Tr. 1-11-21 at 48:24-50:4). This nearly five decades-old rule remains codified today at 19.15.18.12.F NMAC, although it will be replaced and updated by the rules the Commission promulgates in this proceeding. See also 19.15.11.11.D NMAC (exercising its authority since at least 2008, the Commission has required operators to install a flare system to safely gather and burn hydrogen-sulfide bearing gas).*

B. Venting and flaring during drilling operations.

(1) The operator shall capture or combust natural gas if technically feasible using best industry practices and control technologies.

(2) A flare stack shall be located at a minimum of 100 feet from the nearest surface hole location unless otherwise approved by the division.

(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 report natural gas vented or flared during an emergency or malfunction to the division pursuant to Paragraph (1) of Subsection G of 19.15.27.8 NMAC.

C. Venting and flaring during completion or recompletion operations.

(1) ~~During initial flowback and following drill-out, the operator shall route flowback fluids into a completion or storage tank and flare rather than vent if technically feasible under the applicable well conditions, and commence operation of a separator as soon as it is technically feasible for a separator to function. must direct all fluids to flowback vessels and collect and control emissions from each flowback vessel on and after the date of initial flowback by routing emissions to an 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.~~

~~(a) Owners or operators must use enclosed, vapor-tight flowback vessels with an appropriate pressure relief system to be used only as necessary to ensure safety.~~

~~(b) Flowback vessels must be inspected, tested, and refurbished where necessary to ensure the flowback vessel is vapor-tight prior to receiving flowback.~~

~~(c) Flares used to control emissions from flowback vessels and pressure relief systems must be equipped with an automatic igniter or continuous pilot.~~

***JUSTIFICATION:** Since 2012, the U.S. Environmental Protection Agency (“EPA”) has recognized that uncontrolled completion operations vent significant quantities of natural gas, making them a large source of air pollution, including methane, volatile organic compounds, and toxic air pollutants, such as benzene and other carcinogens. From the Commission's perspective,*

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venting large quantities of natural gas is a source of waste. In 2012, EPA required hydraulically fractured natural gas wells to use reduced emissions completions (“REC”) equipment, and EPA added hydraulically fractured oil wells in 2016. However, EPA's regulations have not achieved their intent in part due to unintentional loopholes in the regulatory language. Tr. 1-13-21 at 191:2-192:1 (Teitz); id. at 193:13-194:11 (Teitz).

Other jurisdictions have adopted regulations that limit venting from the beginning of flowback. Both the State of Colorado and the Canadian federal government, for hydraulically fractured wells, prohibit operators from venting during initial flowback. In Colorado, the rules require owners and operators to “monitor pollution during pre-production (i.e., drilling through flowback) and early-production and to control emissions from pre-production tanks and vessels (i.e., flowback vessels).” 5 C.C.R. 1001-9 Parts D.VI.D & F.T. Canada’s rules provide that “hydrocarbon gas associated with flowback at a well and upstream oil and gas facility must not be vented during flowback; but must, instead, be captured and added to hydrocarbon gas conservation equipment or hydrocarbon gas destruction equipment.” The only exception Canada provides to the venting prohibition is “if all of the gas associated with flowback at the well does not have sufficient heating value to sustain combustion.” It is reasonable to assume these jurisdictions have determined that equipment is available and operators are able to meet these requirements without raising safety concerns. Tr. 1-13-21 at 194:24-195:18 (Teitz); Climate Advocates’ Ex. 14, Sub-ex. 7 (excerpts from Colorado methane emissions completions/recompletions rules from the Colorado Air Quality Control Commission and Colorado Oil and Gas Conservation Commission).

Mr. Alexander testified that he has personally been involved in completion operations where emissions were safely controlled in the manner contemplated by the Colorado rule. Specifically, Mr. Alexander testified that this can be safely accomplished by directing flowback fluids to an airtight vessel with a pressure relief system, and then routing the gas to a combustion device or vapor recovery unit, as EDF and Climate Advocates have proposed. Tr. 1-14-21 at 91:1-93:4.

OCD’s “final proposed rules,” shared with the parties after the completion of the hearing, changes the language of this provision to require operators to “route flowback fluids into a completion or storage tank and flare rather than vent if technically feasible under the applicable well conditions.” See Notice of Filing of Final Proposed Rules (Jan. 20, 2021). Unfortunately, this language suffers from the same defect as the current OOOOa, in that it allows each operator to determine for itself when it is technically feasible to control emissions. As Ms. Teitz testified, the completion regulations in OOOOa have not worked as intended because these regulations allow unlimited venting until it is “technically feasible for a separator to function.” This language sets up a test that is ambiguous and subject to abuse because when a separator can function depends on the specifications for the separator and whether other equipment is used in conjunction with it. Tr. 1-13-21 at 193:11-194:11 (Teitz). OCD’s latest proposal suffers from a similar defect, in that operators are only required to control emissions upon making a determination that it is feasible in a particular case to do so.

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In the Governor's recent State of the State address, she committed to "enact the country's toughest methane and air pollutant rules in the oil and gas industry."¹ To make good on that commitment, New Mexico must adopt provisions at least as stringent as Colorado's to address emissions during the entire flowback, including initial flowback.

(2) During separation flowback, the operator shall capture and route natural gas from the separation equipment:

(a) to a gas flowline or collection system, reinject into the well, or use on-site as a fuel source or other purpose that a purchased fuel or raw material would serve; or

(b) to a flare if routing the natural gas to a gas flowline or collection system, reinjecting it into the well, or using it on-site as a fuel source or other purpose that a purchased fuel or raw material would serve would pose a risk to safe operation or personnel safety.

(3) If natural gas does not meet gathering pipeline quality specifications, the operator may flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner, provided that:

(a) the flare stack is properly sized and equipped with an automatic igniter or continuous pilot;

***JUSTIFICATION:** Aerial optical gas imaging surveys of flares have found many unlit flares despite being equipped with automatic igniters or continuous pilot lights because the gas flow rate or heat content of the flare is not capable of sustaining a flame. Dr. David Lyon discussed how this can be addressed by ensuring the flare is suitable for achieving a manufacturer's design destruction efficiency throughout the expected range of gas flow rate and heat content. Tr. 1-14-21 at 49:2-50:3 (Lyon).*

(b) the operator analyzes natural gas samples twice per week;

(c) the operator routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met; and

(d) the operator provides the pipeline specifications and natural gas analyses to the division upon request.

