From:	James Martin
To:	WasteRule, EMNRD, EMNRD
Subject:	[EXT] Cimarex comments
Date:	Wednesday, September 16, 2020 4:27:33 PM
Attachments:	Final Cimarex Comments to EMNRD.pdf

To Whom It May Concern: please find attached comments being submitted on behalf of Cimarex respecting the Rulemaking for Venting and Flaring of Natural Gas.

Thank you in advance for your assistance.

Respectfully,

Jim Martin

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September 16, 2020

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Tiffany Polak, Deputy Director
Oil Conservation Division
New Mexico Energy, Minerals, &
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RE: Rulemaking for Venting and Flaring of Natural Gas

Dear Ms. Polak:

On behalf of Cimarex Energy Company (Cimarex), I am submitting comments on the oiL Conservation Division's (Division) preliminary draft rules respecting venting and flaring of natural gas and natural gas gathering systems. Cimarex very much appreciates the opportunity to comment on these preliminary draft rules, and especially appreciates your efforts to solicit comments and alternative suggestions from our company and other stakeholders that would make these rules more effective. We also want to acknowledge the hard work and patience your team has displayed in developing these preliminary draft rules.

We recognize the challenges you face, particularly amidst the COVID-19 pandemic, in developing comprehensive regulations to address venting and flaring of natural gas at the wellhead and from natural gas gathering systems. Cimarex supports the Division's goal of minimizing the amount of natural gas that is vented or flared. However, Cimarex believes that some parts of the preliminary draft regulations require clarification and revision. Cimarex's concerns are set out below.

I. VENTING AND FLARING AT THE WELLHEAD

A. Definitions

Cimarex notes that some of the Division's definitions differ from very similar definitions used by EPA and, in one instance, the New Mexico Environment Department. Cimarex suggests that it may be helpful to all parties if the Division were to use terms that are consistent with those used by other agencies that operate in the same sphere.

For example, the proposed definitions of "initial flowback" and "separation flowback" differ from EPA's definitions of the same terms in New Source Performance Standards OOOOa. Since

EPA and the Environment Department will be regulating alongside the Division, Cimarex recommends that the Division refer to or adopt the EPA definitions.

Proposed Definition	EPA Definition
"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.	The period during a well completion operation which begins at the onset of flowback and ends at the separation flowback stage.
"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.	The period during a well completion operation when it is technically feasible for a separator to function. The separation flowback stage ends either at the startup of production, or when the well is shut in and permanently disconnected from the flowback equipment.

Similarly, we suggest that the Division's definition of "malfunction" be aligned with the Environment Department's definition of the same term.

Proposed Definition	NMED Definition
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.	NMED definition. 20.2.7.7 (Excess Emissions) "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction.

B. <u>Measurement of Vented and Flared Natural Gas</u>

As drafted, Cimarex has a number of concerns with Section 19.15.27.8(E) of the preliminary draft rules that would require operators to measure the volume of natural gas that is vented, flared, or beneficially used during drilling, completion, and production operations, regardless of the reason for such venting or flaring. Cimarex has a number of concerns with this section.

1. Venting During Drilling. Natural gas would not routinely be released to the atmosphere during drilling operations. The principal exception to that rule would be circumstances when the well unexpectedly encounters natural gas during drilling operations. In those circumstances, to avoid a gas "kick" that could threaten worker safety the operator will vent the gas to the atmosphere. These circumstances do not occur often and are unpredictable. It would be impossible to estimate the amount of gas vented during such an event.

2. Venting During Completions. During completions drill-out, Cimarex routes all emissions to a flare, but it is our experience that these volumes are very small. While it may be possible to measure these emissions, Cimarex does not do so because the volumes are so incredibly small. During flowback, Cimarex measures all volumes coming out of the wellhead; we believe that is where the focus should be.

3. Venting During Production. For equipment like pneumatic controllers it would be impossible to install measuring devices given the controllers' small size and the number of pneumatic controllers found at any one site. Similarly, it would be difficult to estimate the amount of natural gas released to the atmosphere when a pneumatic controller activates. There will be a wide disparity in frequency of activations from one unit to another and from one facility to another. It would take a significant investment in staffing and other resources to accurately estimate the amount of gas released during activations. It would be even more difficult to estimate the amount of natural gas released to the atmosphere when a pneumatic controller is malfunctioning. Instead of requiring estimates of the amounts vented from pneumatic controllers, Cimarex suggests that the Division either recommend an appropriate model for estimating such emissions or work with the Environment Department and operators on a field study designed to produce the data that would be needed to make such estimates.

