

**DEPARTMENT OF THE INTERIOR**

**Bureau of Land Management**

**43 CFR Parts 3160 and 3170**

**[18X.LLWO310000.L13100000.PP0000]**

**RIN 1004-AE53**

**Waste Prevention, Production Subject to Royalties, and Resource Conservation;  
Rescission or Revision of Certain Requirements**

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Final rule.

**SUMMARY:** In this action, the Bureau of Land Management (BLM) is revising the November 18, 2016, rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (“2016 rule”) in a manner that reduces unnecessary compliance burdens, is consistent with the BLM’s existing statutory authorities, and re-establishes longstanding requirements that had been replaced. The BLM is rescinding the 2016 rule’s novel requirements pertaining to waste minimization plans, gas-capture percentages, well drilling, well completion and related operations, pneumatic controllers, pneumatic diaphragm pumps, storage vessels, and leak detection and repair (LDAR). The BLM is revising the remaining provisions of the 2016 rule in a manner that largely reflects the BLM’s longstanding policies for venting and flaring that preceded the 2016 rule. With respect to the flaring of associated gas from oil wells, the BLM will defer to appropriate State or tribal regulations in determining when such flaring will be royalty-free.

**DATES:** The final rule is effective on [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**FOR FURTHER INFORMATION CONTACT:** Steven Wells, Division Chief, Fluid Minerals Division, 202-912-7143 or [s1wells@blm.gov](mailto:s1wells@blm.gov), for information regarding the substance of this final rule or information about the BLM’s Fluid Minerals program. For questions relating to regulatory process issues, contact Faith Bremner at 202-912-7441 or [fbremner@blm.gov](mailto:fbremner@blm.gov). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339, 24 hours a day, 7 days a week, to leave a message or question with the above individuals. You will receive a reply during normal business hours.

**SUPPLEMENTARY INFORMATION:**

- I. Executive Summary
- II. Background
- III. Discussion of the Final Rule
- IV. Procedural Matters

**I. Executive Summary**

On November 18, 2016, the BLM published in the *Federal Register* a final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (82 FR 83008) (“2016 rule”). The 2016 rule was intended to: Reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian leases; clarify when produced gas lost through venting, flaring, or leaks is subject to royalties; and clarify when oil and gas production may be used royalty-free on-site. The 2016 rule became effective on January 17, 2017,

with some requirements taking effect immediately, but the majority of requirements were to phase-in on January 17, 2018, or later.

On March 28, 2017, President Trump issued Executive Order (E.O.) 13783, “Promoting Energy Independence and Economic Growth,” directing the BLM to review the 2016 rule and, if appropriate, to publish proposed and final rules suspending, revising, or rescinding it.

The BLM reviewed the 2016 rule and found that certain impacts were underestimated and many provisions of the rule would have added regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. The BLM also found that the 2016 rule’s approach to reduction of fugitive emissions and flaring departed from the historic approach of considering “waste” in the context of a reasonable and prudent operator standard. This final rule revises the 2016 rule in a manner that ensures consistency with the policies set forth in section 1 of E.O. 13783, which states that “[i]t is in the national interest to promote clean and safe development of our Nation’s vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.”

The BLM reviewed the 2016 rule and determined that it would have imposed costs exceeding its benefits. As detailed in the Regulatory Impact Analysis (RIA) prepared for this rule, and evidenced by the RIA prepared for the 2016 rule (2016 RIA), many of the provisions of the 2016 rule would have imposed compliance costs well in excess of the value of the resource (natural gas) that would have been conserved. In addition, the provisions of the 2016 rule, unlike the analogous Environmental Protection

Agency (EPA) regulations with which many of them overlapped, would have affected existing wells, including a substantial number that are “marginal,” or low-producing, and therefore less likely to remain economical to operate if subjected to additional compliance costs. The BLM estimates that approximately 73 percent of wells on BLM-administered leases would be considered marginal wells and that the annual compliance costs associated with the 2016 rule would have constituted 24 percent of an operator’s annual revenues from even the highest-producing marginal oil wells and 86 percent of an operator’s annual revenues from the highest-producing marginal gas wells. Finally, the BLM has determined that the 2016 rule also contains numerous administrative and reporting requirements that would have imposed unnecessary burdens on operators and the BLM. For these reasons, the BLM revised the 2016 rule in a manner that reduces unnecessary compliance burdens and, in large part, re-establishes the longstanding requirements that the 2016 rule replaced.

With this final rule, the BLM is discouraging excessive venting and flaring by placing volume and/or time limits on royalty-free venting and flaring during production testing, emergencies, and downhole well maintenance and liquids unloading. The BLM has also retained the 2016 rule’s subpart 3178 provisions, which incentivize the beneficial use of gas by making gas used for operations and production purposes royalty free. Finally, by rescinding the 2016 rule’s prescriptive requirements for pneumatic equipment, storage tanks, and LDAR—many of which were not cost-effective and risked the early shut-in of marginal wells—this final rule allows operators to continue implementing waste reduction strategies and programs that they find successful and to tailor or modify their programs in a manner that makes sense for their operations.

## **II. Background**

### **A. Background**

The BLM manages more than 245 million acres of public land, known as the National System of Public Lands, primarily located in 12 Western States, including Alaska. The BLM also manages 700 million acres of subsurface mineral estate throughout the nation.

The BLM's onshore oil and gas management program is a major contributor to the nation's oil and gas production. In fiscal year (FY) 2017, sales volumes from Federal onshore production lands accounted for approximately 9 percent of domestic natural gas production, 5 percent of U.S. natural gas liquids production, and 5 percent of domestically produced oil.<sup>1</sup> Roughly \$1.9 billion in royalties were collected from all oil, natural gas, and natural gas liquids transactions in FY 2017 on Federal Lands.<sup>2</sup> Royalties from Federal lands are shared with States. Royalties from Indian lands are collected for the benefit of the Indian owners.

The venting or flaring of some natural gas is a practically unavoidable consequence of oil and gas development. Whether during well drilling, production testing, well purging, or emergencies, it is not uncommon for gas to reach the surface that cannot be feasibly captured, used, or sold. When this occurs, the gas must either be combusted ("flared") or released to the atmosphere ("vented"). Depending on the circumstances, operators may flare natural gas on a longer-term basis from production

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<sup>1</sup> United States Department of the Interior, "Budget Justifications and Performance Integration Fiscal Year 2019: Bureau of Land Management" at VI-82, available at [https://www.doi.gov/sites/doi.gov/files/uploads/fy2019\\_blm\\_budget\\_justification.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/fy2019_blm_budget_justification.pdf).

<sup>2</sup> Derived from data available on the Office of Natural Resources Revenue website's "Statistical Information" page, accessible at <https://revenue.data.doi.gov/explore/>.

operations, predominantly in situations where an oil well co-produces natural gas (or “associated gas”) in an exploratory area or a field that lacks adequate gas-capture infrastructure to bring the gas to market. Production equipment may be designed to vent or flare gas, e.g., gas may be vented with the use of pneumatic controllers or combusted to generate power. Gas that accumulates in oil-storage tanks may also necessitate venting or flaring for safety. Finally, gas may be unintentionally lost through leaks from equipment and facilities.

In response to oversight reviews and a recognition of increased flaring from Federal and Indian leases, the BLM developed a final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation,” which was published in the *Federal Register* on November 18, 2016 (81 FR 83008) (“2016 rule”). The 2016 rule replaced the BLM’s existing policy at that time, Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A) (44 FR 76600 (Dec. 27, 1979)).

The 2016 rule was intended to: Reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian leases; clarify when produced gas lost through venting, flaring or leaks is subject to royalties; and clarify when oil and gas production may be used royalty free on-site. The 2016 rule applied to all wells producing Federal and Indian oil and gas and regulated new, modified, and existing sources of methane emissions on Federal and Indian leases, units, and communitized areas. The 2016 rule became effective on January 17, 2017, with some requirements taking effect immediately, but the majority of requirements were to phase-in over time.

On March 28, 2017, President Trump issued E.O. 13783, entitled, “Promoting Energy Independence and Economic Growth,” directing the BLM to review the 2016 rule. Section 7(b) of E.O. 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 rule, for consistency with the policy articulated in section 1 of the Order and, if appropriate, to publish rules suspending, revising, or rescinding those rules. Among other things, section 1 of E.O. 13783 states that “[i]t is in the national interest to promote clean and safe development of our Nation’s vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.”

To implement E.O. 13783, Secretary of the Interior Ryan Zinke issued Secretarial Order No. 3349, entitled, “American Energy Independence” on March 29, 2017, which, among other things, directs the BLM to review the 2016 rule to determine whether it is fully consistent with the policy set forth in section 1 of E.O. 13783.

The BLM reviewed the 2016 rule and determined it to be inconsistent with the policy in section 1 of E.O. 13783. The BLM found that some provisions of the 2016 rule would have added (once fully in effect) regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. The BLM estimates that approximately 73 percent of wells on BLM-administered leases would be considered marginal wells and that the annual compliance costs associated with the 2016 rule would have constituted 24 percent of the annual revenues of even the highest-producing marginal oil wells and 86 percent of the annual revenues of the highest-producing marginal gas wells. The BLM also finds that marginal oil and gas production on Federal lands supported an estimated \$2.9 billion in economic output in the national

economy in FY 2015. To the extent that the 2016 final rule would have adversely impacted production from marginal wells through premature shut-ins, this estimated economic output would have been jeopardized.

On February 22, 2018, the BLM published a proposal to revise the 2016 rule in a manner that would make it consistent with the policies set forth in section 1 of E.O. 13783. 83 FR 7924 (Feb. 22, 2018). The BLM provided for a 60-day public comment period, which generated more than 600,000 comments on the proposed rule. The BLM received comments from a wide variety of persons and entities, including individual citizens, environmental advocacy groups, industry advocacy groups, oil and gas exploration and production companies, public interest groups, state agencies, and tribes. The BLM has summarized and responded to these comments in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.) In addition, the BLM has noted the most salient comments on the proposed rule in its discussion of the final rule in this preamble. In response to comments and after further consideration, the BLM has made the following modifications to the proposed rule in this final rule: (1) Clarification that the 24-hour limit on royalty-free flaring during downhole well maintenance and liquids unloading in § 3179.104 applies “per event”; (2) Addition of a standard for “applicable rules, regulations, or orders” of a State regulatory agency or tribe in § 3179.201(a); and (3) Addition of a provision allowing for tribes to seek BLM approval to have tribal rules apply in place of any or all of the provisions of subpart 3179. The final rule is otherwise the same as the proposed rule.



The BLM has several compelling reasons for modifying the requirements in the 2016 rule.

First, the BLM believes that many provisions of the 2016 rule exceeded the BLM's statutory authority to regulate for the prevention of "waste" under the Mineral Leasing Act (MLA). The MLA states that all leases "shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land . . . ."<sup>3</sup> The MLA further provides that "[e]ach lease shall contain provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in the operation of [the lease]," as well as "a provision that such rules . . . for the prevention of undue waste as may be prescribed by [the Secretary] shall be observed . . . ."<sup>4</sup> The concept of "waste" underlying the 2016 rule constituted a drastic departure from the concept of "waste" applied by the Department of the Interior over many decades of implementing the MLA. The 2016 rule was based on the premise that essentially any losses of gas at the production site could be regulated as "waste," without regard to the economics of conserving that lost gas. This is illustrated by the 2016 rule's "capture percentage," storage vessel, and LDAR requirements, all of which, as explained in more detail in the section-by-section analysis, were expected to impose compliance costs well in excess of the value of the gas to be conserved.

The Department's implementation of the MLA has long been informed by an understanding that there is a certain amount of unavoidable loss of oil and gas that is

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<sup>3</sup> 30 U.S.C. 225. For convenience, where several statutes applicable to public lands support the same legal point, we refer hereinafter only to the MLA.

<sup>4</sup> 30 U.S.C. 187.

inherent in oil and gas production and, therefore, not all losses of gas may be considered “waste” under the MLA. *See Marathon Oil Co. v. Andrus*, 452 F. Supp. 548, 551 (D. Wyo. 1978) (“For more than half a century, both the government, as lessor, and all of its lessees have understood and have been governed by the pertinent statutes to the end that all oil and gas used on the lease for ordinary production purposes or unavoidably lost were not subject to royalty payments to the government.”). Contrary to the novel interpretation of “waste” employed in the 2016 rule, the BLM has historically taken the lease-specific circumstances faced by an operator—including the economic viability of capturing and marketing the gas—into account before determining that a particular loss of gas constitutes “waste.” *See Rife Oil Properties, Inc.*, 131 IBLA 357, 376 (1994) (“[T]he ultimate issue in this case is whether it would have been economic to market gas from the well at issue . . . .”); *Ladd Petroleum Corp.*, 107 IBLA 5 (1989) (remanding for “further consideration of whether it was uneconomic to capture that gas at that time”).