D. Venting and flaring during production operations. The operator shall not vent or flare natural gas except:

(1) during an emergency or malfunction;

(2) to unload or clean-up liquid holdup in a well to atmospheric pressure, provided

(a) the operator uses an automated control system, such as a plunger lift, where technically feasible and optimizes the system to minimize the venting of natural gas;

***JUSTIFICATION:** Dr. Lyon estimates that manual liquids unloading events without an automated control system, such as plunger lifts, are responsible for approximately 100,000 metric tons of methane emissions annually. Tr. 1-14-21 at 55:24-56:4. Further, according to Mr. Alexander, the use of automated plunger lifts reduces natural resource waste by increasing production and minimizing emissions, all while using less labor than manual unloading. Tr. 1-14-21 at 97:3-98:19.*

(b) the operator does not vent after the well achieves a stabilized rate and pressure;

¹ <https://nmpoliticalreport.com/2021/01/26/watch-gov-michelle-lujan-grishams-2021-state-of-the-state-address/>.

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(bc) for liquids unloading by manual purging, 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;

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

(d) during downhole well maintenance, 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 that it does not pose a risk to safe operations and personnel safety and is consistent with best management practices;

(3) during the first 12 months of production from an exploratory well, or as extended by the division for good cause shown, provided:

(a) the operator proposes and the division approves the well as an exploratory well;

(b) the operator is in compliance with its statewide gas capture requirements; and

(c) within 15 days of determining an exploratory well is capable of producing in paying quantities, the operator submits an updated form C-129 to the division, including a natural gas management plan and timeline for connecting the well to a natural gas gathering system or as otherwise approved by the division. If it is not possible for the operators to determine if a well is capable of producing in paying quantities within 60 days, the operator may seek approval for an extension of time, not to exceed 12 months; or

JUSTIFICATION: Shortening the time in which operators are permitted to vent and flare from exploratory wells will reduce waste. According to Mr. Alexander, in practice, operators tend to take as much time as provided to determine whether an exploratory well is capable of producing in paying quantities and, in most circumstances, 12 months is in excess of what is needed to evaluate an exploratory well. Allowing operators a shorter time period, such as 60 days, and allowing an exception for additional time when technical evidence shows it is necessary, will help prevent wasted resources. Tr. 1-14-21 at 100:17-101:20 (Alexander).

(4) during the following activities unless prohibited by applicable state or federal law, rule, or regulation for the emission of hydrocarbons and volatile organic compounds:

(a) gauging or sampling 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) repair and maintenance, including blowing down and depressurizing production equipment to perform repair and maintenance;

(d) normal operation of a gas-activated pneumatic controller or pump;

(e) normal operation of a storage tank or other low-pressure production vessel, but not including venting from a thief hatch, located on a tank routed to a flare or control device, that is not properly closed or maintained on an established schedule;

(f) normal operation of dehydration units and amine treatment units;

(g) normal operations of compressors, compressor engines, and turbines;

(h) a bradenhead test taking no longer than 30 minutes, if practicable;

JUSTIFICATION: Without time limits on the length of a bradenhead test, as EDF's technical expert testified, natural gas can be unnecessarily vented because the operator performing the test may attend to other tasks before returning to end the bradenhead test. Operators with bradenhead tests that actually take longer than 30 minutes can provide a justification for the length of the bradenhead test. Tr. 1-14-21 at 101:21-102:13 (Alexander).

(i) a packer leakage test;

(j) a production test lasting less than 24 hours unless the division requires or approves a longer test period;

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(k) when natural gas does not meet the gathering pipeline specifications, provided the operator analyzes natural gas samples twice per week to determine whether the specifications have been achieved, routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met and provides the pipeline specifications and natural gas analyses to the division upon request; or

(l) Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities from the pipeline or equipment.

E. Performance standards for separation, storage tank and flare equipment.

(1) The operator shall design completion and production separation equipment and storage tanks for maximum anticipated throughput and pressure to minimize waste.

(2) The operator of a permanent storage tank associated with production operations that is routed to a flare or control device installed after {effective date of rule} shall equip the storage tank with an automatic gauging system that reduces the venting of natural gas.

(3) The operator shall combust natural gas in a flare stack that is properly sized, designed, and operated to maximize flare combustion efficiency.

(a) A flare stack installed or replaced after May 31, 2021 shall be equipped with an automatic ignitor or continuous pilot.

(b) A flare stack installed before June 1, 2021 shall be retrofitted with an automatic ignitor, continuous pilot, or technology that alerts the operator that the flare may have malfunctioned no later than ~~18-6~~ months after {effective date of rule}.

(c) A flare stack located at a well or facility, with an average daily production of equal to or less than 60,000 cubic feet of natural gas shall be equipped with an automatic ignitor or continuous pilot ~~if the flare stack is replaced~~ no later than 612 months after {effective date of the rule}.

JUSTIFICATION: Requiring stripper wells to retrofit flares with an automatic ignitor or continuous pilot light will reduce methane emissions because, according to Dr. Lyon, these facilities also have issues with flares going out. Shortening the time to retrofit equipment with automatic ignitors or continuous pilot lights will result in lower methane releases. Dr. Lyon testified that according to his research, this equipment is available from multiple vendors such that operators should not have trouble purchasing it. Tr. 1-14-21 at 50:8-51:3. NMOGA, on the other hand, claims operators need more time, but offered no evidence in support. See OCD Ex. 2C, item 47.

Unlit flares have recently been identified as a very significant source of methane emissions, and they are just as likely to occur at stripper wells as at higher production wells. In fact, they may be more likely to vent for longer periods at stripper wells, which are less frequently serviced than higher producing wells. Tr. 1-14-21 at 216:2-20, 217:23-218:8 (McCabe). Moreover, equipment to retrofit flares with continuous pilot lights or automatic ignitors is readily available. Tr. 1-14-21 at 50:8-51:3 (Lyon). While the cost of retrofits may be relatively larger for small operators, many stripper wells are owned by large companies with ample resources. Thus, while there may be some justification for OCD to provide additional time for smaller operators to retrofit existing flares, there is no justification for an indefinite extension until the equipment is replaced entirely. Tr. 1-14-21 at 50:22-51:3 (Lyon); id. at 119:6-16 (Alexander). Nor is there a direct linkage between stripper wells and operator resources, such that operators of stripper wells should automatically be granted such an indefinite extension. See Climate Advocates' Ex. 33. And 34. We suggest a possible middle ground of providing additional, but not unlimited time, for stripper well operators to retrofit their flares.