When thief hatches are opened, it may be possible to estimate the emissions, but doing so would be complicated. For example, the operator would have to know if the separator was dumping oil into the oil tanks while the thief hatch was opened? If so, emissions would be different than if the oil were stagnant. Similarly, we would need to know the ambient temperature on the day of gauging since that also will affect tank vapors. That said, it would be possible to estimate volumes but the error bar would be significant. Just as important would be the time commitment this would entail; we gauge hundreds of tanks a day. We would then have to estimate emissions hundreds of times each and every day. Cimarex does not believe it is reasonable to expect operators to somehow estimate emissions associated with tank gauging.

The preliminary draft rules also seek information for amounts of natural gas vented during events such as emergencies, equipment malfunction, equipment repair, bradenhead tests, and manual liquids unloadings. We have two observations. First, it would be impossible to meter the amounts of natural gas vented to the atmosphere during many of the events represented by the reporting categories. Second, Cimarex is unaware of standard methodologies for estimating the amount of gas vented to the atmosphere during such events. If the rules require such estimates, the likely result will be that individual operators will be forced to develop methodologies to devising such estimates. Those operator-specific methodologies almost certainly will vary considerably among operators produce unreliable data. Instead, Cimarex believes field research and analysis is needed to develop standard emissions estimate for these venting events.

4. Amounts of Gas Flared. There are fewer challenges to measuring or estimating the amount of gas flared at a wellsite. It has been Cimarex's experience that high pressure flares generally are metered or could be metered given an appropriate implementation schedule.

Conversely, Cimarex's low pressure flares generally are not metered. Installing meters on low pressure sources, especially on older equipment, poses a range of issues. Low pressure gas streams that are vented or flared are highly variable in their composition and meters are difficult to reliably calibrate. Composition variability causes meter calibration concerns since most meters use either a factory-set composition or require calibration using site-specific composition (which can vary, as noted above). Because of these factors, Cimarex is unsure how we could ensure that low pressure meters read accurately. Moreover, installing meters for low pressure flares is a costly undertaking and requires trained personnel and significant lead times. For all of these reasons, Cimarex believes that our joint focus should be on large emitting sources rather than low pressure, small emitters since it is our experience that large emitters are responsible for the large majority of total emissions. Cimarex submits that process modeling would provide reasonably accurate estimates of the amounts of natural gas flared at low pressure flares.

In any event, Cimarex continue to use API and Gas Processing Association standards in designing, constructing, and operating facilities, including metering. However, as we have previously noted many New Mexico operators are not members of either organization and they may encounter challenges in accessing their published standards.

C. Streamlining the Process for Certifying 98% Control

Cimarex understands the Division's goal set out in Section 19.15.27.9 to establish a process to reduce upstream venting and flaring by 98% by 2026. However, Cimarex has some concerns about what this would entail and some suggestions on how this process could be streamlined.

Most important, we suggest that the focus should be on high pressure flaring. To the extent the program were also to focus on low pressure flaring, the task will become monumental since we assume it would require vapor recovery systems on even marginal producing wells.

Second, Cimarex also suggests that Division establish a streamlined process by which an operator that has reduced venting and flaring by 98% could document that fact. We believe that would be a significant incentive for companies since the proposed reporting requirements are otherwise onerous. We also suggest that the Division consider a two- or three-year averaging period since reported bottom lines will vary from year to year for a number of reasons, including the margin of error in measurement. Both of these concepts would require additional collaboration with the Division and other stakeholders. Cimarex is eager to participate in such a discussion if the Division elects to establish such a process.

D. Reporting Categories

Building on the preceding discussion, Cimarex suggests that it is simply not feasible given current practices to report amounts vented for some of the categories proposed by the Division. See proposed Rule 19.15.27.8.E.3. In some cases, such as drilling losses, the amounts will be small, unpredictable, and impossible to estimate. Similarly, the amounts of gas vented during malfunctions, equipment repair, and similar events will be small and difficult or impossible to estimate. Cimarex also notes that the Environment Department's proposed rules would require

operators to strictly minimize emissions during many of these events, such as unloadings, thereby limiting the amounts of gas vented to the atmosphere.

Cimarex specifically recommends that the Division eliminate the following reporting categories:

(a) Emergency;
(n) Uncontrolled storage tanks;
(q) Venting in excess of the design specifications of pneumatic controllers and pumps as the result of malfunction or improper or infrequent maintenance;
(r) Venting as the result of normal operation of pneumatic controllers and pumps; and
(s) Thief hatches that are not properly closed or maintained.