In the 2016 rule, the BLM recognized the inconsistency with its longstanding practice, but argued that past practice did not prohibit the BLM from pursuing a different approach. *See* 81 FR 83038. However, in adopting an interpretation of “waste” that is not informed by the economics of capturing and marketing the gas, the BLM ignored the longstanding concept of “waste” in oil and gas law, which Congress adopted in enacting the MLA. Oil and gas law applies a “prudent operator” standard to oil and gas lessees, thereby imposing an obligation of reasonable diligence in the developing and marketing of oil and gas from the lease, with due regard for the interest of both the lessee and the lessor. *See, e.g., Brewster v. Lanyon Zinc Co.*, 140 F. 801, 814 (8th Cir. 1905) (“It is only to the end that the oil and gas shall be extracted with benefit or profit to both [lessee

and lessor] that reasonable diligence is required.”); *see also* Patrick H. Martin & Bruce M. Kramer, WILLIAM & MEYERS OIL AND GAS LAW § 806.3 (abridged 4<sup>th</sup> edition) (2010). This prudent-operator standard was incorporated into the MLA through the provisions requiring lessees to exercise “reasonable diligence, skill, and care” in the operation of the lease, and subjecting leases to the condition that the lessee will “use all reasonable precautions to prevent waste of oil or gas developed in the land.”<sup>5</sup> The exercise of “reasonable diligence” and employment of “reasonable precautions” do not require an operator to lose money capturing and marketing uneconomic gas. To require that operators do so, as the 2016 rule did, is inconsistent with the prudent-operator standard incorporated in the MLA and exceeds the BLM’s waste-prevention authority. Although the 2016 rule contained provisions allowing operators to apply for exemptions or variances from many of the rule’s requirements based on economic considerations, the standard for approving these variances or exemptions was not whether capturing and marketing the gas would be economic (i.e., whether capture would be expected of a prudent operator), but, rather, whether compliance would cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

The BLM’s experience in the litigation of the 2016 rule reinforces the BLM’s conclusion that the 2016 rule exceeded its statutory authority. Immediately after the 2016 rule was issued, petitions for judicial review of the rule were filed by industry groups and States with significant BLM-managed Federal and Indian minerals. *Wyoming v. U.S. Dep’t of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners in this litigation argued that the BLM exceeded its statutory authority by promulgating a rule

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<sup>5</sup> 30 U.S.C. 187, 225.

that, rather than regulating for the prevention of “waste,” was actually intended to regulate air quality, a matter within the regulatory jurisdiction of the EPA and the States under the Clean Air Act. Petitioners also argued that the 2016 rule exceeded the BLM’s waste-prevention authority by requiring conservation without regard to economic feasibility, a key factor in determining whether a loss of oil or gas is prohibited “waste” under the MLA. Although the court denied petitioners’ motions for a preliminary injunction, the court did very clearly express grave concerns that the BLM had usurped the authority of the EPA and the States under the Clean Air Act, and questioned whether it was appropriate for the 2016 rule to be justified based on its environmental and societal benefits, rather than on its resource conservation benefits alone. *Wyoming v. U.S. Dep’t of the Interior*, 2017 WL 161428, \*6-10 (D. Wyo.) (Jan. 16, 2017). The BLM has considered the court’s concerns with the 2016 rule and finds them to be valid. In its revision of the 2016 rule, the BLM has sought to ensure that its regulations are justified as waste-prevention measures under the BLM’s MLA authority and do not usurp the Clean Air Act authority of the EPA, the States, and tribes. To achieve this end, the BLM is rescinding the provisions of the 2016 rule that imposed costs in excess of their resource conservation benefits or created the potential for impermissible conflict with the regulation of air quality by the EPA or the States under the Clean Air Act. The BLM acknowledges that, because regulations that prevent wasteful losses of natural gas necessarily reduce emissions of that gas, there is some limited degree of overlap between the BLM’s MLA authority and the Clean Air Act authority of the EPA, the States, and tribes. However, in the words of the court, “the BLM cannot use overlap to justify overreach.” *Wyoming*, 2017 WL 161428, \*9.

Second, the BLM reviewed the 2016 rule's requirements and determined that the rule's compliance costs for industry and implementation costs for the BLM exceed the rule's benefits. Over the 10-year evaluation period (2019-2028), the total net benefits from the 2016 rule are estimated to be -\$736 million to -\$1.01 billion (net present value (NPV) and interim domestic social cost of methane (SC-CH<sub>4</sub>) using a 7 percent discount rate) or -\$722 million to -\$1.09 billion (NPV and interim domestic SC-CH<sub>4</sub> using a 3 percent discount rate). For a more detailed explanation, see the analysis of the 2016 rule's requirements (baseline scenario) in the Regulatory Impact Analysis (RIA) prepared for this rule (RIA at Section 4.3). Although the 2016 RIA found that overall benefits of the 2016 rule would exceed its costs, this finding was dependent upon the use of a "global" social cost of methane metric based on Technical Support Documents that have since been rescinded. As described in more detail below, BLM's cost-benefit analysis for this revision of the 2016 rule followed longstanding guidance in Office of Management and Budget Circular A-4 (Sept. 17, 2003).

In addition, many of the 2016 rule's requirements placed a particular compliance burden on operators of marginal or low-producing wells, and there is a substantial risk that many of these wells would not be economical to operate with the additional compliance costs. Although the characteristics of what is considered to be a marginal well can vary, the percentage of the nation's oil and gas wells classified as marginal is high. The Interstate Oil and Gas Compact Commission (IOGCC) published a report in 2015 detailing the contributions of marginal wells to the nation's oil and gas production

and economic activity.<sup>6</sup> According to the IOGCC, about 69.1 percent and 75.9 percent of the nation’s operating oil and gas wells, respectively, are marginal (IOGCC 2015 at 22). The IOGCC defines a marginal well as “a well that produces 10 barrels of oil or 60 Mcf of natural gas per day or less” (IOGCC 2015 at 2).<sup>7</sup> The U.S. Energy Information Administration (EIA) reported that, in 2016, roughly 76.4 percent of oil wells produced less than or equal to 10 barrels of oil equivalent (BOE) per day and 81.3 percent of oil wells produced less than or equal to 15 BOE/day. For gas wells, EIA reported that roughly 71.6 percent produced less than or equal to 10 BOE/day and 78.2 percent less than or equal to 15 BOE/day. For both oil and gas wells, EIA estimates that 73.3 percent of all wells produce less than 10 BOE/day.<sup>8</sup> Applying these estimates to the overall number of BLM-administered wells indicates that about 69,000 wells producing Federal and/or Indian oil and gas are marginal.<sup>9</sup>

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<sup>6</sup> IOGCC, “Marginal Wells: Fuel for Economic Growth. 2015 Report.” Available on the web at <http://iogcc.ok.gov/Websites/iogcc/images/MarginalWell/MarginalWell-2015.pdf>.

<sup>7</sup> By other definitions, marginal or stripper wells might include those with production of up to 15 barrels of oil or 90 Mcf of natural gas per day or less. The U.S. Energy Information Administration (EIA) reported that, in 2009, roughly 78.7 percent of oil wells produced less than or equal to 10 barrels of oil equivalent (BOE) per day and 85.4 percent of oil wells produced less than or equal to 15 BOE/day. For gas wells, EIA reported that roughly 64.5 percent produced less than or equal to 10 BOE/day and 73.3 percent less than or equal to 15 BOE/day. EIA, “United States Total 2009: Distribution of Wells by Production Rate Bracket.” December 2010. Available on the web at [https://www.eia.gov/naturalgas/archive/petrosystem/us\\_table.html](https://www.eia.gov/naturalgas/archive/petrosystem/us_table.html).

<sup>8</sup> EIA, “The Distribution of U.S. Oil and Natural Gas Wells by Production Rate.” December 2017. Available on the web at <https://www.eia.gov/petroleum/wells/>, Table B17. United States oil and gas well summary statistics, 2016.

<sup>9</sup> The BLM obtained this number by estimating the percent of marginal wells and by multiplying that percentage by the number of Federal and Indian wells reported in the BLM Oil and Gas Statistics, *available at* <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics>. The BLM is not aware of any information indicating that the incidence of marginal wells producing Federal and Indian oil and gas is substantially different than the incidence of marginal wells nationally, and so it is appropriate to use the EIA’s estimate of the national incidence of marginal wells in estimating the number of marginal wells producing Federal and Indian oil and gas. The BLM’s estimate is further supported by comments that the American Petroleum Institute (API) submitted to the BLM’s proposed rule. The API estimates that between 70 percent and 80 percent of the Federal and Indian wells that would have been impacted by the 2016 rule are marginal. See API comment at Appendix A, p. 3.

The 2016 rule's requirements that would have placed a particular burden on marginal wells were those pertaining to pneumatic controllers, pneumatic diaphragm pumps, and LDAR. To illustrate the impact on the economic viability of marginal oil and gas wells from the 2016 rule, the BLM calculated the per-well reduction in revenue from the costs imposed by the requirements in the 2016 rule. The reduction in revenue was calculated using both total and annualized costs at three different periods in EIA's 2018 Annual Energy Outlook (AEO) price forecast. The per-well revenue values are the product of estimated annual production and annual average prices less royalty payments and lifting costs. Based on EIA's projected 2019 prices, the estimated revenue reduction for marginal oil wells ranges from 24 percent for wells producing 10 bbl/day to 236 percent for wells producing 1 bbl/day. Revenue reductions to marginal gas wells range from 86 percent for wells producing 60 mcf/day to 1,037 percent for wells producing 5 mcf/day. These values are reduced when using annualized costs, however, the reductions in revenue are still substantial. Production from marginal wells represents a smaller fraction of total oil and gas production than that of non-marginal wells. However, as the BLM's analysis indicates, this means that any associated regulatory burdens would have a disproportionate impact on marginal wells, since the compliance costs represent a much higher fraction of oil and gas revenues for marginal wells than they do for non-marginal wells. Thus, the compliance burdens of the 2016 rule pose a greater cost to marginal-well producers. The BLM's analysis of the impact of the 2016 rule on marginal wells is explained in more detail in Section 4.5.6 of the RIA.

The 2016 rule attempted to address the marginal-well problem by providing operators with an opportunity to obtain exemptions from many of the most costly

requirements when compliance would impose such costs that an operator would cease production and abandon significant recoverable reserves. Although the 2016 rule allowed operators to request an alternative LDAR program based on these considerations, there was no opportunity for a full exemption from the LDAR requirement in the 2016 rule.<sup>10</sup> Moreover, it was not clear what would constitute significant recoverable reserves for purposes of determining whether an operator would qualify for an exemption or an alternative LDAR program. In light of the fact that compliance costs for the 2016 rule represent 24 percent of the revenues of the highest-producing marginal oil wells and 86 percent of the revenues of the highest-producing marginal gas wells, the BLM expects that full compliance with the 2016 rule could have jeopardized the economic operations of many marginal wells and that many applications for exemptions or alternative LDAR programs would have been warranted. And, due to the prevalence of marginal and low-producing wells, the BLM expects that the burden imposed by the exemption/alternative processes would have been excessive, both for operators and the BLM. An operator would incur costs in obtaining an exemption or approval for an alternative LDAR program, as the operator would need to submit an application with economic and geologic information and analysis proving to BLM's satisfaction that compliance would cause the operator to cease production and abandon significant recoverable reserves. Considering this cost in light of the fact that the standard for obtaining an exemption or approval for an alternative LDAR program is unclear and subject to interpretation, the BLM believes that the costs and uncertainties involved in processes for receiving an

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<sup>10</sup> The BLM estimates that, over 10 years from 2019-2028, the 2016 rule's LDAR requirements would have imposed costs of about \$550 million to \$688 million while only generating cost savings from product recovery of about \$101 million to \$128 million (RIA at Section 4.4).



exemption or approval for an alternative LDAR program could have led the operators of the lowest-producing marginal wells to shut them in prematurely, stranding otherwise recoverable resources in place.

In addition to the costs of complying with the 2016 rule's operational requirements, there were many reporting requirements in the 2016 rule and the cumulative effect of the burden would have been substantial. Specifically, the BLM estimates that the 2016 rule would have imposed administrative costs of about \$14 million per year (\$10.7 million to be borne by the industry and \$3.27 million to be borne by the BLM). The BLM estimates that this final rule will alleviate the vast majority of these burdens and will pose administrative burdens of only \$349,000 per year. (See RIA Section 3.2.2).

Beyond the cost-benefit analysis, the impact to marginal wells, and the reporting burdens, the BLM notes that the 2016 rule had many requirements that overlapped with the EPA's regulations issued under the Clean Air Act, namely EPA's New Source Performance Standards (NSPS) at 40 CFR part 60, subparts OOOO (NSPS OOOO) and OOOOa (NSPS OOOOa). The EPA's NSPS OOOO regulates new, reconstructed, and modified pneumatic controllers, storage tanks, and gas wells completed using hydraulic fracturing, while NSPS OOOOa regulates new, reconstructed, and modified pneumatic pumps, fugitive emissions from well sites and compressor stations, and oil and gas wells completed using hydraulic fracturing. The BLM's 2016 rule also would have regulated emissions of natural gas from these source categories. While the EPA regulates new, modified, and reconstructed sources, the BLM's 2016 rule applied to all wells and facilities producing Federal and Indian oil and gas and regulated emissions from new,

modified, and existing sources. The 2016 rule's emissions-targeting provisions were informed by and were largely similar to EPA's requirements for the same sources of emissions. Therefore, the practical effect of the 2016 rule's emissions-targeting provisions was essentially to impose EPA requirements designed for new and reconstructed sources on existing sources producing Federal and Indian oil and gas.<sup>11</sup>

In addition, as the BLM acknowledged during the development of the 2016 rule,<sup>12</sup> some States with significant Federal oil and gas production have similar regulations addressing the loss of gas from these sources. For example, the State of Colorado has regulations that restrict hydrocarbon emissions during most oil and gas well completions and recompletions, impose requirements for pneumatic controllers and storage vessels, require a comprehensive LDAR program, and set standards for liquids unloading.<sup>13</sup> In addition, the Utah Department of Environmental Quality has issued regulations addressing emissions from pneumatic controllers and storage vessels as well as fugitive emissions from oil and gas well sites.<sup>14</sup> Since the promulgation of the 2016 rule, the State of California has also issued new regulations that: Require quarterly monitoring of methane emissions from oil and gas wells, compressor stations and other equipment involved in the production of oil and gas; impose limitations on venting from natural-gas-powered pneumatic devices and pumps; and require vapor recovery from tanks under

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<sup>11</sup> The EPA can regulate existing facilities through a process separate from how it regulates new, modified, and reconstructed sources. Challengers of the 2016 rule argued that the BLM circumvented that EPA process by promulgating the 2016 rule.

<sup>12</sup> 81 FR 6616, 6633-34 (Feb. 8, 2016).

<sup>13</sup> Colorado Air Quality Control Commission, Regulation 7, 5 CCR 1001-9, Sections XII, XVII, and XVIII.

<sup>14</sup> UTAH ADMIN. CODE r.307-501-510.

certain circumstances.<sup>15</sup> The existence of methane emissions regulations in these states highlights the unnecessary regulatory overlap and duplication created by the 2016 rule.

Finally, the 2016 rule also had requirements that limited the flaring of associated gas produced from oil wells. The 2016 rule sought to constrain the flaring of associated gas through the imposition of a “capture percentage” requirement, which required operators to capture a certain percentage of the gas they produce, after allowing for a certain volume of flaring per well. The requirement would have become more stringent over a period of years. As explained below, the BLM has chosen to rescind this requirement in favor of an approach that relies on State and tribal regulations and reinstates the NTL-4A standard for flaring in the absence of applicable State or tribal regulations. The BLM reviewed State regulations, rules, and orders designed to limit the waste of oil and gas resources and the flaring of natural gas, and determined that States with the most significant BLM-managed oil and gas production place restrictions or limitations on gas flaring from oil wells. For example, the State of North Dakota has requirements that are similar (but not identical) to the 2016 rule. Other States generally have flaring limits that trigger a review by a governing board to determine whether the gas should be conserved. A memorandum containing a summary of the statutory and regulatory restrictions on venting and flaring in the 10 States responsible for approximately 99 percent of Federal oil and gas production is available on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.

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<sup>15</sup> CAL. CODE REGS. Tit. 17, §§ 95665–95677.