(4) A flare stack constructed after {effective date of rule} shall be securely anchored and located at least 100 feet from the well and storage tanks unless otherwise approved by the division.

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(5) The operator shall conduct an AVO inspection on the frequency specified below to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.

(a) During an AVO inspection the operator shall inspect all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated piping to identify defects, leaks, and releases by:

(i) visually inspecting externally for cracks and holes; loose connections; leaks; broken and missing caps; broken, damaged seals and gaskets; broken, missing and open hatches; broken, missing and open access covers and closure devices; and to ensure a flare stack is operating in conformance with its design;

(ii) listening for pressure and liquid leaks; and

(iii) smelling for unusual and strong odors.

(b) The operator shall conduct an AVO inspection weekly:

(i) during the first year of production; and

(ii) on a well or facility with an average daily production greater than 60,000 cubic feet of natural gas.

(c) The operator shall conduct an AVO inspection weekly if it is on site, and in no case less than once per calendar month with at least 20 calendar days between inspections:

(i) on a well or facility with an average daily production equal to or less than 60,000 cubic feet of natural gas; and

(ii) on shut-in, temporarily abandoned, or inactive wells.

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

(6) Subject to the division's prior written approval, the operator may use a remote or automated monitoring technology to detect leaks and releases in lieu of an AVO inspection.

F. Measurement of vented and flared natural gas.

(1) The operator shall measure or estimate the volume of natural gas that it vents, flares, or beneficially uses during drilling, completion, and production operations regardless of the reason or authorization for such venting or flaring.

(2) The operator shall install equipment to measure the volume of natural gas vented or flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 31, 2021 that has an average daily production greater than 60,000 cubic feet of natural gas.

(3) Measuring equipment shall conform to an industry standard such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares.

(4) Measuring 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.

(5) If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, the operator may estimate the volume of vented or flared natural gas using a methodology that can be independently verified.

(6) For a well that does not require measuring 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 to allow the division to independently verify the volume, rate, and heating value of the flared natural gas.

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

G. Reporting of vented or flared natural gas.

(1) Venting or flaring caused by an emergency, a malfunction, or of long duration.

(a) The operator shall notify the division of venting or flaring that exceeds 50 MCF in volume and either results from an emergency or malfunction, or lasts eight hours or more cumulatively within any

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24-hour period from a single event by filing a form C-129 in lieu of a C-141, except as provided by Subparagraph (d) of Paragraph (1) of Subsection G of 19.15.27.8 NMAC, with the division as follows:

(i) for venting or flaring that equals or exceeds 50 MCF but less than 500 MCF from a single event, notify the appropriate division district office in writing by filing a form C-129 no later than 15 days following discovery or commencement of venting or flaring;

(ii) for venting or flaring that equals or exceeds 500 MCF or otherwise qualifies as a major release as defined in 19.15.29.7 NMAC from a single event, notify the appropriate division district office verbally or by e-mail as soon as possible and no later than 24 hours following discovery or commencement of venting or flaring and provide the information required in form C-129. No later than 15 days following the discovery or commencement of venting or flaring, the operator shall file a form C-129 that verifies, updates, or corrects the verbal or e-mail notification; ~~and~~

(iii) for venting and flaring that qualifies as a major release as defined in Subparagraphs (a), (c), and (d) of Paragraph (2) of Subsection A of 19.15.29.7 NMAC, the operator shall use best efforts to notify all members of the public whose health, safety or property are endangered; and

***JUSTIFICATION:** There are homes, schools, and businesses located close to oil and gas wells and infrastructure that are at risk from major venting and flaring events from those operations. When venting natural gas spikes because of an emergency, malfunction, or other reason, people living and working nearby need and deserve to know in real time so that they can minimize their exposure. Under both 19.15.29 and 19.15.27.8.G(1)(a)(ii) NMAC, operators are already required to determine whether a release results in a fire, may with reasonable probability endanger public health, or substantially endangers property or the environment. Once operators make that determination, they should be required to use best efforts to notify members of the public whose health or property is put at risk by their operations. Tr. 1-13-21 at 313:6-314:17 (Singer).*

Indeed, Climate Advocates' witness Kendra Pinto, who works for Diné C.A.R.E., a party in this proceeding, lives near oil and gas operations. She told the Commission about the time, in 2016, that a well located about five miles from her home exploded loudly and burned for about five days. She and her family had no protocol to follow in such an emergency. The operator never gave Ms. Pinto, her family, or anyone else living near as far as she knows any information on the cause of the explosion or potential dangers to her family and community. She believes she should have been provided information at the time whether the explosion and fire presented a direct threat to them. Tr. 1-14-21 at 198:21-199:25 (Pinto).

OCD claims that other entities, such as local governments and emergency responders, are better equipped to provide notice to the public. OCD Ex. 4C, p. 7, item 68. But OCD offered no evidence that these entities would have any information whatsoever that such releases occur, the nature of the releases, or the potential harm to community members living nearby. This is information peculiarly within the knowledge of the operator. And there is no evidence that any of those local entities gave Ms. Pinto, her family, or her community notice of the oil and gas explosion near their homes or the danger it represented.

OCD argues for the first time in rebuttal Exhibit 4C, submitted late January 14, 2021, that notice to the public is not a "logical outgrowth" of its proposed rule. Id. This argument has no merit. OCD's proposed rule itself requires operators to notify OCD of a major release. A natural outgrowth of this notification requirement is a requirement to notify the public of the release and the dangers it poses. Indeed, OCD had actual notice that notice to the public would be proposed in this proceeding. In comments to OCD's proposed July 2020 draft rule, Western Environmental Law Center specifically proposed that operators give members of the public

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notice of potential harm. WELC Comment Ltr., pp. 14-15 (Sept. 16, 2020) at blob:resource://pdf.js/0315071b-4b9a-43a8-a6b0-0fda870caf9d#filename=%5BEXT%5D%20Re%20WELC%20et%20a1%20Waste%20Rule%20Comments.pdf.