These categories are not reported currently and reporting on this scale implies either the conduct of monthly emission inventories or the use of conservative assumptions. Cimarex does not currently have a system for completing monthly inventories and doing so amidst the other requirements embedded within these and the Environment Department proposal would create serious staffing and resource issues.

In the alternative, the Division could streamline reporting by using four omnibus categories that appear to capture key data:

1. Third party event (pipeline constraint, malfunction, et cetera) [d, o];
2. Uncontrollable – weather, emergency, etc. [a];
3. Routine Flaring – pilots, purge, routine repairs and maintenance, tests, scheduled maintenance, et cetera [e, f, g, h, I, j, k, l, m, n]' and
4. Malfunction – [b, c, p, q, r]

E. <u>Advanced Leak and Repair Monitoring (ALARM)</u>

In Section 19.15.27.9, the Division introduced the idea of providing incentives for operators to utilize advanced leak and repair monitoring technologies. In general, Cimarex supports this proposal.

Cimarex complies with federal leak detection and repair requirements expressed in EPA's New Source Performance Standards OOOO and OOOOa. Cimarex also fully intends to comply with whatever leak detection and repair requirements the Environment Department promulgates. In addition to complying with these regulatory requirements, Cimarex has contracted with a third party to conduct aircraft-based monitoring of many of Cimarex's facilities in the Permian Basin. Since that aircraft-based monitoring is highly efficient but generally cannot precisely identify the precise location of a leak, Cimarex has developed a system for mobilizing field crews that can expeditiously travel to the wellhead where a leak was detected, pinpoint the source of the leak, and in many cases repair the leak during that visit.

Cimarex believes new technologies and processes such as this provide significant advantages over the conventional leak detection technologies used by EPA and proposed by the Environment Department. Cimarex has encouraged the Environment Department to establish a flexible and efficient process for reviewing and approving such alternative monitoring technologies that provide substantially equivalent emission reductions compared to the default technologies.

By the same token, Cimarex urges the Division to establish a process for approving alternative monitoring technologies that would qualify for use in the ALARM system. Cimarex believes such technologies will benefit all stakeholders and could provide significant environmental benefits. It may be that the Division could work with the Environment Department to ensure that platforms approved by one agency can quickly be approved by its sister agency since both agencies share the same goal from use of such alternative monitoring technologies and plans.

Cimarex also has two suggestions for how the Division might create incentives for use of these alternative monitoring platforms. First, based on its experience Cimarex believes that twice-annual surveys may yield significant reductions in venting losses in excess of thirty (30) percent. We also anticipate that quarterly surveys would yield even greater reductions in venting losses. Therefore, Cimarex suggests the Division provide a greater percentage reduction in venting volume reporting. Second, we suggest that the credits be available for a period of two (2) years rather than thirteen (13) months since a number of variables beyond the operator's control may cause an operator's overall control percentage to drop below 98% on occasion.

F. Natural Gas Accounting

Section 19.15.27.9(B) sets out in some detail how operators must file annually to certify compliance with the statewide gas capture requirements. While Cimarex does not have specific objections with this section's provisions, Cimarex suggests the Division coordinate with the U.S. Department of the Interior on the reports that operators must file respecting development of federal minerals. There may be significant advantages to conforming state reporting to that required by the Department of the Interior rather than requiring operators to, in effect, maintain two sets of books. Set out below is a summary of the data reported when creating Oil and Gas Operations Reports (OGORs) for Office of Natural Resource Reporting (ONRR) (Federal Reporting) in the U.S. Department of the Interior include[1]:

OGOR - PART A (Well Detail Information)

- Well Status and Completion Type (Oil or Gas)
- Oil, Gas, and Water Production Volumes

OGOR – PART B (Product Disposition Information)

- Oil Sales (disposition code 10)
- Gas Sales (disposition code 01 sales by transmission or disposition code 11 transferred by Facility which would include gas plant numbers)
- Water disposition code 17 or disposition code 27 is used in conjunction when skim oil is reported.

Product Information when applicable:

- Flared Gas (disposition code 33 with BTU)
- Skim Oil (disposition code 04 with gravity)
- Drip (disposition code 16 with gravity)
- <Offset – Disposition Code 13 > - this is the skim and drip volume that should not be included additional to the purchased volumes.