## **B. Legal Authority**

Pursuant to a delegation of Secretarial authority, the BLM regulates the development of Federal and Indian onshore oil and gas resources under the following statutes: The Mineral Leasing Act of 1920 (MLA) (30 U.S.C. 188-287), the Mineral Leasing Act for Acquired Lands (MLAAL) (30 U.S.C. 351-360), the Federal Oil and Gas Royalty Management Act (30 U.S.C. 1701-1758), the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1701-1785), the Indian Mineral Leasing Act of 1938 (IMLA) (25 U.S.C. 396a-g), the Indian Mineral Development Act of 1982 (IMDA) (25 U.S.C. 2101-2108), the Act of March 3, 1909 (25 U.S.C. 396), and the other statutes and authorities listed in 43 CFR 3160.0-3. These statutes authorize the Secretary of the Interior to promulgate such rules and regulations as may be necessary to carry out the statutes' various purposes.<sup>16</sup> Although the MLA authorizes the Secretary to prescribe rules and regulations for carrying out the purposes of the MLA, it also states that “nothing in [the MLA] shall be construed or held to affect the rights of the States or other local authority to exercise any rights which they may have.”<sup>17</sup>

The Federal mineral leasing statutes share a common purpose of promoting the development of Federal oil and gas resources for the financial benefit of the public.<sup>18</sup> The MLA states that all leases “shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to

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<sup>16</sup> E.g., 30 U.S.C. 189 (MLA); 30 U.S.C. 359 (MLAAL); 30 U.S.C. 1751(a) (FOGRMA); 43 U.S.C. 1740 (FLPMA); 25 U.S.C. 396d (IMLA); 25 U.S.C. 2107 (IMDA); 25 U.S.C. 396.

<sup>17</sup> 30 U.S.C. 189.

<sup>18</sup> See, e.g., *California Co. v. Udall*, 296 F.2d 384, 388 (D.C. Cir. 1961) (noting that the MLA “was intended to promote wise development of . . . natural resources and to obtain for the public a reasonable financial return on assets that ‘belong’ to the public.”).

prevent waste of oil or gas developed in the land . . . .”<sup>19</sup> The MLA further provides that “[e]ach lease shall contain . . . a provision that such rules . . . for the prevention of undue waste as may be prescribed by [the Secretary] shall be observed . . . .”<sup>20</sup> FOGRMA establishes royalty liability for “oil or gas lost or wasted . . . when such loss or waste is due to negligence on the part of the operator of the lease, or due to the failure to comply with any rule or regulation, order or citation issued under [the mineral leasing laws].”<sup>21</sup> In FLPMA, Congress declared “that it is the policy of the United States that . . . the public lands be managed in a manner which recognizes the Nation’s need for domestic sources of minerals . . . .”<sup>22</sup>

The Indian minerals statutes require the Secretary to exercise his trust responsibilities in the best interests of the tribes or of the individual Indian mineral owners, considering all factors affecting their interests. E.g., *Kenai Oil & Gas, Inc. v. DOI*, 671 F.2d 383, 387 (10<sup>th</sup> Cir. 1982).

To assure that the development of Federal and Indian oil and gas resources will not be unnecessarily hindered by regulatory burdens, the BLM has, in this rulemaking, exercised its inherent authority<sup>23</sup> to reconsider the 2016 rule. The BLM’s revision of the 2016 rule is intended to ensure that, consistent with its statutory authority, the BLM’s waste prevention regulations target “undue waste” and require “reasonable precautions”

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<sup>19</sup> 30 U.S.C. 225. For convenience, where several statutes applicable to public lands support the same legal point, we refer hereinafter only to the MLA.

<sup>20</sup> 30 U.S.C. 187.

<sup>21</sup> 30 U.S.C. 1756.

<sup>22</sup> 43 U.S.C. 1701.

<sup>23</sup> See *Ivy Sports Med., LLC v. Burwell*, 767 F.3d 81, 86 (D.C. Cir. 2014) (noting the “oft-repeated” principle that the “power to reconsider is inherent in the power to decide”).

on the part of operators, and that the BLM's regulations do not unnecessarily constrain domestic mineral production or oil and gas revenues from Indian lands.

The BLM received a number of comments addressing its statutory authority and obligations. The BLM did not make any changes to the rule based on these comments.

Some commenters argued that the 2016 rule exceeded the BLM's statutory authority and alleged that BLM was attempting to regulate air quality under the guise of waste prevention. These commenters argued that the authority to regulate air quality at oil and gas operations rests with the EPA and the States, not with the BLM. As evidence of the alleged overreach, these commenters cited a number of "air quality" provisions in the 2016 rule for which compliance costs outweighed conservation benefits. These commenters expressed support for the BLM's revision of the 2016 rule on the grounds that the revision brings the BLM's regulations back in line with its statutory authority.

Other commenters argued that the BLM's proposed revision of the 2016 rule would fail to meet what they saw as the BLM obligations under the MLA. They argued that the proposed revision of the 2016 rule would not require operators to use "all reasonable precautions to prevent waste" and would not prevent "undue waste." They further argued that the BLM's policy determination that waste-prevention regulations should balance compliance costs against conservation benefits (i.e., the value of the resource to be conserved) is inconsistent with the concept of "waste" in the MLA. Ultimately, however, these commenters failed to provide legal authorities or evidence sufficient to persuade the BLM that the MLA either does not provide the BLM with the discretion to determine what constitutes "reasonable precautions" and "undue waste," or that the BLM's revision of the 2016 rule exceeds the BLM's discretion in this area.

Some commenters noted that the BLM gave less emphasis to operator economics in developing the 2016 rule. As explained above, the BLM believes that, by failing to give due regard to operator economics, the BLM exceeded its statutory authority in imposing many of the 2016 rule's requirements. The BLM's revision of the 2016 rule is consistent with the MLA and is consistent with the BLM's longstanding approach to regulating waste prior to the promulgation of the 2016 rule that considered the economic feasibility of marketing lost gas in making "avoidable loss" determinations. *See Rife Oil Properties, Inc.*, 131 IBLA 357, 373–76 (1994); *Ladd Petro. Corp.*, 107 IBLA 5, 7 (1989). And, even if the 2016 rule did not exceed the BLM's statutory authority, it is nonetheless within the BLM's authority to revise its "waste prevention" regulations in a manner that balances compliance costs against the value of the resources to be conserved.

Some commenters argued that the BLM's revision of the 2016 rule violates FLPMA because FLPMA states that the Secretary "shall manage the public lands under principles of multiple use and sustained yield" and that the Secretary "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the public lands." 43 U.S.C. 1732(a)-(b). The BLM acknowledges the quoted mandates of FLPMA, but disagrees that they support the commenters' conclusion. FLPMA's concern with "unnecessary or undue degradation" must be understood in light of the statute's overarching mandate that the BLM manage the public lands under "principles of multiple use and sustained yield." *See Theodore Roosevelt Conservation P'ship v. Salazar*, 661 F.3d 66, 76 (D.C. Cir. 2011). FLPMA's multiple-use and sustained-yield mandate requires the BLM to balance potentially degrading uses, such as mineral extraction, with conservation of the natural environment so as to ensure valuable uses of

the lands in the future. *Id.* Nothing in the revision of the rule precludes the BLM from managing the development of Federal oil and gas—a statutorily authorized use of the public lands—in accordance with the principles of multiple use and sustained yield and requiring the avoidance and minimization of impacts where appropriate. Commenters highlighted the noise, light, and air quality impacts expected to be associated with the revised regulations, but they failed to explain why it would be impossible for the BLM to balance these impacts with appropriate conservation measures as needed in order to comply with FLPMA. The BLM considers the environmental impacts of oil and gas production in complying with the National Environmental Policy Act at the resource management planning, lease sale, and well permitting stages of Federal oil and gas development, and the BLM may identify appropriate region- and site-specific environmental-impact avoidance and minimization measures at each of those stages. Commenters, therefore, failed to convince the BLM that its revision of the 2016 rule is inconsistent with FLPMA.

### **III. Discussion of the Final Rule**

#### **A. Summary**

The 2016 rule replaced the BLM’s prior policy, NTL-4A, which governed venting and flaring from BLM-administered leases for more than 35 years. Because the BLM has found the 2016 rule would impose excessive costs (when fully implemented), and believes that a regulatory framework similar to NTL-4A can be applied in a manner that limits waste without unnecessarily burdening production, the BLM has replaced the requirements contained in the 2016 rule with requirements similar to, but with notable improvements on, those contained in NTL-4A.



The preamble to the 2016 rule suggested that NTL-4A was outdated and needed to be overhauled to account for technological advancements and to incorporate “economical, cost-effective, and reasonable measures that operators can take to minimize gas waste.”<sup>24</sup> But, as evidenced by the 2016 RIA and the RIA prepared for this final rule, many of the requirements imposed by the 2016 rule were not, in fact, cost-effective and actually imposed compliance costs well in excess of the value of the resource to be conserved. The BLM believes that a return to an improved NTL-4A framework, as explained in more detail in the section-by-section discussion below, is appropriate and will ensure that operators take “reasonable precautions” to prevent “undue waste.” Notable improvements on NTL-4A in this final rule include: Codifying a general requirement that operators flare, rather than vent, gas that is not captured (§ 3179.6); requiring persons conducting manual well purging to remain onsite in order to end the venting event as soon as practical (§ 3179.104); and, providing clarity about what does and does not constitute an “emergency” for the purposes of royalty assessment (§ 3179.103).

With this final rule, the BLM has rescinded the following requirements of the 2016 rule:

- Waste Minimization Plans;
- Well drilling requirements;
- Well completion and related operations requirements;
- Pneumatic controllers equipment requirements;
- Pneumatic diaphragm pumps equipment requirements;

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<sup>24</sup> 81 FR 83008, 83009, 83017 (Nov. 18, 2016).

- Storage vessels equipment requirements; and
- LDAR requirements.

In addition, the BLM has modified and/or replaced the following requirements of the 2016 rule with requirements that are similar to those that were in NTL-4A:

- Gas-capture requirements;
- Downhole well maintenance and liquids unloading requirements; and
- Measuring and reporting volumes of gas vented and flared.

The remaining requirements in the 2016 rule have either been retained, modified only slightly, or removed, but the impact of the removal is small relative to the items listed above.

Many of the rescinded provisions of the 2016 rule focused on controlling emissions from sources and operations, which are regulated by EPA under its Clean Air Act authority, and for which there are analogous EPA regulations at 40 CFR part 60, subparts OOOO and OOOOa. Specifically, these emissions-targeting provisions of the 2016 rule are §§ 3179.102, 3179.201, 3179.202, 3179.203, and 3179.301 through 3179.305. The BLM has chosen to rescind these provisions based on a number of considerations.

First, the BLM has reconsidered whether the substantial compliance costs associated with the emissions-targeting provisions are justified by the value of the gas that is expected to be conserved as a result of compliance. As detailed in the RIA, and evidenced by the 2016 RIA, many of the emissions-targeting provisions of the 2016 rule were expected to impose compliance costs well in excess of the value of the resource (natural gas) that would be conserved. The BLM has made the policy determination that

it is not appropriate for “waste prevention” regulations to impose compliance costs greater than the value of the resources they are expected to conserve. Although the RIA for the 2016 rule found that, in total, the benefits of these provisions outweighed their costs, this finding depended on the use of a global social cost of methane (SC-CH<sub>4</sub>) metric derived from Technical Support Documents which have since been rescinded. The SC-CH<sub>4</sub> metric is a societal metric that does not inform the “prevention of undue waste” or “reasonable precautions to prevent waste” under the MLA, which is statutory language that the BLM interprets in terms of the conservation of oil and gas resources. Although the BLM has employed the SC-CH<sub>4</sub> metric for the purpose of examining and disclosing the impacts of this regulatory action pursuant to E.O. 12866, it is not appropriate for the BLM to use the SC-CH<sub>4</sub> metric when determining whether a loss of natural gas is “waste” under the MLA.

E.O. 13783, at Section 5, disbanded the earlier Interagency Working Group on Social Cost of Greenhouse Gases (IWG) and withdrew the Technical Support Documents<sup>25</sup> upon which the RIA for the 2016 rule relied for the valuation of changes in methane emissions. The SC-CH<sub>4</sub> estimates presented by the BLM for this revision rule are interim values for use in regulatory analyses until an improved estimate of the impacts of climate change to the U.S. can be developed. In accordance with E.O. 13783, they are adjusted to reflect discount rates of 3 percent and 7 percent, and to focus on domestic—rather than global—impacts of climate change, which is consistent with OMB Circular A-4. The 7 percent rate is intended to represent the average before-tax rate of

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<sup>25</sup> Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under E.O. 12866 (published August 26, 2016) and its Addendum.

return to private capital in the U.S. economy. The 3 percent rate is intended to reflect the rate at which society discounts future consumption, which is particularly relevant if a regulation is expected to affect private consumption directly. When assessing domestic impacts of climate change, the benefits of many of the emissions-targeting provisions do not outweigh their costs. And, because the value of the conserved gas would not outweigh the costs, the BLM does not believe that its legal authority to prescribe rules “for the prevention of undue waste”<sup>26</sup> would cover the emissions-targeting provisions in the 2016 rule.

Several commenters argued that the SC-CH<sub>4</sub> approach taken in the economic analysis for the revision of the 2016 rule fails to adequately recognize the global nature of methane emissions impacts. These commenters asserted that the U.S. will likely be forced to increase humanitarian aid, deal with mass migrations, and manage changing security needs (e.g., in the Arctic) as a result of overseas climate change impacts. They further argued that overseas impacts could also affect the U.S. economy, disrupting international trade and undermining financial markets. In response, the BLM reiterates that the Technical Support Documents that provided the basis for the use of the global social cost of methane in the 2016 RIA were rescinded by EO 13783 and that the BLM followed the guidance in OMB Circular A-4 in conducting its economic analysis of the anticipated climate impacts of this rule.<sup>27</sup> Finally, the BLM notes that its use of this same domestic social cost of methane analysis in a rulemaking to temporarily suspend certain provisions of the 2016 rule was recently examined by a U.S. District Court in the context of a preliminary injunction motion and that court found the BLM’s social cost of methane

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<sup>26</sup> 30 U.S.C. 187.

<sup>27</sup> See the RIA at Section 3.3 for a discussion of how the BLM’s analysis is consistent with Circular A-4.

analysis to be acceptable. *California v. BLM*, 286 F.Supp.3d 1054, 1070 (N.D. Cal. 2018) (“[BLM] has provided a factual basis for its change in position (the OMB circular and Executive Order 13793) as well as demonstrated that the change is within its discretion, at least with respect to this aspect of the RIA”).