- notify the division by filing a form C-129.
- (b) The operator shall provide and certify the accuracy of the following information in the form C-129:
- (i) operator's name;
 - (ii) name and type of facility;
 - (iii) equipment involved;
 - (iv) compositional analysis of vented or flared natural gas that is representative of the well or facility;
 - (v) date(s) and time(s) that venting or flaring was discovered or commenced and terminated;
 - (vi) measured or estimated volume of vented or flared natural gas;
 - (vii) cause and nature of venting or flaring, as identified in the venting and flaring categories set forth in Paragraph (2) of Subsection G of 19.15.27.9 NMAC;
 - (viii) steps taken to limit the duration and magnitude of venting or flaring including well shut in, production curtailed, work expedited, upset condition resolved, and other; and
 - (ix) corrective actions taken to eliminate the cause and recurrence of venting or flaring, including well connected to sales line, compression installed, equipment replaced, maintenance procedure or schedule revised, and other.

***JUSTIFICATION:** The new reporting requirements for the C-129 forms require some items of information in an open-ended manner that will make review and analysis of C-129 information by OCD and the public difficult or impossible given the large number of producing wells and C-129 forms that will be submitted. Providing specific response categories in the rule would clarify and reduce reporting effort for operators as well as improve the information's quality and usability.*

19.15.27.8.G(1)(b)(vii) NMAC requires operators to report the cause and nature of venting and flaring, but does not set forth any categories to specifically identify the causes even though the most common causes are required to be reported immediately below, in Subparagraph (2). Understanding the reasons why operators are flaring and venting is critical to understanding the sources of this waste, which will in turn inform policy recommendations regarding how to further reduce venting and flaring of natural gas. Therefore, these already-developed categories should be required to be reported in operators' C-129 forms. Notably, the New Mexico Oil and Gas Association also makes this recommendation. NMOGA Ex. A, p. 17.

19.15.27.8.G(1)(b)(viii) NMAC requires operators to report the steps taken to limit the duration and magnitude of venting and flaring, but does not require operators to report the most common steps taken so that OCD and the public understand with specificity the steps operators are taking to limit waste. Therefore, the most common actions taken should be reported, including well shut in, production curtailed, work expedited, and upset condition resolved.

19.15.27.8.G(1)(b)(ix) NMAC requires operators to report corrective actions to eliminate the cause and occurrence of venting or flaring, yet again the specific actions taken are not required

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reporting categories. This rule should similarly require reporting of the most common corrective actions, including well connected to sales line, compression installed, equipment replaced, and maintenance procedures or schedule revised.

The ability of OCD and the public to conduct meaningful analysis why operators are venting and flaring and what they are doing about it requires more specific categories rather than narrative descriptions. During the hearing, witnesses from many parties and Commissioners observed that the current reporting system is flawed. The Commission has the opportunity now to give OCD the information it needs to focus on the most important causes of the waste of associated gas, and increase transparency to the public and accountability of the industry.

Tr. 1-13-21 at 310:7-312:8 (Singer).

(c) At the division's request, the operator shall provide and certify additional information by the specified date.

(d) The operator shall file a form C-141 instead of a form C-129 for a release which includes liquid during venting or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.

(2) **Monthly reporting of vented and flared natural gas.** For each well or facility at which venting or flaring occurred, the operator shall separately report the volume of vented natural gas and volume of flared natural gas for each month in each category listed below. Beginning July 1, 2021, the operator shall gather data for quarterly reports in a format specified by the division and submit by November 15, 2021 for the third quarter and February 15, 2022 for the fourth quarter. Beginning January 2022, the operator shall submit a form C-115B monthly on or before the 15th day of the second month following the month in which it vented or flared natural gas. The operator shall specify whether it estimated or measured each reported volume. In filing the initial report, the operator shall provide the methodology (measured or estimated using calculations and industry standard factors) used to report the volumes and shall report changes in the methodology on future forms. The operator shall make and keep records of the measurements and estimates, including records showing how it calculated the estimates, for no 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 or malfunction;
- (c) routine repair and maintenance, including blowdown and depressurization;
- (d) routine downhole maintenance, including operation of workover rigs, swabbing rigs, coiled tubing units and similar specialty equipment;
- (e) manual liquid unloading;
- (f) uncontrolled storage tanks;
- (g) flaring from controlled storage tanks;

JUSTIFICATION: *According to Climate Advocates' expert witness, Dr. David McCabe, storage tanks that are controlled by routing flash gas from the tank to a flare are a source of waste, because it is possible to capture this gas for sale. It is "relatively common for operators to capture gas in this way." Almost 3,000 storage tanks in the New Mexico portion of the Permian Basin are already using vapor recovery units to capture gas and direct it to sales. The approach has been used "for many years," and ancillary equipment such as catalytic devices that remove oxygen from the gas stream are readily available to facilitate capture of gas from tanks. Nevertheless, tens of thousands of tanks flare gas rather than capturing it and rerouting it to sales. Tr. 1-13-21 at 223:10-23 (McCabe).*

Flaring tank vapors that could be recovered is a huge source of waste. Operators required to report emissions to EPA reported emitting over one million metric tons of CO2 from enclosed

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combustors or tank flares in the Permian Basin in 2019. This means that, “a tremendous amount of useful hydrocarbons from these tanks is simply burned up.” Operators should be required to report the amount of gas flared from tanks, and this volume should be included when evaluating compliance with the gas capture goal. Id. at 224:9-20 (McCabe).

During cross-examination, James Bolander acknowledged that flaring from controlled tanks is potentially a form of waste. Tr. 1-4-21 at 125:8-13. He offered two discrete examples where flaring of tank vapors might not be wasteful: where the gas is not of pipeline quality because it has a high percentage of H₂S gas, or where the volume of gas produced is too small to be captured by a vapor recovery unit. Id. at 124:21-125:5, 126:11-13. He acknowledged that recovering natural gas using a vapor recovery unit should be preferred to flaring in all other cases, but that the rule, as proposed by OCD, does not currently reflect that policy. Id. at 127:11-18.