[1] Additional information can be found at the ONRR website: https://www.onrr.gov/ReportPay/production-reporting.htm.

OGOR – PART C (Product Sales from Facilities)

- Product Code 01 – Gravity – Beginning Oil - Production – Sales – Ending Inventory
- Rarely an Adjustment Code 32 (BS&W) and Adjustment Volume (BBL) is used.

G. Gas Capture Requirements

Section 19.15.27.9 of the proposed rules would require operators to file gas capture plans commencing on January 1, 2022. In turn, Section 19.15.27.9.D.1 would require operators to file a natural gas management plan with each APD. Cimarex understands the reason the Division is proposing such a requirement but questions the need for such a plan in cases where the operator has takeaway capacity and has no intent to routinely flare associated gas. The Division has at its disposal numerous tools by which it could curtail flaring by such an operator in the event the operator does not, in fact, have reliable takeaway capacity. Our point is that requiring a plan for every APD simply is not necessary in some circumstances. In the alternative, the Division could streamline plans where an operator certifies it has takeaway capacity for a new well or wells.

In any event, some of the information the Division proposes to require from the operator simply cannot be provided by the operator. For example, the operator will not be in a position to identify the natural gas processing facility that the midstream operator will use and in many cases the midstream operator could move gas from one facility to another for operational reasons. Similarly, only the midstream operator will have access to data on the maximum daily output and current throughput of the natural gas pipeline and compressors and likely will treat that information as confidential business information. The same is true for the anticipated daily capacity and anticipated throughput of the natural gas pipeline and compressors. Certainly, a midstream operator will carefully guard data on the reliability of the natural gas gathering system, including average annual downtime.

These and similar proposed requirements for a gas management plan are beyond the control of upstream operators and these information categories will be impossible for upstream operators to obtain and disclose to the Division. Moreover, and with all due respect, midstream operations are highly complex but flexible systems. Cimarex has real questions about what the Division could do with these data and the Division's capacity to evaluate and use those data for making decisions on whether to approve an APD. We suggest the Division eliminate these information requirements.

II. VENTING AND FLARING AT GATHERING SYSTEMS

It is unclear why the Division seeks to promulgate regulations pertaining to Class II and III pipelines and gathering lines that already are regulated by the Public Regulation Commission's (PRC) Pipeline Safety Bureau under delegation from the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the United States Department of Transportation. PHMSA and PRC regulations already cover design, construction, operation, maintenance, and integrity management of natural gas gathering lines; duplicating those requirements likely will have little effect on emissions into the atmosphere.

Just as important, it appears the Division attempted to capture only some of the requirements imposed by PHMSA regulations at 49 C.F.R. Part 192, and attempted to paraphrase or summarize other PHMSA regulations. As a result, there are numerous instances where the Division's proposed regulations differ, in some cases markedly, from PHMSA regulations.

Cimarex strongly urges that at a minimum the Division's rules should be aligned with PHMSA rules to avoid confusion and even unwise policies. In fact, the Division may simply want to refer to and incorporate by reference PHMSA's rules at 49 C.F.R. Part 192.

Set out below are some specific comments on the Division's preliminary draft rules for gathering lines. Given the number and scope of the issues identified below, Cimarex suggests that the wisest course may be to defer these regulations and empanel a working group with expertise in pipeline regulation to develop a set of rules that are appropriate to New Mexico's situation while avoiding duplication of existing regulatory regimes.

- Section 19.15.28.9(C) refers to the "current API standard" but does not refer to a specific API standard of which there are hundreds. As a result, this section fails to provide an actionable reference. Again, Cimarex suggests a reference to the appropriate 49 C.F.R. Part 192 provisions.

- 19.15.28.10(D) refers in the conjunctive to "other technology-based inspection tools." It is important to understand that not all pipelines are capable of utilizing a smart pig. See 49 CFR 192.150. For example, poly lines, small diameter steel lines, and composite lines are not capable of pigging operations. We suggest that the Division replace the word "and" with the word "or."

- 19.15.28.13(A) would require the operator to file a GIS digitally formatted as-built map for new gathering pipelines, natural gas gathering systems and for additions to such lines. Cimarex already submits shapefiles to the national pipeline mapping system. However, a reference to "as-built maps" implies different information. What does the Division mean by use of the word "as-built maps"? We suggest that the Division first consult the national pipeline mapping system and examine the information that is already collected in that system. The Division would then be in a better position to inform operators of what additional or different information the Division seeks.