In addition to cost-benefit concerns, the BLM believes that the emissions-targeting provisions of the 2016 rule create unnecessary regulatory overlap in light of EPA’s Clean Air Act authority and its analogous regulations that similarly reduce losses of gas.<sup>28</sup> In general, the emissions-targeting provisions of the 2016 rule were crafted so that compliance with similar provisions within EPA’s regulations would constitute compliance with the BLM’s regulations. Although EPA’s regulations apply to new, reconstructed, and modified sources, while the 2016 rule’s requirements also applied to existing sources, the BLM notes that the EPA’s regulations at 40 CFR part 60 subpart OOOO<sup>29</sup> were published in 2012 and that over time, as existing well sites are modified or reconstructed and new well sites come online, the EPA’s regulations at 40 CFR part 60 subparts OOOO and OOOOa will displace the BLM’s regulations, eventually rendering certain emissions-targeting provisions of the 2016 rule entirely duplicative. The rate by which we expect the EPA’s regulations to become entirely duplicative of the 2016 rule varies by requirement and the specific equipment or operations being regulated. For example, assuming a pneumatic controller equipment life of 15 years, we would expect the EPA’s subpart OOOO regulations to entirely duplicate the 2016 rule in 8 years (or by 2026) since those requirements have been in effect for 7 years. With respect to LDAR,

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<sup>28</sup> The BLM is aware that the EPA has proposed a temporary stay of some of the requirements contained in NSPS OOOOa and that the EPA is undertaking a reconsideration of these requirements. See 82 FR 27645 (June 16, 2017). The BLM has coordinated with the EPA throughout the process of revising the 2016 rule.

<sup>29</sup> Subpart OOOO was finalized in 2012, but covers new, modified, reconstructed sources since 2011.

an existing well would fall under EPA's subpart OOOOa regulations if any of the existing wells on the wellsite are modified or reconstructed, or if a new well is added to the wellsite. Therefore, existing wells might shift quickly from the 2016 rule to EPA's subpart OOOOa regulation (e.g., if multiple existing wells shift to the EPA's regulations due to the modification of a single well on the wellsite) or not at all (e.g., if a well or wellsite is never modified before being plugged and abandoned). By removing the duplicative emissions-targeting provisions, the final rule falls squarely within the scope of the BLM's authority to prevent waste and leaves the regulation of air emissions to the EPA, the agency with the experience, expertise, and clear statutory authority to do so.

The BLM received comments asserting that the BLM cannot rely on EPA's regulations to reduce waste from oil and gas operations on Federal and Indian leases for a variety of reasons, including that EPA's regulations do not apply to existing sources, that the EPA does not regulate for the purpose of preventing waste, and that the BLM has not quantified the extent to which EPA's regulations will reduce waste from Federal and Indian oil and gas operations in the time period before EPA's regulations entirely displace the 2016 rule's requirements. These comments are based on an incorrect belief that the BLM is relying on EPA regulations to limit waste. As discussed above, the BLM has found that many of the emissions-targeting provisions of the 2016 rule do not target waste because their compliance costs far exceed the value of the resource to be conserved. Even if the BLM were relying on EPA's regulations to address waste from these sources and operations – which it is not – this would be consistent with the 2016

rule, which provided exemptions for sources and operations compliant with or subject to analogous EPA regulations.<sup>30</sup>

Finally, the BLM recognizes that the oil and gas exploration and production industry continues to pursue reductions in methane emissions on a voluntary basis. For example, XTO Energy, Inc., which operates 2,572 BLM-administered leases and agreements, has publicly stated that it is undertaking a 3-year plan to phase out high-bleed pneumatic devices from its operations and will be implementing an enhanced LDAR program.<sup>31</sup> In December 2017, the American Petroleum Institute (API) announced a voluntary program to reduce methane emissions. The API announced that 26 companies, including ExxonMobil, Chevron, Shell, Anadarko and EOG Resources, would take action to implement LDAR programs and replace, remove, or retrofit high-bleed pneumatic controllers with low- or zero-emitting devices.<sup>32</sup>

With this final rule, the BLM did not revise the royalty provisions (43 CFR 3103.3-1) or the royalty-free use provisions (43 CFR subpart 3178) that were part of the 2016 rule. Although the BLM sought and received comments on the royalty-free use provisions in subpart 3178, the BLM was not persuaded that any amendment of subpart 3178 is necessary at this time.

The BLM intends that each of the provisions of the final rule is severable. It is reasonable to consider the provisions severable because they do not inextricably depend

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<sup>30</sup> See former 43 CFR 3179.102(b), 3179.201(a)(2), 3179.202(a)(2), 3179.203(a)(2), 3179.301(k).

<sup>31</sup> XTO Energy, “Methane emissions reduction program”, *available at* <https://www.xtoenergy.com/en-us/responsibility/current-issues/air/xto-energy-methane-emissions-reduction-program>

<sup>32</sup> Osborne, J., “Oil companies clamping down on methane leaks,” *Houston Chronicle* (Dec. 6, 2017); American Petroleum Institute, “Natural Gas, Oil Industry Launch Environmental Partnership to Accelerate Reductions in Methane, VOCs,” *available at* <http://www.api.org/news-policy-and-issues/news/2017/12/04/natural-gas-oil-environmental-partnership-accelerate-reductions-methane-vocs>.

on each other. For example, revised § 3179.4, which specifies when losses of oil or gas associated with common events and operations will be deemed “avoidable” or “unavoidable,” does not depend on, and may operate effectively in the absence of, revised § 3179.201, which determines when the flaring of associated gas from oil wells will be royalty-bearing.

## **B. Section-by-Section Discussion**

### **1. 2016 rule Requirements Rescinded**

As was proposed, the BLM rescinds the following provisions of the 2016 rule in this final rule:

#### **43 CFR 3162.3-1(j) - Drilling applications and plans.**

In the 2016 rule, the BLM added a paragraph (j) to 43 CFR 3162.3-1, which required that, when submitting an Application for Permit to Drill (APD) for an oil well, an operator must also submit a waste-minimization plan. Submission of the plan was required for approval of the APD, but the plan was not itself part of the APD, and the terms of the plan were not enforceable against the operator. The purpose of the waste-minimization plan was for the operator to set forth a strategy for how the operator would comply with the requirements of 43 CFR subpart 3179 regarding the control of waste from venting and flaring from oil wells.

The waste-minimization plan was required to include information regarding: The anticipated completion date(s) of the proposed oil well(s); a description of anticipated production from the well(s); certification that the operator has provided one or more midstream processing companies with information about the operator’s production plans,



including the anticipated completion dates and gas production rates of the proposed well or wells; and identification of a gas pipeline to which the operator plans to connect.

Additional information was required when an operator could not identify a gas pipeline with sufficient capacity to accommodate the anticipated production from the proposed well, including: A gas pipeline system location map showing the proposed well(s); the name and location of the gas processing plant(s) closest to the proposed well(s); all existing gas trunklines within 20 miles of the well, and proposed routes for connection to a trunkline; the total volume of produced gas, and percentage of total produced gas, that the operator is currently venting or flaring from wells in the same field and any wells within a 20-mile radius of that field; and a detailed evaluation, including estimates of costs and returns, of potential on-site capture approaches.

The BLM estimates that the administrative burden of the waste-minimization plan requirements would be roughly \$5 million per year for industry and \$800,000 per year for the BLM (RIA at Section 7.1).

This final rule rescinds the waste minimization plan requirement of § 3162.3-1(j). The BLM believes that the waste minimization plan requirement imposed an unnecessary administrative burden on both operators and the BLM. The purpose of the waste-minimization-plan requirement was to guide an operator's behavior by forcing it to collect and consider information pertaining to gas capture. The BLM believes that there will be sufficient information-based safeguards against undue waste even in the absence of the waste-minimization-plan requirement for the following reasons. First, the BLM has found that comparable gas-capture-plan requirements in North Dakota and New Mexico will ensure that operators in those States take account of the availability of

capture infrastructure. In New Mexico, the operator must submit a gas-capture plan when seeking permission to drill a well. In North Dakota, the operator must submit a gas-capture plan when seeking permission to drill a well if the operator has not been in compliance with the State's gas-capture requirements during any of the most recent 3 months. The BLM notes that more than half of the flaring of Federal and Indian gas occurs in the states of North Dakota and New Mexico. Second, State regulations in Utah, Wyoming, and Montana require operators to submit production information similar to that required under § 3162.3-1(j)(2) when operators seek approval for long-term flaring of associated gas. In these States, both operators and State regulators will be able to consider the potential for capture before long-term flaring of associated gas can be approved. Finally, under § 3179.201(c), applicable in the absence of State or tribal regulation for the flaring of associated gas, an operator is required to submit one of the following before it could receive approval for royalty-free flaring of associated gas under final § 3179.201(c): (1) A report supported by engineering, geologic, and economic data which demonstrates to the BLM's satisfaction that the expenditures necessary to market or use the gas are not economically justified; or (2) An action plan that will eliminate the flaring within a time period approved by the BLM. All of these requirements will help to fulfill the purpose of § 3162.3-1(j), which is to ensure that operators do not waste gas without giving due consideration to the possibility of marketing or using the gas.

In addition, the extensive amount of information that an operator must include in the waste-minimization plan makes compliance with the requirement cumbersome for operators. Operators have also expressed concern that the waste-minimization-plan requirement will slow down APD processing as BLM personnel take time to determine

whether the waste-minimization plan submitted by an operator is “complete and adequate,” and whether the operator has provided all required pipeline information to the full extent that the operator can obtain it.

Some commenters expressed support for the rescission of § 3162.3-1(j), arguing that the BLM’s waste-minimization-plan requirement was redundant with State requirements and reflected an inappropriate “one size fits all” approach to basin-specific infrastructure problems. These commenters further argued that the BLM had erroneously assumed that, unless operators are forced to gather information pertaining to gas capture infrastructure, they will not do so or will not pursue opportunities to capture and market associated gas when economically justified. Some commenters argued that the BLM has not justified the rescission of the waste-minimization-plan requirement because: New Mexico has not been enforcing its comparable requirement; the process for seeking approval for flaring in Utah, Wyoming, and Montana is not an adequate substitute since the information is submitted after the well has been approved and drilled; and, the BLM can allocate more resources to APD processing to ensure that the waste-minimization-plan requirement does not slow down APD processing. First, the BLM is aware of no evidence that New Mexico is not implementing its gas capture plan requirement. Second, the BLM does not agree that the timing of the applications to flare—whether under Utah, Wyoming, or Montana State regulations or § 3179.201(c)—precludes operators and regulators from using the information to make prudent determinations about whether flaring or capture is warranted. The fact that a well has already been drilled does not preclude State regulators from denying approval to flare where production and infrastructure information indicates that capture is warranted. Finally, the BLM does not

see the need to allocate additional BLM resources to accommodate a requirement that is duplicative of State requirements in the two States with the highest rates of flaring and provides limited additional benefit (if any) in other States where flaring is less prevalent and/or State regulations require similar information to be submitted to regulators in order to obtain permission to flare.

In light of the foregoing, the BLM concludes that there is limited (if any) benefit to the waste minimization plan requirement of § 3162.3-1(j) and is therefore rescinding it in its entirety.

The BLM has summarized and responded to the comments received on the rescission of § 3162.3-1(j) in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.7 – Gas-capture requirement.**

In the 2016 rule, the BLM sought to constrain the routine flaring of associated gas through the imposition of a “capture percentage” requirement, requiring operators to capture a certain percentage of the gas they produce, after allowing for a certain volume of flaring per well. The capture percentage requirement would have become more stringent over a period of years, beginning with an 85 percent capture requirement (5,400 Mcf per well flaring allowable) in January 2018, and eventually reaching a 98 percent capture requirement (750 Mcf per well flaring allowable) in January 2026. An operator could choose to comply with the capture targets on each of the operator’s leases, units or communitized areas, or on a county-wide or state-wide basis.

As proposed, this final rule rescinds the 2016 rule's capture percentage requirements for a number of reasons. First, the BLM estimates that this requirement, over 10 years from 2019-2028, would impose costs of \$556 million to \$1.10 billion and generate cost savings from product recovery of \$381 to \$507 million (RIA at Section 4.4). That is, the BLM's estimates indicate that the 2016 rule's capture-percentage requirements would have imposed costs that exceeded the value of the gas that they were expected to conserve. Because the capture-percentage requirements are expected to impose net costs, the BLM believes that it is appropriate to rescind them and replace them with a different approach to regulating the flaring of associated gas.

In addition, the BLM has identified a number of practical problems with the 2016 rule's capture percentage requirements. In the early years, when capture percentages would not be as high and allowable flaring would be high, the 2016 rule would have allowed for large amounts of royalty-free flaring. In the later years, the BLM believes that the 2016 rule would have introduced complexities that would have undermined its effectiveness. Because of the common use of horizontal drilling through multiple leaseholds of different ownership, the 2016 rule's coordination requirements in previous § 3179.12 (providing for coordination with States and tribes when any requirement would adversely impact production from non-Federal and non-Indian interests) created a high degree of uncertainty over how the capture requirements would have been implemented and what their impact would have been. Even if the capture percentage requirements were to be implemented and effective as written, the BLM is concerned that the prescriptive nature of the approach would have allowed for unnecessary flaring in some cases while prohibiting necessary flaring in others. For example, even if an operator

could feasibly capture all of the gas it produces from a Federal well, the operator could still flare a certain amount of gas without violating previous § 3179.7's capture-percentage requirements. Thus, in situations where the operator faced transmission or processing-plant capacity limitations (i.e., where a pipeline or processing plant does not have the capacity to take all of the gas that is being supplied to it), previous § 3179.7 would have allowed the operator to flare gas from a Federal well in order to produce more gas from a nearby non-Federal well for which there are tighter regulatory or contractual constraints on flaring.

Furthermore, the capture-percentage requirement afforded less flexibility for smaller operators with fewer operating wells than it would have for larger operators with a greater number of operating wells. A small operator with only a few wells in an area with inadequate gas-capture infrastructure would have likely been faced with curtailing production or violating § 3179.7's prescriptive limits. On the other hand, a larger operator with many wells would have had greater flexibility to average the flaring allowable over its portfolio and avoid curtailing production or other production constraints.

In place of the 2016 rule's capture-percentage requirements, the final rule, as was proposed, addresses the routine flaring of associated gas by deferring to State or tribal regulations where possible and codifying the familiar NTL-4A standard for royalty-free flaring as a backstop where no applicable State or tribal regulation exists. The final rule's approach to the routine flaring of associated gas is explained more fully below (see the discussion of § 3179.201).

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of § 3179.7 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.). Many of the comments received about this section expressed dissatisfaction with BLM giving deference to state regulations in § 3179.201. Those comments are addressed in the discussion of final § 3179.201.