Chairwoman Sandoval asked Mr. Bolander if, in light of this testimony, flaring from storage tanks should still be excluded from the final rule. Id. at 158:8-12. Mr. Bolander responded:

I would characterize, if it's controlled going to a vapor recovery, then it should be excluded from the rule. And if the vapor recovery malfunctions, any losses would go under our malfunction category. If it is flared due to H₂S it should be excluded from the rule and should already be because we do have, you know, characterization for H₂S. However, if it's a control tank just for flaring natural gas, that would indicate that it does have the ability or possibility to be captured for beneficial use. So in that individual case it could be added to the regulation.

Id. at 158:13-24 (emphasis added).

(hg) insufficient availability or capacity in a natural gas gathering system or downstream processing plant during the separation phase of completion operations or production operations, including lack of connection to a gathering system, lack of adequate wellbore pressure or additional compression, third-party or midstream upset condition or curtailment, or other;

JUSTIFICATION: *OCD's proposed 19.15.27.8.G(2)(g) NMAC establishes a reporting single category for “insufficient pipeline availability or capacity in a natural gas gathering system,” and OCD limited that reporting to only the separation phase of completion operations. However, this broad reporting category does not include the main reasons operators identified during the MAP process why there is insufficient availability or capacity or the reasons commonly given by operators on the C-129 forms examined by Climate Advocates’ witness Dr. Singer. The provision above should require reporting of three such categories set forth above. Tr. 1-13-21 at 312:5-313:5 (Singer).*

(ih) natural gas that is not suitable for transportation or processing because:

- (i) N₂, H₂S, or CO₂ concentrations do not meet gathering pipeline quality specifications; or
- (ii) O₂ concentrations do not meet gathering pipeline quality specifications except during commissioning of pipelines, equipment, or facilities pursuant to Subparagraph (l) of Paragraph (4) of Subsection D of 19.15.27.8 NMAC;

(ji) venting as a result of normal operation of pneumatic controllers and pumps, unless the operator vents or flares less than 500,000 cubic feet per year of natural gas;

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(~~ks~~) improperly closed or maintained thief hatches on tanks routed to a flare or control device;

(~~lk~~) venting or flaring in excess of four hours that is caused by an emergency, unscheduled maintenance or malfunction of a natural gas gathering system as defined in 19.15.28 NMAC;

(~~ml~~) venting and flaring from an exploratory well; and

(~~nm~~) other waste as defined in 19.15.2 NMAC that is not described above.

(3) Upon submittal of the C-115B report, the division will compile and publish an operator's vented and flared natural gas information for each month on a volumetric and gas capture percentage basis.

(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, vented or flared because it was not suitable for transportation or processing due to N₂, H₂S, or CO₂ concentrations, or vented or flared from an exploratory well with division approval, 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, vented or flared because it was not suitable for transportation or processing due to N₂, H₂S, or CO₂ concentrations, or vented or flared from an exploratory well with division approval, and divide by the total volume of natural gas produced.

(4) Beginning March 2022, the operator shall report the vented and flared natural gas on a volumetric and percentage basis to all owners in the mineral estate being produced by the well or facility on a monthly basis, keep such reports for not less than five years and make such records available for inspection by the division upon request.

(5) Upon the New Mexico environment department's request, the operator shall promptly provide a copy of any form filed pursuant to 19.15.27 NMAC.

[19.15.27.8 NMAC – N, xx/xx/xxxx]

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 in order to capture no less than ninety-eight percent of the natural gas produced from its wells in each of two reporting areas, one north and one south of the Township 10 North line, by December 31, 2026. The division shall calculate and publish each operator's baseline natural gas capture rate based on the operator's 2021 quarterly reports as per paragraph 2 of subsection G of 19.15.27.8 NMAC. In each calendar year between January 1, 2022 and December 31, 2026, the operator shall increase its annual percentage of natural gas captured in each reporting area in which it operates based on the following formula: (2021 baseline loss rate minus two percent) divided by five.

(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%	>5.6-19.6%

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

(3) An operator's acquisition of one or more wells from another operator shall not affect its annual natural gas capture requirements. No later 60 days following the acquisition, the operator may file a written request to the division requesting to modify its gas capture percentage requirements for good cause based on its acquisition. The division may approve, approve with conditions, or deny the request in its sole discretion.

(4) No later than March 30 following the reporting year, an operator that has not met its annual natural gas capture requirement for the previous year shall submit to the division a compliance plan

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demonstrating its ability to comply with its annual gas capture requirement for the current year. If the division determines, after a reasonable opportunity to meet with the operator, that the compliance plan does not demonstrate the operator's ability to comply with its annual gas capture requirement for the current year the operator's approved APDs for wells that have not been spud shall be suspended pending a division hearing to be held no later than 30 days after the determination. Nothing in this subparagraph shall prevent the division from taking any other action authorized by law for the operator's failure to comply with its annual gas capture requirement, including shutting in wells and assessing civil penalties.

B. Accounting. No later than February 15 each year beginning in 2023, the operator shall submit a report certifying compliance with its 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 that the operator may exclude from the volume of produced natural gas:

(1) the volume of natural gas vented or flared pursuant to Subparagraph (a) of Paragraph (2) of Subsection G of 19.15.27.8 NMAC for which the operator timely filed, and the division approved, a form C-129; and

(2) the volume of natural gas reported as a beneficial use and reported on the operator's form C-115; and

(3) the volume of natural gas vented or flared pursuant to Subparagraphs ~~(i)~~(j) or ~~(m)~~ of Paragraph (2) of Subsection G of 19.15.27.8 NMAC.