- 19.15.28.15. While the title of this section refers to pressure tests, the section's text refers to design pressure and not pressure testing. We suggest that the rule refer to ASME B31.8 for the correct reference or alternatively to 49 C.F.R. § 192.619 for determining MAOP or to 49 C.F.R. 192 subpart J. As currently drafted, this section cannot be implemented.

- 19.15.28.16 would require the operator to notify the Division no later than 30 days before the operator intends to place a gathering pipeline into service. Under this provision, a pipeline that is ready to go into service would sit inactive for 30 days before being placed into service. It is inadvisable for a pipeline to sit inactive for 30 days after being pressure tested.

- 19.15.28.17(C) (corrosion control) would require operators to install a corrosion protection system on a new gathering pipeline that meets or exceeds the minimum criteria from National Association of Corrosion Engineers but provides no implementation dates. PHMSA rules at Subpart I provide significant additional detail and typically allow operators a year to meet the cathodic protection standard. An operator is capable of making better judgments about cathodic protection when a pipeline is in place and functioning.

- 19.15.28.18(C) will require an operator to electrically check "additional components" for

proper performance each calendar quarter, but does not specify what "additional components" are covered by this subsection. This places operators in the position of making judgments about what "other components" are covered. The Division should define "additional components."

- 19.15.28.18(D) similarly refers to abnormal internal corrosion but provides no guidance to operators on what constitutes abnormal internal corrosion? This provision also recommends no actions to address non-abnormal internal corrosion. Here again we refer the Division to PHMSA regulations at 49 C.F.R. Part 192 sections on internal corrosion.

- 19.15.28.19(A)(3) will require operators to investigate, report, and correct any condition that affects a natural gas system's integrity. We question whether the Division needs or wants a report on every integrity related issue, such as a low cathodic protection reading or coating damage. Cimarex submits this provision is too vague to implement without additional guidance.

- 19.15.28.20(A) requires an annual pressure test that ensures MAOP is maintained for thirty minutes. We suggest that instead this provision should require an operator to test pressure for thirty minutes after reaching the test pressure design value. However, Cimarex is unsure of what the Division intends with this provision.

- 19.15.28.20(C) requires that if an operator is using smart pigging, the operator shall use a smart pig that is capable of measuring flowline wall thickness. However, this regulation relates to gathering lines, not flowlines, for which this regulation would be inapplicable.

- 19.15.28.22(B)(4) appears to require an operator to conduct a weekly AVO inspection of a natural gas gathering line. Cimarex is unsure how an operator could fulfill this requirement. Would it require an operator to drive the entire pipeline system every week or does the proposed regulation apply only to above-ground ground valves and controllers – the sort of things for which an operator would conduct an AVO? Doing a weekly AVO of all of the lines would be cost-prohibitive since an AVO implies the ability to hear, smell, and see leaks – suggesting that an ALARM technology would be precluded. If adopted, this provision would provide a significant incentive for prudent operators to sell their systems or take lines out of use.

- 19.15.28.22(C) would require measurement and reporting of vented and flared gas. We refer you to our comments above related to measurement of gas vented and flared.

- 19.15.28.22(C)(7) and (C)(8) would encompass vast amounts of data. We submit that the number of categories is excessive. As noted above, we suggest the following aggregate categories as one alternative:

  1. Third party event (pipeline constraint, malfunction, et cetera) [d, o]
  2. Uncontrollable – weather, emergency, etc. [a]
  3. Routine Flaring – pilots, purge, routine repairs and maintenance, tests, scheduled maintenance, et cetera [e, f, g, h, I, j, k, l, m, n]
  4. Malfunction – [b, c, p, q, r]

- 19.15.28.23 will be difficult for operators to achieve given the margin of error associated

with measurement capability. As a result, at any one point an operator's performance could drop below the target even though nothing has changed in the real world. Even if the target is 98%, an operator's calculation could show the operator to be at 100%, or even 102% when the operator actually is at 98%. Perversely, this section also creates an incentive for an operator to report a lower baseline in order to ease achievement of an interim target.

In closing, Cimarex appreciates the opportunity to comment on the preliminary draft rules. Once again, Cimarex is grateful for the Division's efforts to solicit comment from stakeholders as part of the rulemaking process. We believe those efforts will result in better rules.

Cimarex stands ready to assist in any way that may be helpful. Please do not hesitate to contact me if I can be of any assistance.

Very truly yours,

Stephen A. Flaherty
Vice President, Government/External Relations
Cimarex Energy