#### **43 CFR 3179.8 - Alternative capture requirement.**

Previous § 3179.8 allowed operators of leases issued before January 17, 2017, to request a lower capture percentage requirement than would otherwise be imposed under § 3179.7. In order to obtain this lower capture requirement, an operator would have had to demonstrate that the applicable capture percentage under § 3179.7 would “impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.” Because the BLM is rescinding the capture percentage requirements of previous § 3179.7, the BLM is also rescinding the mechanism for obtaining a lower capture requirement, as was proposed. Because § 3179.7 is now rescinded, there is no need for previous § 3179.8.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of §§ 3179.8 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **43 CFR 3179.11 - Other waste prevention measures.**

Previous § 3179.11(a) stated that the BLM may exercise its existing authority under applicable laws and regulations, as well as under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to limit production from a new well that is expected to force other wells off of a common pipeline. Previous § 3179.11(b) stated that the BLM could similarly exercise existing authority to delay action on an APD or impose conditions of approval on an APD. Previous § 3179.11 was not an independent source of authority or obligation on the part of the BLM. Rather, previous § 3179.11 was intended to clarify how the BLM could exercise existing authorities in addressing the waste of gas. However, the BLM understands that previous § 3179.11 could easily be misread to indicate that the BLM has plenary authority to curtail production or delay or condition APDs regardless of the circumstances. Because previous § 3179.11 is unnecessary and is susceptible to misinterpretation, the BLM is rescinding it, as proposed.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of §§ 3179.11 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **43 CFR 3179.12 - Coordination with State regulatory authority.**

Previous § 3179.12 stated that, to the extent an action to enforce 43 CFR subpart 3179 may adversely affect production of oil or gas from non-Federal and non-Indian mineral interests, the BLM will coordinate with the appropriate State regulatory



authority. The purpose of this provision was to ensure that due regard was given to the States' interests in regulating the production of non-Federal and non-Indian oil and gas. As was proposed, in this final rule the BLM has rescinded previous § 3179.12 because, as explained more fully below, the BLM revised subpart 3179 in a manner that defers to State and tribal requirements with respect to the routine flaring of associated gas. In light of this new approach, the BLM believes that there is much less concern that subpart 3179 could be applied in ways that State regulatory agencies find to be objectionable or in ways that would adversely affect oil or gas production from non-Federal and non-Indian mineral interests. The BLM continues to recognize the value of coordinating with State regulatory agencies, but no longer considers it necessary to include a coordination requirement in subpart 3179.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of §§ 3179.12 in a separate "Responses to Comments" document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter "RIN 1004-AE53," click the "Search" button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.101 - Well drilling.**

Previous § 3179.101(a) required gas reaching the surface as a normal part of drilling operations to be used or disposed of in one of four ways: (1) Captured and sold; (2) Directed to a flare pit or flare stack; (3) Used in the operations on the lease, unit, or communitized area; or (4) Injected. Previous § 3179.101(a) also specified that gas may not be vented, except under the circumstances specified in previous § 3179.6(b) or when it was technically infeasible to use or dispose of the gas in one of the ways specified

above. Previous § 3179.101(b) stated that gas lost as a result of a loss of well control would be classified as avoidably lost if the BLM determined that the loss of well control was due to operator negligence.

As was proposed, the BLM is rescinding previous § 3179.101 because it would be duplicative under final subpart 3179. In essence, § 3179.101(a) required an operator to flare gas lost during well drilling rather than vent it (unless technically infeasible). This same requirement is contained in final § 3179.6(b). Previous § 3179.101(b) stated that where gas was lost during a loss of well control, the lost gas would be considered “avoidably lost” if the BLM determined that the loss of well control was due to operator negligence. This principle is contained in final § 3179.4(b), which requires an absence of operator negligence in order for lost gas to be considered “unavoidably lost.”

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of § 3179.101 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.). The comments that opposed the rescission of this section asserted that there would be no state or EPA backstop if BLM rescinds the section. In its response to these comments, BLM explains that the essential requirements of former § 3179.101 are retained in the revised rule.

#### **43 CFR 3179.102 - Well completion and related operations.**

Previous § 3179.102 addressed gas that reached the surface during well-completion, post-completion, and fluid-recovery operations after a well has been

hydraulically fractured or refractured. It required the gas to be disposed of in one of four ways: (1) Captured and sold; (2) Directed to a flare pit or stack, subject to a volumetric limitation in § 3179.103; (3) Used in the lease operations; or (4) Injected. Previous § 3179.102 specified that gas could not be vented, except under the narrow circumstances specified in previous § 3179.6(b) or when it was technically infeasible to use or dispose of the gas in one of the four ways specified above. Previous § 3179.102(b) provided that an operator would be deemed to be in compliance with its gas capture and disposition requirements if the operator was in compliance with the requirements for control of gas from well completions established under 40 CFR part 60, subparts OOOO or OOOOa, or if the well was not a “well affected facility” under those regulations. Previous § 3179.102(c) and (d) allowed the BLM to exempt an operator from the requirements of previous § 3179.102 where the operator demonstrated that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

As was proposed, this final rule rescinds previous § 3179.102 in its entirety. The EPA finalized regulations in 40 CFR part 60, subpart OOOO and OOOOa, that are applicable to all of the well completions covered by previous § 3179.102. See 81 FR 35824 (June 3, 2016); 81 FR 83055–56. In light of the complete overlap with EPA regulations, and the fact that compliance with these regulations satisfies an operator’s obligations under previous § 3179.102, the BLM has concluded that previous § 3179.102 is duplicative and unnecessary. In the 2016 rule, the BLM recognized the duplicative nature of § 3179.102, but sought to establish a “backstop” in the “unlikely event” that the analogous EPA regulations ceased to be in effect. See 81 FR 83056. The BLM no

longer believes that it is appropriate to insert duplicative regulations into the Code of Federal Regulations as insurance against unlikely events. In addition, the BLM questions the appropriateness of issuing regulations that serve as a backstop to the regulations of other Federal agencies, especially when those agencies have promulgated their regulations under different authorities.

The BLM notes that, under revised § 3179.4(b)(2), the BLM reserves the right to limit royalty-free flaring during well-completion operations based on the operator's negligence or failure to take reasonable precautions to prevent the loss. Furthermore, the implicit requirement of previous § 3179.102 that gas that reaches the surface during well-completion operations be disposed of by some means other than venting is maintained in the general venting prohibition of final § 3179.6.

In light of the foregoing, the BLM is rescinding previous § 3179.102 in its entirety.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of §§ 3179.102 in a separate "Responses to Comments" document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter "RIN 1004-AE53," click the "Search" button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.201 - Equipment requirements for pneumatic controllers.**

Previous § 3179.201 addressed pneumatic controllers that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease. Previous § 3179.201 applied to such controllers if the controllers: (1) Had a continuous bleed rate greater than 6 standard cubic feet per hour

(scf/hour) (“high-bleed” controllers); and (2) Were not covered by EPA regulations that prohibit the new use of high-bleed pneumatic controllers (40 CFR part 60, subparts OOOO or OOOOa), but would have been subject to those regulations if the controllers were new, modified, or reconstructed. Previous § 3179.201(b) required the applicable pneumatic controllers to be replaced with controllers (including, but not limited to, continuous or intermittent pneumatic controllers) having a bleed rate of no more than 6 scf/hour, subject to certain exceptions. Previous § 3179.201(d) (as amended by the 2017 Suspension Rule) required that this replacement occur no later than January 17, 2019, or within 3 years from the effective date of the 2016 rule if the well or facility served by the controller had an estimated remaining productive life of 3 years or less. Previous § 3179.201(b)(4) and (c) allowed the BLM to exempt an operator from the requirements of previous § 3179.201 where the operator demonstrated that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

The BLM estimates that this requirement, over 10 years from 2019-2028, would have imposed costs of about \$12 million to \$13 million and would have generated cost savings from product recovery of \$20 million to \$26 million (RIA at Section 4.4). As was proposed, this final rule rescinds previous § 3179.201 in its entirety. Low-bleed continuous pneumatic controllers are expected to generate revenue for operators when employed at sites from which gas is captured and sold and when the sale price of gas is generally higher than it is now. Thus, the BLM expects many operators to adopt low-bleed pneumatic controllers even in the absence of previous § 3179.201’s requirements. This belief is supported by the fact that low-bleed continuous pneumatic controllers are

already very common, representing about 89 percent of the continuous bleed pneumatic controllers in the petroleum and natural gas production sectors.<sup>33</sup> Because low-bleed pneumatic controllers are often cost-effective and are already very common, the BLM does not believe that it is necessary to maintain previous § 3179.201 in its regulations, even though it was expected to result in overall cost savings.

The BLM notes that the EPA has regulations in 40 CFR part 60, subparts OOOO and OOOOa that require new, modified, or reconstructed continuous bleed controllers to be low-bleed. As new facilities on Federal and Indian leases come online and more of the existing high-bleed continuous controllers are replaced, these EPA regulations will require the installation of low-bleed continuous controllers. The BLM understands the typical lifespan of a pneumatic controller to be 10 to 15 years. Finally, as discussed above, the BLM recognizes that the oil and gas exploration and production industry continues to pursue reductions in methane emissions on a voluntary basis, and the BLM expects these efforts to result in a reduction in the number of high-bleed pneumatic devices employed by the industry.

In addition to the explanation provided here, which addresses most of the issues raised in the comments that BLM received about the rescission of this section, the BLM has summarized and responded to the comments received about the rescission of § 3179.201 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-

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<sup>33</sup> Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015, Annex 3 (published April 2017). Data are available in Table 3.5-5 and Table 3.6-7.

AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **43 CFR 3179.202 - Requirements for pneumatic diaphragm pumps.**

Previous § 3179.202 established requirements for operators with pneumatic diaphragm pumps that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that included a Federal or Indian lease. It applied to such pumps if they were not covered under EPA regulations at 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if they were a new, modified, or reconstructed source. For covered pneumatic pumps, previous § 3179.202 required that the operator either replace the pump with a zero-emissions pump or route the pump exhaust to processing equipment for capture and sale. Alternatively, an operator had the option of routing the exhaust to a flare or low-pressure combustion device if the operator made a determination (and notifies the BLM through a Sundry Notices and Reports on Wells, Form 3160-5) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust was not viable because: (1) A pneumatic pump was necessary to perform the function required; and (2) Capturing the exhaust was technically infeasible or unduly costly. If an operator made this determination and had no flare or low-pressure combustor on-site, or routing to such a device would have been technically infeasible, the operator was not required to route the exhaust to a flare or low-pressure combustion device. Under previous § 3179.202(h), an operator was required to replace its covered pneumatic diaphragm pump or route the exhaust gas to capture or flare beginning no later than January 17, 2018. Previous § 3179.202(f) and (g) would have allowed the BLM to exempt an operator from the requirements of previous §

3179.202 where the operator demonstrated that compliance would have caused the operator to cease production and abandon significant recoverable oil reserves under the lease.

The BLM estimates that the costs of compliance with previous § 3179.202 would have outweighed the value of its conservation effects. Specifically, the BLM estimates that § 3179.202, over 10 years from 2019-2028, would have imposed costs of about \$29 million to \$30 million, while only generating cost savings from product recovery of \$15 million to \$19 million (RIA at Section 4.4). Because previous § 3179.202 imposed compliance costs greater than the value of the resources it was expected to conserve, the BLM does not consider it to be an appropriate “waste prevention” requirement, and is rescinding it in its entirety, as was proposed.

The BLM notes that, as discussed above, industry is making ongoing efforts to retire old leak-prone equipment, including pneumatic pumps, on a voluntary basis. Furthermore, analogous EPA regulations in 40 CFR part 60, subpart OOOOa, will reduce the loss of gas from pneumatic diaphragm pumps on Federal and Indian leases as more and more of them are covered by the EPA regulations over time. These reasons further support rescission of previous § 3179.202.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of § 3179.202 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.203 - Storage vessels.**



Previous § 3179.203 applied to crude oil, condensate, intermediate hydrocarbon liquid, or produced-water storage vessels that contained production from a Federal or Indian lease, or from a unit or communitized area that included a Federal or Indian lease, and that were not subject to 40 CFR part 60, subparts OOOO or OOOOa, but would be if they were new, modified, or reconstructed sources. If such storage vessels had the potential for volatile organic compound (VOC) emissions equal to or greater than 6 tons per year (tpy), previous § 3179.203 required operators to route all gas vapor from the vessels to a sales line. Alternatively, the operator could have routed the vapor to a combustion device if it determined that routing the vapor to a sales line was technically infeasible or unduly costly. The operator could have also submitted a Sundry Notice to the BLM that demonstrated that compliance with the above options would cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

As proposed, the BLM is rescinding previous § 3179.203 in its entirety. The BLM finds that the costs of compliance with previous § 3179.203 would have outweighed the value of its conservation effects. Specifically, the BLM estimates that previous § 3179.203, over 10 years from 2019-2028, would have imposed costs of about \$51 million to \$56 million while only generating cost savings from product recovery of about \$1 million (RIA at Section 4.4). The BLM has always believed that previous § 3179.203 would have a limited reach, due to the 6 tpy emissions threshold and the carve-out for storage vessels covered by EPA regulations. The BLM estimated in the RIA for the 2016 rule that § 3179.203 would impact fewer than 300 facilities on Federal and Indian lands (2016 RIA at 69). Because previous § 3179.203 imposed compliance costs

well in excess of the value of the resources it was expected to conserve, the BLM does not consider it to be an appropriate “waste prevention” requirement, and is rescinding it in its entirety.

Finally, the BLM notes that, even with § 3179.203 rescinded, the BLM retains the authority to impose royalties on vapor losses from storage vessels under final § 3179.4(b)(2)(vii) when the BLM determines that recovery of the vapors is warranted.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of § 3179.203 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

**43 CFR 3179.301 through 3179.305 - Leak detection and repair.**

Previous §§ 3179.301 through 3179.305 established leak detection, repair, and reporting requirements for: (1) Sites and equipment used to produce, process, treat, store, or measure natural gas from or allocable to a Federal or Indian lease, unit, or communitization agreement; and (2) Sites and equipment used to store, measure, or dispose of produced water on a Federal or Indian lease. Previous § 3179.302 prescribed the instruments and methods that may have been used for leak detection. Previous § 3179.303 prescribed the frequency for inspections and previous § 3179.304 prescribed the time frames for repairing leaks found during inspections. Finally, previous § 3179.305 required operators to maintain records of their LDAR activities and submit an annual report to the BLM. Pursuant to previous § 3179.301(f), operators were required to begin to comply with the LDAR requirements of previous §§ 3179.301 through 3179.305

before: (1) January 17, 2018, for all existing sites; (2) 60 days after beginning production for sites that begin production after January 17, 2017; and (3) 60 days after a site that was out of service was brought back into service and re-pressurized.