***JUSTIFICATION:** Removing the cross-reference to venting from pneumatic controllers and pumps in 19.15.27.8.G(2)(i) NMAC [new 19.15.27.8.G(2)(j) NMAC in our draft] – venting from pneumatic controllers and pumps -- will ensure that an operator's gas capture percentage reflects the amount of gas avoidably lost due to the use of outdated pneumatic devices. An abundance of evidence indicates that pneumatic devices are a major source of venting. For example:*

- *OCD acknowledged that, "pneumatics are considered one of the largest sources of vented and flared gas in New Mexico." OCD Exhibit 4C, p. 9.*
- *OCD witness Matt Lepore testified that pneumatic devices are "widely considered to be a not insignificant source of venting." Tr. 1-6-21 at 78:22-24.*
- *The Methane Guiding Principles Partnership states that natural gas powered pneumatic devices "can be one of the largest sources of methane emissions in petroleum and natural gas supply chains." OCD Ex. 30, p. 18.*

Substantial evidence demonstrates that emissions from pneumatic devices can be eliminated or greatly reduced by using up-to-date equipment, such that the continued use of venting equipment can appropriately be considered a form of waste. For example:

- *Mr. Lepore testified that high-bleed pneumatics were "once upon a time" considered a "valid technology," but that this technology "has been supplanted" by lower-emitting or non-emitting alternatives, such that "using the out-of-date technology is no longer appropriate." Tr. 1-6-21 at 79:24-80:6.*
- *The Methane Guiding Principles Partnership identifies numerous "best practices" for reducing venting from pneumatic devices, including "replacing pneumatic devices with electrical pumps or controllers," "replacing pneumatic devices with mechanical controllers," "using compressed air rather than natural gas to power pneumatic devices," and replacing high-bleed controllers. The Partnership further explains that "15% of the total global emissions of methane from oil and gas operations" could be eliminated by implementing best practices for pneumatic devices, and that implementing*

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these measures “can also often have economic benefits” for operators. OCD Ex. 30, p. 18.

- *Dr. McCabe testified that, “it is entirely appropriate that gas that is vented from pneumatic controllers be considered waste,” given the existence of zero-bleed alternatives. Tr. 1-14-21 at 221:2–5. It is “egregiously wasteful for operators to continue using high-bleed controllers.” Id. at 220:21–22. But the problem is not limited to high-bleed controllers: rather, operators should be moving away from all types of gas-driven controllers that vent gas to the atmosphere. Id. at 23:23-25. Other jurisdictions require operators to retrofit to zero-bleed controllers, or are considering imposing this type of requirement. Id. at 23:7-20.*

The New Mexico Environment Department (“NMED”) has issued a draft rule that would include regulation of pneumatic devices. But NMED’s draft would exempt a large number of well sites entirely. See Tr. 1-14-21 at 34:10–17 (95% of wells in the state would be exempt from NMED draft) (Goldstein). Moreover, even at covered well sites, operators would not be required to replace low-bleed or intermittent bleed controllers unless they have “access to electric power.” This creates additional uncertainty whether the draft would be effective at reducing waste from these sources. See Tr. 1-14-21 at 222:3-20.

In any event, “OCD can and should be regulating venting from these [pneumatic] devices because it’s clearly wasteful.” Id. at 222:16-20 (McCabe). An agency cannot avoid its duty simply because its jurisdiction overlaps with that of another agency. Cf. Massachusetts v. EPA, 549 U.S. 497, 532 (2007) (“But that DOT sets mileage standards in no way licenses EPA to shirk its environmental responsibilities. EPA has been charged with protecting the public’s ‘health’ and ‘welfare,’ a statutory obligation wholly independent of DOT’s mandate to promote energy efficiency. The two obligations may overlap, but there is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency.”). There is no evidence in the record that there is any conflict or inconsistency between the New Mexico Environmental Improvement Board prescribing performance standards for pneumatic devices and including the devices’ emissions in the Commission’s gas capture percentage.

(4) An operator that used a division-approved ALARM technology to monitor for leaks and releases may obtain a credit against the volume of lost natural gas if it discovered the leak or release using the ALARM technology and the operator:

(a) isolated the leak or release within 48 hours following field verification;
(b) repaired the leak or release within 15 days following field verification or another date approved by the division;

(c) timely notified the division by filing a form C-129 or form C-141; and

(d) used ALARM monitoring technology as a routine and on-going aspect of its waste-reduction practices.

(i) For discrete waste-reduction practices such as aerial methane monitoring, the operator must use the technology at least twice per year; and

(ii) for waste-reduction practices such as automated emissions monitoring systems that operate routinely or continuously, the division will determine the required frequency of use.

(5) An operator may file an application with the division for a credit against its volume of lost natural gas that identifies:

(a) the ALARM technology used to discover the leak or release;

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- (b) the dates on which the leak or release was discovered, field-verified, isolated and repaired;
- (c) the method used to measure or estimate the volume of natural gas leaked or released which method shall be consistent with Subsection F of 19.15.27.8 NMAC;
- (d) a description and the date of each action taken to isolate and repair the leak or release;
- (e) visual documentation or other verification of discovery, isolation and repair of the leak or release;
- (f) a certification that the operator did not know or have reason to know of the leak or release before discovery using ALARM technology; and
- (g) a description of how the operator used ALARM technology as a routine and on-going aspect of its waste-reduction practices.

(6) For each leak or release reported by an operator that meets the requirements of Paragraphs (3) and (4) of Subsection B of 29.15.28.10 NMAC, the division, in its sole discretion, may approve a credit that the operator can apply against its reported volume of lost natural gas as follows:

- (a) a credit of forty percent of the volume of natural gas discovered and isolated within 48 hours of discovery and timely repaired;
- (b) an additional credit of twenty percent if the operator used ALARM technology no less than once per calendar quarter as a routine and on-going aspect of its waste-reduction practices.

(7) A division-approved ALARM credit shall:

- (a) be used only by the operator who submitted the application pursuant to Paragraph (4) of Subsection B of 29.15.27.10 NMAC;
- (b) not be transferred to or used by another operator, including a parent, subsidiary, related entity, or person acquiring the well;
- (c) be used only once; and
- (d) expire 24 months after division approval.

C. Third-party verification. The division may request that an operator retain a third party to verify any data or information collected or reported pursuant to this Part, make recommendations to correct or improve the collection and reporting of data and information, submit a report of the verification and recommendations to the division by the specified date, and implement the recommendations in the manner approved by the division. If the division and the operator cannot reach agreement on the division's request, the operator may file an application for hearing before the division. The operator, at its own expense, shall retain a third party approved by the division to conduct the activities agreed to by the division and the operator or ordered by the division following a hearing.