As proposed, the BLM is rescinding previous §§ 3179.301 to 3179.305 in their entirety. The BLM finds that the costs of compliance with §§ 3179.301 to 3179.305 outweigh the value of their conservation effects. The BLM estimates that these requirements, over 10 years from 2019-2028, would have imposed costs of about \$550 million to \$688 million while only generating cost savings from product recovery of about \$101 million to \$128 million (RIA at Section 4.4). In addition, the BLM estimates that the administrative burdens associated with the LDAR requirements, at roughly \$5 million, would have represented the bulk of the administrative burdens of the 2016 rule. Because the 2016 rule's LDAR requirements would have imposed compliance costs well in excess of the value of the resources they were expected to conserve, the BLM does not consider them to be appropriate "waste prevention" requirements, and is rescinding them in their entirety.

The BLM has identified additional problems with the 2016 rule's LDAR requirements—beyond their unjustified costs—that further support rescission. First, the LDAR requirements inappropriately applied to all wellsites equally. Wellsites that are not connected to deliver gas to market would not achieve any waste reduction because sales from the recovered gas would not be realized. Second, the LDAR requirements posed an unnecessary burden to operators of marginal wells, particularly marginal oil wells. The BLM does not estimate that the potential fugitive gas losses from marginal oil wells would be substantial enough to warrant the costs of maintaining an LDAR program

with semi-annual inspection frequencies. As noted previously, the BLM estimates that over 73 percent of oil wells on the public lands are marginal.

Some commenters argued that, rather than rescinding the LDAR requirements in their entirety, the BLM should have considered alternative LDAR requirements that would have been less burdensome to operators. The BLM appreciates the commenters' concern with examining alternative approaches to LDAR. The BLM considered a reasonable range of LDAR alternatives and determined that the rescission of the LDAR requirements of the 2016 final rule is appropriate. This determination was based on the following information. In the RIA for the 2016 rule, the BLM examined the impacts of a range of alternative approaches for LDAR. See 2016 RIA at 91-93. Specifically the RIA examined the five following LDAR alternatives: (1) Semi-annual inspections (adopted in the 2016 rule); (2) Quarterly inspections; (3) Semi-annual inspections, but annual inspections for oil wells with <300 gas/oil ratio (GOR); (4) Semi-annual inspections, exempting oil wells with <300 GOR; and (5) Annual inspections. Note that the last three alternatives would have imposed fewer compliance costs than the alternative adopted in the 2016 rule. However, for all of the alternatives examined, compliance costs greatly outweighed cost savings (i.e., the value of the gas conserved). The annual inspections alternative was the least burdensome in terms of compliance costs. However, the 2016 RIA estimated that this alternative would impose costs of about \$48 million per year while generating only \$8 million to \$14 million in annual cost savings. Finally, even when including estimates of benefits associated with foregone emissions (using the domestic social cost of methane), the BLM found net costs for all of the alternatives

analyzed in the 2016 RIA. In light of this information, the BLM continues to assess that the rescission of the LDAR requirements of the 2016 final rule is appropriate.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on the rescission of §§ 3179.301-305 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **43 CFR 3179.401 - State or tribal requests for variances from the requirements of this subpart**

Previous § 3179.401 would have allowed a State or tribe to request a variance from any provisions of subpart 3179 by identifying a State, local, or tribal regulation to be applied in place of those provisions and demonstrating that such State, local, or tribal regulation would perform at least equally well as those provisions in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas.

As was proposed, the BLM is rescinding previous § 3179.401 because it believes that the variance process established by this section was too restrictive and is no longer necessary in light of the BLM’s action to re-institute NTL-4A standards and to defer to State and tribal regulations for the flaring of associated gas, as explained in the discussion of final § 3179.201. Notably, in this final rule, the BLM has chosen to include a new § 3179.401, described below, which will allow for additional deference to tribal regulations. We discuss tribal comments received on this section below.

## **2. Final Subpart 3179**

With this final rule, the BLM is revising subpart 3179, as follows:

**43 CFR 3179.1 Purpose.**

Section 3179.1 states that the purpose of 43 CFR subpart 3179 is to implement and carry out the purposes of statutes relating to prevention of waste from Federal and Indian leases, the conservation of surface resources, and management of the public lands for multiple use and sustained yield. The BLM is not revising existing § 3179.1 as a part of this rulemaking. Section 3179.1 is presented here for context.

**43 CFR 3179.2 Scope.**

This section specifies which leases, agreements, tracts, and facilities are covered by this subpart. The section also states that subpart 3179 applies to Indian Mineral Development Act (IMDA) agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement, and to agreements for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary of the Interior, unless specifically excluded in the agreement. Existing § 3179.2 remains largely unchanged. However, the BLM is revising paragraph (a)(5) by using the more-inclusive words “well facilities” instead of the words “wells, tanks, compressors, and other equipment” to describe the onshore equipment that is subject to this final rule. The purpose of the phrase “wells, tanks, compressors, and other equipment” was to specify components subject to LDAR requirements which, as described above, the BLM is rescinding.

**43 CFR 3179.3 Definitions and acronyms.**

As was proposed, this section keeps, in their entirety, four of the 18 definitions that appear in previous § 3179.3: “Automatic ignition system,” “gas-to-oil ratio,”

“liquids unloading,” and “lost oil or lost gas.” The definition for “capture” is retained in this final rule as it appeared in previous § 3179.3, except, as proposed, the word “reinjection” has been changed to “injection” to be consistent with references to conservation by injection (as opposed to reinjection) elsewhere in subpart 3179.

A definition for “gas well” is also maintained in this final rule, however the second and third sentences in the existing definition are removed, as was proposed. The second-to-last sentence in the previous definition of “gas well” is removed because, although a well’s designation as a “gas” well or “oil” well is appropriately determined by the relative energy values of the well’s products, the 6,000 scf/bbl standard in previous § 3179.3 is not a commonly used standard. The last sentence in the existing definition of “gas well,” which states generally that an oil well will not be reclassified as a gas well when its gas-to-oil ratio (GOR) exceeds the 6,000 scf/bbl threshold, is removed and replaced with a simpler qualifier making clear that a well’s status as a “gas well” is “determined at the time of completion.”

As was proposed, a new definition for “oil well” is added in this final rule that defines an “oil well” as a “well for which the energy equivalent of the oil produced exceeds the energy equivalent of the gas produced, as determined at the time of completion.” The addition of a definition of “oil well” should help to make clear when final § 3179.201’s requirements for “oil-well gas” apply.

In the proposed rule, the BLM proposed to add a definition of “waste of oil or gas” that would define waste, for the purposes of subpart 3179, to mean any act or failure to act by the operator that is not sanctioned by the authorized officer as necessary for proper development and production, where compliance costs are not greater than the

monetary value of the resources they are expected to conserve, and which results in: (1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir under prudent and proper operations; or (2) Avoidable surface loss of oil or gas. This proposed definition incorporated the definition of “waste of oil or gas” from the BLM’s operating regulations at 43 CFR 3160.0-5, but added an economic limitation: Waste does not occur where the cost of conserving the oil or gas exceeds the monetary value of that oil or gas. The BLM requested public comment on this proposed definition. Some commenters expressed support for the economic standard contained in the definition and argued that it would be consistent with the MLA’s concept of “waste,” as well as past BLM practice. Other commenters argued that “waste of oil or gas” expressed the same concept as “avoidably lost” production, and that the new definition of “waste of oil or gas” was therefore superfluous and could create confusion to the extent that it could be read as inconsistent with the definition of “avoidably lost” production in § 3179.4(a). Still other commenters noted that the practical application of the definition of “waste of oil or gas” would be difficult because the definition did not contain a time horizon over which the operator should evaluate its compliance costs and the value of the resources that compliance would be expected to conserve. The BLM has chosen to retain the proposed definition of “waste of oil or gas” in the final rule. This definition codifies the BLM’s policy determination that it is not appropriate for “waste prevention” regulations to impose compliance costs greater than the value of the resources they are expected to conserve. Because the term “waste of oil or gas” is not used in subpart 3179 (outside of the definitions section), the BLM does not expect any conflict between this definition and the provisions of § 3179.4, which identify “avoidably lost” oil or gas.



However, if a conflict ever arises, the BLM will view § 3179.4 as controlling on the question of what constitutes a royalty-bearing “avoidable” loss of oil or gas. Although the definition does not contain a specific time horizon for comparing the value of resources conserved to the cost of conservation, the BLM notes that, to the extent a technical application of this definition would ever be required under these regulations (which is unlikely given the fact that the phrase is not used in subpart 3179 outside of the definitions section), there is no reason to believe that the BLM would not employ a reasonable time frame in assessing costs and benefits.

As was proposed, this section removes 12 definitions from the previous regulations because they are no longer needed: “Accessible component,” “capture infrastructure,” “compressor station,” “continuous bleed,” “development oil well,” “high pressure flare,” “leak,” “leak component,” “liquid hydrocarbon,” “pneumatic controller,” “storage vessel,” and “volatile organic compounds (VOC).” These definitions pertain to requirements in previous subpart 3179 that the BLM is rescinding.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.3 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.**

Final § 3179.4 describes the circumstances under which lost oil or gas is classified as “avoidably lost” or “unavoidably lost.” None of the language in this section of the final rule has changed from the language that BLM proposed. Under final § 3179.5,

royalty is due on all avoidably lost oil or gas, while royalty is not due on unavoidably lost oil or gas. Final § 3179.4 includes concepts from both previous § 3179.4 and NTL-4A, Sections II. and III.

Final paragraph (a) defines “avoidably lost” production and mirrors the “avoidably lost” definition in NTL-4A Section II.A. Final paragraph (a) defines avoidably lost gas as gas that is vented or flared without BLM approval, and produced oil or gas that is lost due to operator negligence, the operator’s failure to take all reasonable measures to prevent or control the loss, or the operator’s failure to comply fully with applicable lease terms and regulations, appropriate provisions of the approved operating plan, or prior written BLM orders. This paragraph replaces the “avoidably lost” definition that appears in the last paragraph of previous § 3179.4, which primarily defined “avoidably lost” oil or gas as lost oil gas that is not “unavoidably lost” and also expressly included “excess flared gas” as defined in previous § 3179.7, which the BLM is rescinding.

Final paragraph (b) defines “unavoidably lost” production. Final paragraph (b)(1) follows language from Section II.C(2) of NTL-4A. It states that oil or gas that is lost due to line failures, equipment malfunctions, blowouts, fires, or other similar circumstances is considered to be unavoidably lost production, unless the BLM determines that the loss was avoidable under § 3179.4(a)(2)—i.e., the loss resulted from operator negligence, the failure to take all reasonable measures to prevent or control the loss, or the failure of the operator to comply fully with applicable lease terms and regulations, appropriate provisions of the approved operating plan, or prior written orders of the BLM.

Final paragraph (b)(2) is substantially similar to the definition of “unavoidably lost” oil or gas that appears in previous § 3179.4(a). This paragraph improves upon NTL-4A by providing clarity to operators and the BLM about which losses of oil or gas should be considered “unavoidably lost.” Paragraph (b)(2) introduces a list of operations or sources from which lost oil or gas is considered “unavoidably lost,” so long as the operator has not been negligent, has taken all reasonable measures to prevent or control the loss, and has complied fully with applicable laws, lease terms, regulations, provisions of a previously approved operating plan, or other written orders of the BLM, as provided in § 3179.4(a)(2).

Except for cross references, final § 3179.4(b)(2)(i) through (vi) are the same as paragraphs (a)(1)(i) through (vi) in previous § 3179.4. These paragraphs list the following operations or sources from which lost oil or gas would be considered “unavoidably lost”: Well drilling; well completion and related operations; initial production tests; subsequent well tests; exploratory coalbed methane well dewatering; and emergencies.

This final rule removes normal operating losses from pneumatic controllers and pumps (previous § 3179.4(a)(1)(vii)) from the list of unavoidable losses because the use of gas in pneumatic controllers and pumps is already royalty free under previous § 3178.4(a)(3).

Final paragraph (b)(2)(vii) is similar to previous § 3179.4(a)(1)(viii), but has been rephrased to reflect the NTL-4A provisions pertaining to storage-tank losses (NTL-4A Section II.C(1)). Under final § 3179.4(b)(2)(vii), normal gas vapor losses from a storage tank or other low-pressure production vessel are unavoidably lost, unless the BLM

determines that recovery of the vapors is warranted. Changing the phrase “operating losses” (as used in previous § 3179.4(a)(1)(viii)) to “gas-vapor losses” makes clear that this provision applies to low-pressure gas losses.

Final § 3179.4(b)(2)(viii) is the same as previous § 3179.4(a)(1)(ix). It states that well venting in the course of downhole well maintenance and/or liquids unloading performed in compliance with § 3179.104 is an operation from which lost gas is considered “unavoidably lost.”

The final rule does not retain previous § 3179.4(a)(1)(x), which classified leaks as unavoidable losses when the operator has complied with the LDAR requirements in previous §§ 3179.301 through 3179.305. The BLM is rescinding these LDAR requirements and so there is no need to reference these requirements as a limitation on losses through leaks.

Final § 3179.4(b)(2)(ix) is the same as previous § 3179.4(a)(1)(xi), identifying facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance or repairs, as an operation from which lost oil or gas would be considered “unavoidably lost,” so long as the operator has not been negligent and has complied with all appropriate requirements.

The final rule does not include previous § 3179.4(a)(1)(xii). This paragraph listed the flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market as an unavoidable loss. This provision was included in the 2016 rule as part of the BLM’s effort to adopt a gas-capture percentage scheme similar to that of North Dakota. The BLM is removing this provision because it is rescinding the gas-capture percentage requirements contained in the 2016 rule.

The final rule does not include previous § 3179.4(a)(2). Previous § 3179.4(a)(2) provided that gas that is flared or vented from a well that is not connected to a gas pipeline is unavoidably lost, unless the BLM has determined otherwise. Previous § 3179.4(a)(2) was essentially a blanket approval for royalty-free flaring from wells not connected to a gas pipeline. Flaring from these wells, however, would no longer have been royalty free if the operator failed to meet the gas-capture requirements imposed by previous § 3179.7 and the flared gas thus became royalty-bearing “excess flared gas.” Because the BLM is rescinding previous § 3179.7, maintaining previous § 3179.4(a)(2) would amount to sanctioning unrestricted flaring from wells not connected to gas pipelines. The routine flaring of oil-well gas from wells not connected to a gas pipeline is addressed by final § 3179.201, which is discussed in more detail below.