D. Natural gas management plan.

(1) After May 31, 2021, the operator shall file a natural gas management plan with each APD for a new or recompleted well. The operator may file a single natural gas management plan for multiple wells drilled or recompleted from a single well pad or that will be connected to a central delivery point. The natural gas management plan shall describe the actions that the operator will take at each proposed well to meet its statewide natural gas capture requirements and to comply with the requirements of Subsections A through F of 19.15.27.8 NMAC, including for each well:

- (a) the operator's name and OGRID number;
- (b) the name, API number, location and footage;
- (c) the anticipated dates of drilling, completion and first production;
- (d) a description of operational best practices that will be used to minimize venting during active and planned maintenance; and
- (e) the anticipated volumes of liquids and gas production and a description of how separation equipment will be sized to optimize gas capture.

(2) Beginning January 1, 2022, an operator that, at the time it submits an APD for a new or recompleted well is, cumulatively for the year, not in compliance with its baseline natural gas capture rate for the applicable reporting area if the APD is submitted in 2022 or its natural gas capture requirement for the previous year if the APD is submitted in 2023 or after shall also include the following information in the natural gas management plan:

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- (a) the anticipated volume of produced natural gas in units of MCFD for the first year of production;
- (b) the existing natural gas gathering system the operator has contracted or anticipates contracting with to gather the natural gas, including:
- (i) the name of the natural gas gathering system operator;
 - (ii) the name and location of the natural gas gathering system;
 - (iii) a map of the well location and the anticipated pipeline route connecting the production operations to the existing or planned interconnect of the natural gas gathering system.; and
 - (iv) the maximum daily capacity of the segment or portion of the natural gas gathering system to which the well will be connected; and
- (c) the operator's plans for connecting the well to the natural gas gathering system, including:
- (i) the anticipated date on which the natural gas gathering system will be available to gather the natural gas produced from the well;
 - (ii) whether the natural gas gathering system has or will have capacity to gather the anticipated natural gas production volume from the well prior to the date of first production; and
 - (iii) whether the operator anticipates the operator's existing well(s) connected to the same segment or portion of the natural gas gathering system, referenced in Subparagraph (iv) of Paragraph (2) of Subsection D or 19.15.27.9 NMAC will continue to be able to meet anticipated increases in line pressure caused by the well and the operator's plan to manage production in response to the increased line pressure.
- (3) The operator may assert confidentiality for information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC pursuant to Section 71-2-8 NMSA 1978.
- (4) The operator shall certify that it has determined based on the available information at the time of submitting the natural gas management plan either:
- (a) it will be able to connect the well to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the volume of natural gas the operator anticipates the well will produce commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or
 - (b) it will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the volume of natural gas the operator anticipates the well will produce commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.
- (5) If the operator determines it will not be able to connect a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced on the date of first production from the well, the operator shall either shut-in the well until the operator submits the certification required by Paragraph (4) of Subsection D of 19.15.27.7 NMAC or submit a venting and flaring plan to the division that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas to ensure that the natural gas is put to alternative use or uses until a natural gas gathering system is available, including:

***JUSTIFICATION:** The plain language of the venting and flaring plan does not require the operator to actually select and use possible alternative uses for the gas. Tr. 1-13-21 at 174:1-3 (Teitz). OCD legal expert Mr. Lepore agrees with that interpretation. Tr. 1-6-21 at 187:18-188:1 (Lepore). To add to the confusion on the meaning of this section, OCD's regulatory expert, Brandon Powell, testified under cross examination that the intent of this provision is that an operator "evaluate and select" an alternative. Tr. 1-4-21 at 113:25-115:14 (Powell).*

To ensure that an operator cannot simply evaluate the options, but must actually select and use one or more of the alternatives, as Mr. Powell testified is OCD's intent, we propose a targeted modification to the provision that would require operators to "select" one or more alternatives to ensure to ensure that the natural gas is put to an alternative use until the natural gas system is

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available. This targeted modification clarifies that the purpose of the venting and flaring plan is not just to evaluate options, but to actually select and adopt one or more alternatives, demonstrating how the operator will actually put the gas to beneficial use, rather than venting or flaring it. Tr. 1-13-21 at 173:6-174:23 (Teitz).

OCD objected in its rebuttal exhibit, OCD Ex. 4C, that operators should have the flexibility to choose among alternative uses. OCD Ex. 4C, p. 11, item 104. Climate Advocates had no opportunity at the hearing to respond to that concern, but propose language making it clear that an operator can choose more than one alternative.

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

(6) If, at any time after the operator submits the natural gas management plan and before the well is spud:

(a) the operator becomes aware that the natural gas gathering system it planned to connect the well to has become unavailable or will not have capacity to transport one hundred percent of the production from the well, no later than 20 days after becoming aware of such information, the operator shall submit for the division's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; and

(b) the operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, the operator shall submit for the division's approval a new or revised natural gas management plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each plan until the operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

(7) If the operator does not make a certification of compliance with its statewide gas capture requirements, the division shall deny the APD.

JUSTIFICATION: *Regulators never have sufficient enforcement resources to enforce every violation. One of the basic principles of regulation is to make compliance the default action whenever possible. This maximizes compliance and preserves limited enforcement resources. Tr. 1-13-21 at 171:23-172:2 (Teitz). Environmental permitting and enforcement expert, Charles de Saillan, testified that ambitious environmental and natural resources laws are most effective when they provide clear, automatic consequences for noncompliance. It is common for these laws to provide that operators shall be ineligible to receive permits for new facilities if their existing facilities are out of compliance with key regulatory requirements. Examples include the Clean Air Act's Non-Attainment New Source Review program, the New Mexico Water Quality Act – to which OCC is subject -- and two provisions of the Resource Conservation and Recovery Act.*

OCD's proposed language does not provide for clear or automatic consequences for noncompliance with an operator's gas capture requirement. Instead, the operator has the opportunity to submit a plan showing it will come into compliance in the future. If OCD believes

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this plan is inadequate, the operator may then contest that determination in a hearing. This represents an extremely resource intensive effort and would not be as effective as a provision that creates automatic consequences. Furthermore, because 2021 is the baseline year and operators have all of 2022 to improve their gas capture compliance, it will be 2023 at the earliest before any operator is deemed out of compliance. It is appropriate, and certainly not unfair, to impose consequences on an operator that is still not in compliance by the end of 2022, which will be more than four years after the Governor's Executive Order on climate change put the industry on notice that it needed to sharply reduce wasteful venting and flaring. Tr. 1-14-21 at 141:19-148:7, 149:22-157:3 (de Saillan). The proposed modification would require operators to be in compliance with their statewide gas capture requirements in order to obtain a new APD. This sets a clear and automatic consequence that (1) incentives compliance, (2) helps the operator come into compliance by avoiding exacerbating the problem, and (3) does so without requiring any additional enforcement resources or actions by the regulator.