Final § 3179.4(b)(3) states that produced gas that is flared or vented with BLM authorization or approval is unavoidably lost. This provision mirrors final § 3179.4(a), which states that gas that is flared or vented without BLM authorization or approval is avoidably lost, and provides clarity to operators about royalty obligations with respect to authorized venting and flaring.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.4 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

**43 CFR 3179.5 When lost production is subject to royalty.**

As proposed, the final rule does not change previous § 3179.5. This section continues to state that royalty is due on all avoidably lost oil or gas and that royalty is not due on any unavoidably lost oil or gas.

#### **43 CFR 3179.6 Venting limitations.**

The title of this section in the final rule has been changed from “venting prohibitions” to “venting limitations.” As was proposed, the final rule retains most of the provisions in previous § 3179.6. The purpose of both sections is to prohibit flaring and venting from gas wells, with certain exceptions, and to require operators to flare, rather than vent, any uncaptured gas, whether from oil wells or gas wells, with certain exceptions.

Final § 3179.6(a) is the same as the previous § 3179.6(a), except the cross reference has been updated. It states that gas-well gas may not be flared or vented, except where it is unavoidably lost, pursuant to § 3179.4(b). This same restriction on the flaring of gas-well gas was included in NTL-4A.

Both previous and final § 3179.6(b) state that operators must flare, rather than vent, any gas that is not captured, with the exceptions listed in subsequent paragraphs. Although the text of NTL-4A did not contain a similar requirement that, in general, lost gas should be flared rather than vented, the implementing guidance for NTL-4A in the United States Geological Survey’s (USGS) Conservation Division Manual did contain a similar preference for flaring over venting. The flaring of gas is generally preferable to the venting of gas due to safety concerns. Final § 3179.6(b) therefore represents an improvement on NTL-4A by making clear in the regulation, rather than in implementation guidance, that lost gas should be flared when possible.

The first three flaring exceptions in both the previous and final § 3179.6 are identical: Paragraph (b)(1) allows for venting when flaring is technically infeasible; paragraph (b)(2) allows for venting in the case of an emergency, when the loss of gas is uncontrollable, or when venting is necessary for safety; and, paragraph (b)(3) allows for venting when the gas is vented through normal operation of a natural-gas-activated pump or pneumatic controller.

The fourth flaring exception, listed in final § 3179.6(b)(4), allows gas vapors to be vented from a storage tank or other low-pressure production vessel, except when the BLM determines that gas-vapor recovery is warranted. Although this language is somewhat different than what appears in previous § 3179.6(b)(4), it has the same practical effect. As was proposed, it has been changed in this final rule to align the language with final § 3179.4(b)(vii) and to remove the cross-reference to the storage tank requirements in previous § 3179.203, which the BLM is rescinding.

The fifth exception, listed in final § 3179.6(b)(5), applies to gas that is vented during downhole well maintenance or liquids unloading activities. This is similar to previous § 3179.6(b)(5), except that the final rule, as was proposed, removes the cross reference to previous § 3179.204. Although the revision of subpart 3179 retains limitations on royalty-free losses of gas during well maintenance and liquids unloading in final § 3179.104, no cross-reference to those restrictions is necessary in this section, which simply addresses whether the gas may be vented or flared, not whether it is royalty-bearing.

The final rule removes the flaring exception listed in previous § 3179.6(b)(6), which applied to gas vented through a leak, provided that the operator had complied with

the LDAR requirements in previous §§ 3179.301 through 3179.305. The BLM is rescinding these LDAR requirements so there is no need to reference these requirements as a limitation on venting through leaks.

The sixth flaring exception, listed in final § 3179.6(b)(6), is identical to the exception listed in previous § 3179.6(b)(7). This exception allows gas venting that is necessary to allow non-routine facility and pipeline maintenance to be performed.

The seventh flaring exception, listed in final § 3179.6(b)(7), is identical to the exception listed in previous § 3179.6(b)(8). This exception allows venting when a release of gas is unavoidable under § 3179.4, and Federal, State, local, or tribal law, regulation, or enforceable permit terms prohibit flaring.

Final § 3179.6(c) is identical to previous § 3179.6(c). Both sections require all flares or combustion devices to be equipped with automatic ignition systems.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.6 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **Authorized Flaring and Venting of Gas**

#### **43 CFR 3179.101 Initial production testing.**

As was proposed, final § 3179.101 establishes volume and duration standards which limit the amount of gas that may be flared royalty free during initial production testing. The gas is no longer royalty free after reaching either limit. Final § 3179.101 establishes a volume limit of 50 million cubic feet (MMcf) of gas that may be flared



royalty free during the initial production test of each completed interval in a well. Additionally, final § 3179.101 limits royalty-free initial production testing to a 30 day period, unless the BLM approves a longer period.

The 2016 rule also used volume and duration thresholds to limit royalty-free initial production testing. Previous § 3179.103 provided for up to 20 MMcf of gas to be flared royalty free during well drilling, well completion, and initial production testing operations combined. Under previous § 3179.103, upon receiving a Sundry Notice request from the operator, the BLM could have increased the volume of royalty-free flared gas up to an additional 30 MMcf. Under previous § 3179.103, similar to final § 3179.101, the BLM allowed royalty-free testing for a period of up to 30 days after the start of initial production testing. Under previous § 3179.103, the BLM could, upon request, extend the initial production testing period by up to an additional 60 days. Further, previous § 3179.103 provided additional time for dewatering and testing exploratory coalbed methane wells. Under previous § 3179.103, such wells had an initial royalty-free period of 90 days (rather than the 30 days applicable to all other well types), and the possibility of the BLM approving, upon request, up to two additional 90-day periods.

Under NTL-4A, gas lost during initial production testing was royalty free for a period not to exceed 30 days or the production of 50 MMcf of gas, whichever occurred first, unless a longer test period was authorized by the State and accepted by the BLM.

The volume and duration limits in final § 3179.101 are similar to those in previous § 3179.103 and NTL-4A. Both sections and NTL-4A allow 30 days from the start of the test, and all three allow for extensions of time. However, previous § 3179.103

limited an extension to no more than 60 days, whereas final § 3179.101 does not specify an extension limit. Final § 3179.101 allows for up to 50 MMcf of gas to be flared royalty free, with no express opportunity for an increase in the volume of royalty-free flaring during initial production testing. By comparison, previous § 3179.103 allowed for 20 MMcf to be flared royalty free, with the possibility of an additional 30 MMcf of gas flared with BLM approval, and no opportunity for additional royalty-free flaring beyond the cumulative 50 MMcf of gas.

Some commenters argued that the regulation should allow for operators to seek BLM approval for additional volumes of royalty-free flaring during initial production testing in the same way they can seek additional time for royalty-free flaring.

Commenters also argued that the BLM should allow for additional time and volumes of royalty-free flaring when such longer periods or additional volumes of flaring are authorized by a State. The BLM does not agree with the comments and did not change § 3179.101 in response to them. Based on consultation with experienced BLM petroleum engineers and the fact that these limitations are consistent with longstanding standards in NTL-4A, the BLM believes the limitations in § 3179.101(a)(2) and (3) provide most operators sufficient time and volume for testing in a royalty-free status. Although an extension of the time period for initial production testing may sometimes be justified (as where the operator has failed to acquire adequate reservoir information), the volume threshold acts as a governor to ensure that the public and tribes are compensated for excessive losses of publicly or tribally owned gas during initial production testing. Beyond the 50 Mmcf threshold, the operator may continue initial production testing, but incurs a royalty obligation.

The provision for exploratory coalbed methane wells in previous § 3179.103 is the most notable difference between it and this final rule with regard to the initial production testing. Previous § 3179.103 provided for up to 270 cumulative royalty-free production testing days for exploratory coalbed methane wells, whereas the final rule contains no special provision for such wells. Exploratory coalbed methane wells are expected to be an exceedingly low percentage of future wells drilled, and so the BLM does not believe that a special provision addressing these wells is necessary.<sup>34</sup> In the future, if an exploratory coalbed methane well requires additional time for initial production testing, this can be handled under final § 3179.101(b), which allows an operator to request a longer test period without imposing an outside limit on the length of the additional test period the BLM might approve.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.101 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*:

<https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.102 Subsequent well tests.**

As proposed, final § 3179.102(a) provides that gas flared during well tests subsequent to the initial production test is royalty free for a period not to exceed 24 hours, unless the BLM approves or requires a longer test period. Also as proposed, final

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<sup>34</sup> Exploratory coalbed methane (CBM) well completions have declined precipitously over the past 15 years, likely due to the drop in natural gas prices and the relative attractiveness of natural gas from shale formations. In 2004, the number of exploratory CBM well completions was 904, while in 2015, 2016, 2017, and 2018, the number of CBM well completions on Federal lands was 9, 8, 1, and 1, respectively. Meaning, from 2004 to 2018, exploratory CBM well completions on Federal lands dropped by 99.9%.

§ 3179.102(b) provides that the operator may request a longer test period and must submit its request using a Sundry Notice. Final § 3179.102 is functionally identical to previous § 3179.104.

NTL-4A included royalty-free provisions for “evaluation tests” and for “routine or special well tests.” Because NTL-4A also contained specific provisions for “initial production tests,” all of the other mentioned tests were presumed to be subsequent to the initial production tests. Under NTL-4A, royalty-free evaluation tests were limited to 24 hours, with no mention of a possibility for extension. Routine or special well tests, which are well tests other than initial production tests and evaluation tests, were royalty free under NTL-4A, but only after approval by the BLM.

The provisions for subsequent well tests in final § 3179.102 are essentially the same as those in both the 2016 rule and in NTL-4A. All three provide for a base test period of 24 hours, and all three have a provision for the BLM to approve a longer test period. Final § 3179.102 improves upon NTL-4A by dispensing with the distinction between “evaluation tests” and “routine or special well tests,” making the requirements for subsequent well tests more clear.

The comments about this section that the BLM received expressed support for the provision, as summarized in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **43 CFR 3179.103 Emergencies.**

Under final § 3179.4(b)(2)(vi), royalty is not due on gas that is lost during an emergency. As proposed, final § 3179.103 describes the conditions that constitute an emergency, and lists circumstances that do not constitute an emergency. As provided in final § 3179.103(d), an operator is required to estimate and report to the BLM on a Sundry Notice the volumes of gas that were flared or vented beyond the timeframe for royalty-free flaring under final § 3179.103(a) (i.e., venting or flaring beyond 24 hours, or a longer necessary period as determined by the BLM).

The provisions in final § 3179.103 are nearly identical to those in previous § 3179.105. The most notable change from the 2016 rule is in describing those things that do not constitute an emergency. Where previous § 3179.105(b)(1) specifies that “more than 3 failures of the same component within a single piece of equipment within any 365-day period” is not an emergency, final § 3179.103(c)(4) simplifies that concept by including “recurring equipment failures” among the situations caused by operator negligence that do not constitute an emergency. This simplification addresses the practical difficulties involved in tracking the number of times the failure of a specific component of a particular piece of equipment causes emergency venting or flaring, and recognizes that recurring failures of the same equipment, even if involving different “components,” may not constitute a true unavoidable emergency.

The description of “emergencies” in NTL-4A was brief and was subject to misinterpretation. The purpose behind both previous § 3179.105 and final § 3179.103 is to improve upon NTL-4A by narrowing the meaning of “emergency,” such that it is uniformly understood and consistently applied.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.103 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*:

<https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

#### **43 CFR 3179.104 Downhole well maintenance and liquids unloading.**

Under final § 3179.4(b)(2)(viii), gas lost in the course of downhole well maintenance and/or liquids unloading performed in compliance with final § 3179.104 is royalty free. Final § 3179.104(a) states that gas vented or flared during downhole well maintenance and well purging is royalty free for a period not to exceed 24 hours. Final § 3179.104(a) also states that gas vented from a plunger lift system and/or an automated well control system is royalty free. Final § 3179.104(b) states that the operator must minimize the loss of gas associated with downhole well maintenance and liquids unloading, consistent with safe operations. Final § 3179.104(c) states that, for wells equipped with a plunger lift system or automated control system, minimizing gas loss under paragraph (b) includes optimizing the operation of the system to minimize gas losses to the extent possible consistent with removing liquids that would inhibit proper function of the well. Final § 3179.104(d) provides that the operator must ensure that the person conducting manual well purging remains present on-site throughout the event in order to end the event as soon as practical, thereby minimizing any venting to the atmosphere. Final § 3179.104(e) defines “well purging” as blowing accumulated liquids out of a wellbore by reservoir gas pressure, whether manually or by an automatic control system that relies on real-time pressure or flow, timers, or other well data, where the gas

is vented to the atmosphere, and it does not apply to wells equipped with a plunger lift system. Final § 3179.104(e) is identical to previous § 3179.204(g).

Previous § 3179.204 required the operator to “minimize vented gas” in liquids unloading operations, but did not impose volume or duration limits. As with final § 3179.104, previous § 3179.204 allowed for gas vented or flared during well purging to be royalty free provided that the operator ensured that the person conducting the operation remained on-site throughout the event. Previous § 3179.204 also required plunger lift and automated control systems to be optimized to minimize gas loss associated with their effective operation. The main difference between previous § 3179.204 and final § 3179.104 is that previous § 3179.204(c) required the operator to file a Sundry Notice with the BLM the first time that each well was manually purged or purged with an automated control system. That Sundry Notice was required to include documentation showing that the operator evaluated the feasibility of using methods of liquids unloading other than well purging and that the operator determined that such methods were either unduly costly or technically infeasible. In addition to the apparent administrative burden of filing the Sundry Notice, this would have imposed additional costs on the operator by requiring it to evaluate and analyze other methods of liquids unloading. And, the evaluation may have led the operator to identify a more costly alternative that could not be ignored as “unduly costly.” Additionally, under previous § 3179.204, the operator would file a Sundry Notice with the BLM each time a well-purging event exceeded either a duration of 24 hours in a month or an estimated gas loss of 75 Mcf in a month. For each manual purging event, the operator would also have needed to keep a record of the cause, date, time, duration, and estimate of the volume of gas vented. The operator

would have had to maintain these records and make them available to the BLM upon request.

With respect to royalty, gas vented during well purging was addressed in NTL-4A as follows: “. . . operators are authorized to vent or flare gas on a short-term basis without incurring a royalty obligation . . . during the unloading or cleaning up of a well during . . . routine purging . . . not exceeding a period of 24 hours.” As used in NTL-4A, it is unclear whether the “24 hours” limit was intended to be 24 hours per month or 24 hours per purging event. In this final rule, the BLM has modified proposed § 3179.104(a) to make clear that it imposes a 24-hour limit per event.