(8) ~~or~~ If the operator fails to submit an adequate venting and flaring plan that provides for alternative uses for the anticipated volume of natural gas produced on the date of first production from the well, after accounting for venting or flaring not prohibited by Subsections A through D of 19.15.27.8 NMAC, ~~if the operator is not in compliance with its statewide natural gas capture requirements,~~ 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~~ shall:

JUSTIFICATION: *According to Climate Advocates' regulatory and legal expert, Alexandra Teitz, OCD's proposed language in the provision above is ambiguous in several respects and should be clarified as a matter of sound regulatory practice.*

First, OCD's proposed language in 19.15.27.9.D(7) NMAC does not align with OCD's expressed intent that the operator select one or more alternatives for beneficial use, and does not provide any criteria for determining what would constitute "an adequate venting and flaring plan." Tr. 1-13-21 at 175:5-11.

According to Mr. Lepore, a 50% capture rate could constitute an adequate plan. Tr. 1-6-21 at 191:12-15. But a 50% capture rate is not consistent with the prohibition of all routine flaring in 19.15.27.8.D NMAC or the requirement in 19.15.27.9.D(1) NMAC that the natural gas management plan "shall describe the actions that the operator will take at each proposed well" to comply with the ban on routine flaring in 19.15.27.8 NMAC. Tr. 1-13-21 at 175:12-176:8 (Teitz). And Mr. Powell disagreed with Mr. Lepore's interpretation. Tr. 1-15-21 at 115:25-117:11.

Given the differences of opinion between OCD's legal expert, Mr. Lepore, and its regulatory expert, Mr. Powell, it is evident that OCD's proposed language is ambiguous and subject to conflicting interpretations. To clarify, the language should be modified to align approval of an APD with the regulatory requirement that a venting and flaring plan provide for alternate uses for the anticipated volume of natural gas in newly proposed 19.15.27.9.D(8) NMAC, above. Tr. 1-13-21 at 176:9-177:2 (Teitz).

In OCD's rebuttal exhibit, OCD Ex. 4C, submitted January 14, 2021, OCD argued that Climate Advocates' original proposed language, requiring alternative use of 100% of the gas produced, was "unrealistic" and that operators should have the flexibility to choose among alternative uses. OCD Ex. 4C, p. 11, item 104.

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Climate Advocates had no opportunity at the hearing to respond to those concerns, but are proposing language herein that both responds to OCD's concerns and addresses Ms. Teitz's concerns. The modified language ensures that the issuance of an APD be conditioned on an operator either having sufficient take away capacity or putting the gas to beneficial use consistent with the requirements of the rule. This language would prevent abuse of the rule and would not allow approval of a venting and flaring plan that allowed 50% of gas produced to be wasted.

The other clarification needed is to the language that OCD "may" deny or conditionally approve an APD. This language is ambiguous because the text allows OCD to deny or conditionally approve the APD, but does not limit OCD to only those two actions. The discretionary "may" language would allow OCD to simply approve an APD, but without conditions. Tr. 1-13-21 at 177:7-20. Again, OCD's regulatory expert Mr. Powell agreed with this interpretation, and agreed also that such an interpretation "wouldn't be consistent with the intent of the rule. Tr. 1-4-21 at 119:7-24. Therefore, "may" deny or conditionally approve should be replaced with "shall" deny or conditionally approve. Tr. 1-13-21 at 177:21-178:15 (Teitz).

(a) deny the APD; or

(b) conditionally approve the APD with conditions to ensure that the operator has sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced on the date of first production from the well or will put to alternative use or uses the anticipated volume of natural gas produced on the date of first production from the well, after accounting for venting or flaring not prohibited by Subsections A through D of 19.15.27.8 NMAC.

JUSTIFICATION: *The language above proposed by OCD is similarly unclear, and similar modifications are proposed. The phrase "conditionally approve" is entirely open ended. The intent of the conditions is to ensure that, even if the operator's showing isn't sufficient at the time OCD grants an APD, the permit conditions would require that, by the time the well is spud, the operator would have the capacity to capture, use, or reinject the gas. While that is a reasonable basis for granting a conditioned permit, OCD's language does not require the operator to meet the purpose of the rules. Tr. 1-13-21 at 178:16-179:11 (Teitz). Again, OCD's legal expert Mr. Lepore agrees with this interpretation. Tr. 1-6-21 at 193:4-11 (Lepore).*

We do not propose regulatory text that specifies every permissible condition or directs OCD exactly what to include in the permit. However, the language should clarify that an operator must meet the requirements of the rules to obtain a permit. Therefore, the language should be modified to provide that OCD either deny or approve the APD with conditions to ensure the operator has sufficient takeaway capacity or puts the gas produced to beneficial use, consistent with the requirements of the rule. This language does not dictate to OCD what the conditions must be, but simply provides a standard for evaluating the adequacy of the conditions. Tr. 1-13-21 at 179:12-23 (Teitz). And, again, Mr. Powell agreed that if an operator fails to certify takeaway capacity or to submit an adequate venting and flaring plan, the conditions on the APD should go to the failure of the operator to make the necessary showing. Tr. 1-4-21 at 122:13-123:1 (Powell).

Operators who are out of compliance with their venting, flaring, and gas takeaway obligations, should not enjoy the benefit of the state's resources. EDF and Climate Advocate's suggested provision limiting OCD's discretion to either a denial or conditional approval in those

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circumstances specified in 19.15.27.9.D.(8) will assist in ensuring operator compliance. Tr. 1-14-21 at 106:11-107:25 (Alexander). Allowing for conditional approval recognizes that there may be instances where a conditional approval will allow an operator to move forward with oil production activities while creating a mechanism to ensure the ban on routine flaring and venting during production and the gas capture requirements are being met. This will also make the state's gas capture requirements clear to all parties, and thus, easier to enforce. Tr. 1-14-21 at 18:18-19:13 (Goldstein).

[19.15.27.9 NMAC – N, xx/xx/xxxx]