The available data show that the frequency of liquids unloading maintenance operations vary and that the events are relatively short in duration. A study by Shires and Lev-On<sup>35</sup> examined data from an API and American Natural Gas Alliance (ANGA) nationwide survey. The researchers found that, of the roughly 6,500 surveyed wells that vented to the atmosphere for liquids unloading (i.e., not equipped with a plunger lift), the wells required an average of 32.57 events per year for an average of 1.9 hours per event.<sup>36</sup> A study by Allen et al.<sup>37</sup> examined a small sample of nine wells conducting manual well liquids unloading and found that the wells in the sample required an average of 5.9 events per year for an average of 1 hour per event.<sup>38</sup> While the BLM has finalized a 24-hour limit recognizing that certain instances or wells might require maintenance operations that exceed the averages noted, the BLM notes that the rule requires the

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<sup>35</sup> Shires, T. & Lev-On, M. (2012). Characterizing Pivotal Sources of Methane Emissions from Unconventional Natural Gas Production: Summary and Analysis of API and ANGA Survey Responses. September 2012.

<sup>36</sup> See Table 7 on p. 15.

<sup>37</sup> Allen, D., Torres, V., et al. (2013). Measurements of methane emissions at natural gas production sites in the United States. Proceedings of the National Academy of Sciences or the United States of America.

<sup>38</sup> See appendix to study at S-37.



person conducting manual well purging to remain present on-site throughout the event to end the event as soon as practical. Therefore, even though the 24-hour limit exceeds the average, we are convinced that the duration of events will be limited to the time necessary.

In terms of minimizing the loss of gas during well-purging events, final § 3179.104 and previous § 3179.204 are essentially the same. Differences between the two are found in the reporting and recordkeeping requirements imposed by the 2016 rule. The intent of these recordkeeping requirements, as explained in the 2016 rule preamble, was to build a record of the amount of gas lost through these operations so that information might lead to better future management of liquids unloading operations. The BLM now believes that the reporting and recordkeeping requirements in previous § 3179.204 are unnecessary and unduly burdensome. In particular, the reporting requirement of previous § 3179.204(c) appears to be unnecessary because wells undergoing manual well purging are mature and the well pressure is in decline<sup>39</sup> and alternative methods of liquids unloading are likely to be costly for those wells.<sup>40</sup> And in light of the economic and production circumstances faced by wells undergoing manual well purging, the BLM does not realistically foresee the development of better waste-management techniques based on manual well-purging information collected pursuant to previous § 3179.204.

As mentioned above, final § 3179.104(d) requires the person conducting manual well purging to remain present on-site throughout the event to end the event as soon as

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<sup>39</sup> EPA (2014). Oil and Natural Gas Sector Liquids Unloading Process: Report for Oil and Natural Gas Sector Liquids Unloading Process Review Panel. April 2014. pp. 2, 25.

<sup>40</sup> Ibid. pp. 16-19 of that report detail the costs of various possible interventions.

practical. This provision was not a requirement in NTL-4A, and was first established in the 2016 rule.

The comments about section that the BLM received expressed support for the provision, as summarized in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*: <https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents.).

### **Other Venting or Flaring**

#### **43 CFR 3179.201 Oil-well gas.**

As proposed, final § 3179.201 governs the routine flaring of associated gas from oil wells. The requirements of final § 3179.201 replace the “capture percentage” requirements of the 2016 rule. Short-term flaring, such as that experienced during initial production testing, subsequent well testing, emergencies, and downhole well maintenance and liquids unloading, are governed by final §§ 3179.101 through 3179.104.

Final § 3179.201(a) allows operators to vent or flare oil-well gas royalty free when the venting or flaring is done in compliance with applicable rules, regulations, or orders of the State regulatory agency (for Federal gas) or tribe (for Indian gas). This section establishes State or tribal rules, regulations, and orders as the prevailing regulations for the venting and flaring of oil-well gas on BLM-administered leases, unit participating areas (PAs), or communitization agreements (CAs).

Under the 2016 rule, an operator’s royalty obligations for venting or flaring were determined by the avoidable/unavoidable loss definitions and the gas-capture-requirement thresholds. Operator royalty obligations for the flaring of associated gas

from oil wells under NTL-4A were, for the most part, dependent on a discretionary authorization by the BLM based on the economics of gas capture or an action plan to eventually eliminate the flaring. NTL-4A also allowed for gas to be flared royalty free pursuant to the rules, regulations, or order of the appropriate State regulatory agency, when the BLM had ratified or accepted such rules, regulations, or orders. The final rule implements this concept from NTL-4A by deferring to the rules, regulations, or orders of State regulatory agencies or a tribe. This change both simplifies an operator's obligations by aligning Federal and State venting and flaring requirements for oil-well gas and allows for region-specific regulation of oil-well gas that accounts for regional differences in production, markets, and infrastructure. An operator owes royalty on any oil-well gas flared in violation of applicable State or tribal requirements.

The BLM has analyzed the statutory and regulatory restrictions on venting and flaring in the 10 States constituting the top eight producers of Federal oil and the top eight producers of Federal gas, which collectively produce more than 99 percent of Federal oil and more than 98 percent of Federal gas. The BLM found that each of these States have statutory or regulatory restrictions on venting and flaring that are expected to constrain the waste of associated gas from oil wells. Most of these States require an operator to obtain approval from the State regulatory authority (by justifying the need to flare) in order to engage in the flaring of associated gas.<sup>41</sup> North Dakota has a similar requirement, but, in the Bakken, Bakken/Three Forks, and Three Forks pools, restricts flaring through the application of gas-capture goals that function similarly to the capture percentage requirements of the 2016 rule. Summaries of the State statutory and

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<sup>41</sup> These States are: New Mexico, Wyoming, Colorado, Utah, Montana, Texas, and Oklahoma.

regulatory restrictions on venting and flaring analyzed by the BLM are contained in a Memorandum that BLM has published for public access on <https://www.regulations.gov>. (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents). Final § 3179.201(a) defers to State and tribal statutes and regulations, like those described in the Memorandum, that provide a reasonable assurance to the BLM that operators will not be permitted to engage in the flaring of associated gas without limitation and that the waste of associated gas will be controlled. In order to make this clear in the final regulatory text, the BLM has chosen to add the following language to the text of proposed § 3179.201(a): “Applicable State or tribal rules, regulations, or orders are appropriate if they place limitations on the venting and flaring of oil-well gas, including through general or qualified prohibitions, volume or time limitations, capture percentage requirements, or trading mechanisms.”

Some commenters expressed support for the deference to State and tribal regulations in § 3179.201(a). These commenters noted that the various oil and gas fields throughout the country possess different geological characteristics and that the primary fossil fuel resources extracted from the fields vary in type and quality. These commenters expressed support for § 3179.201(a) because it accounts for these regional differences. The BLM agrees with these commenters that regional geological differences make it difficult to develop a single standard for oil-well gas flaring that will be fair and effective when applied nationwide.

Other commenters objected to § 3179.201(a) on the grounds that State flaring regulations are less stringent than the 2016 rule, that State flaring regulations differ from State to State, that existing State regulations will not reduce flaring from current levels,

that States may amend their regulations, and that North Dakota's flaring regulations have been, in the view of the commenters, ineffective. The BLM agrees that many of the State regulations it analyzed are not as stringent as the capture percentage requirements of the 2016 rule and that State flaring regulations vary from State to State. However, the BLM disagrees that this represents a flaw in § 3179.201(a). As explained above and evidenced by the 2016 RIA, BLM expected the capture percentage requirements of the 2016 rule to impose net costs. In § 3179.201(a), the BLM is replacing a regulatory requirement that imposed unreasonable costs with a policy that will reasonably constrain waste while accounting for the differing geological and infrastructure realities faced by operators in different regions. The BLM does not argue that each State's existing flaring regulations will necessarily reduce flaring rates in that State. However, this does not mean that the BLM is acting unreasonably or in violation of its statutory obligations in deferring to them under § 3179.201(a). As explained above, after reviewing the State regulations for the 10 states producing approximately 99 percent of Federal oil and gas, the BLM believes that these regulations require operators to take reasonable precautions to prevent undue waste. The BLM also recognizes that States may amend their regulations. If such an amendment were to propose a relaxation of a State's restrictions on flaring, and the BLM judged that it allowed for undue waste of Federal gas, then the BLM would move swiftly to amend § 3179.201 to preclude deference to that State's flaring regulations.

With respect to the efficacy of North Dakota's regulations, commenters submitted tabular data indicating that, of the top 30 producers of gas in the Bakken/Bakken-Three Forks/Three-Forks pools, 19 exceeded the applicable flaring percentage requirement in at least one month in 2017. The table submitted by the commenters highlighted each month

in which an operator failed to meet the applicable capture target of 85 percent. The BLM notes that the table indicates that in many of these instances the operator appears to have narrowly missed the requirement (e.g., capturing 84 percent instead of 85 percent). The BLM further notes that, for all but five or six of the 30 operators, the failure to meet the monthly capture target was an occasional, rather than routine, issue. The table submitted by commenters shows that: 11 of the 30 operators met their capture target for every month in 2017; 5 of the 30 operators failed to meet their capture target in only 1 month in 2017; and 5 of the 30 operators failed to meet their capture target in only 2 months in 2017. The BLM does not believe that these statistics indicate that North Dakota's flaring regulations are deficient. Commenters also claimed that North Dakota has been derelict in taking enforcement actions against operators that fail to meet the capture target. However, the extent of a State's enforcement of its regulations does not impact whether flared gas is royalty bearing under § 3179.201(a). If the flaring violates the applicable State regulation, it will be royalty bearing regardless of whether the State takes enforcement action. Finally, the BLM estimates that the flaring of Federal and Indian mineral estate oil-well gas in North Dakota has been reduced substantially from 64 Bcf in 2015 to 44 Bcf in 2016.

Final § 3179.201(b) exclusively addresses oil-well gas production from an Indian lease. Vented or flared oil-well gas from an Indian lease will be treated as royalty free pursuant to final § 3179.201(a) only to the extent it is consistent with the BLM's trust responsibility.

In the event a State regulatory agency or tribe does not currently have rules, regulations, or orders governing venting or flaring of oil-well gas, the BLM is retaining

the NTL-4A approach as a backstop, providing a way for operators to obtain BLM approval to vent or flare oil-well gas royalty free by submitting an application with sufficient justification as described in final §3179.201(c). Applications for royalty-free venting or flaring of oil-well gas must include either: (1) An evaluation report supported by engineering, geologic, and economic data demonstrating that capturing or using the gas is not economical; or (2) An action plan showing how the operator will minimize the venting or flaring of the gas within 1 year of the application. If an operator vents or flares oil-well gas in excess of 10 MMcf per well during any month, the BLM may determine the gas to be avoidably lost and subject to royalty assessment. The BLM notes that there was no similar provision in NTL-4A allowing for the BLM to impose royalties where flaring under an action plan exceeds 10 MMcf per well per month. However, this provision is based on guidance in the Conservation Division Manual<sup>42</sup> (at 644.5.3F), which was developed by the USGS and has long been used by the BLM as implementation guidance for NTL-4A.

As under NTL-4A, the evaluation report required under final § 3179.201(c)(1) must demonstrate to the BLM's satisfaction that the expenditures necessary to market or beneficially use the gas are not economically justified. Under final § 3179.201(d)(1), the evaluation report must include estimates of the volumes of oil and gas that would be produced to the economic limit if the application to vent or flare were approved, and estimates of the volumes of oil and gas that would be produced if the applicant was required to market or use the gas.

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<sup>42</sup> Available at <https://www.ntc.blm.gov/krc/uploads/172/NTL-4A%20Royalty%20or%20Compensation%20for%20Oil%20and%20Gas%20Lost.pdf>

From the information contained in the evaluation report, the BLM will determine whether the operator can economically operate the lease if it is required to market or use the gas, taking into consideration both oil and gas production, as well as the economics of a field-wide plan. Under final § 3179.201(d)(2), the BLM is able to require operators to provide updated evaluation reports as additional development occurs or economic conditions improve, but no more than once a year. NTL-4A did not contain a similar provision allowing the BLM to require an operator to update its evaluation report based on changing circumstances. Final § 3179.201(d)(2) thus represents a change from NTL-4A.

An action plan submitted under final § 3179.201(c)(2) must show how the operator will minimize the venting or flaring of the oil-well gas within 1 year. An operator may apply for an approval of an extension of the 1-year time limit. In the event the operator fails to implement the action plan, the entire volume of gas vented or flared during the time covered by the action plan would be subject to royalty.

Final § 3179.201(e) provides for grandfathering of prior approvals to flare royalty free. These approvals will continue in effect until no longer necessary because the venting or flaring is authorized by the rules, regulations, or orders of an appropriate State regulatory agency or tribe under final § 3179.201(a), or the BLM requires an updated evaluation report and determines to amend or revoke its approval.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.201 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*:



<https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents).

## **Measurement and Reporting Responsibilities**

### **43 CFR 3179.301 Measuring and reporting volumes of gas vented and flared.**

As proposed, final § 3179.301(a) requires operators to estimate or measure all volumes of lost oil and gas, whether avoidably or unavoidably lost, from wells, facilities, and equipment on a lease, unit PA, or CA and report those volumes under applicable Office of Natural Resources Revenue (ONRR) reporting requirements. Under final § 3179.301(b), the operator may: (1) Estimate or measure the vented or flared gas in accordance with applicable rules, regulations, or orders of the appropriate State or tribal regulatory agency; (2) Estimate the volume of the vented or flared gas based on the results of a regularly performed GOR test and measured values for the volume of oil production and gas sales, to allow BLM to independently verify the volume, rate, and heating value of the flared gas; or, (3) Measure the volume of the flared gas.

Under final § 3179.301(c), the BLM may require the installation of additional measurement equipment whenever it determines that the existing methods are inadequate to meet the purposes of subpart 3179. NTL-4A contained essentially the same provision. Based on past experience in implementing NTL-4A, the BLM believes that final § 3179.301(c) would help to ensure accuracy and accountability in situations in which high volumes of royalty-bearing gas are being flared.

Final § 3179.301(d) allows the operator to combine gas from multiple leases, unit PAs, or CAs for the purpose of flaring or venting at a common point, but the operator is required to use a BLM-approved method to allocate the quantities of the vented or flared

gas to each lease, unit PA, or CA. Commingling to a single flare is allowed because the BLM recognizes that the additional costs of requiring individual flaring measurement and meter facilities for each lease, unit PA, or communitized area are not necessarily justified by the incremental royalty accountability afforded by the separate meters and flares.

Final § 3179.301 is essentially the same as previous § 3179.9. The main difference between the two is that previous § 3179.9 required measurement or calculation under a particular protocol when the volume of flared gas exceeded 50 Mcf per day.

In addition to the explanation provided here, the BLM has summarized and responded to the comments received on § 3179.301 in a separate “Responses to Comments” document, available on the *Federal eRulemaking Portal*:

<https://www.regulations.gov> (In the Searchbox, enter “RIN 1004-AE53,” click the “Search” button, open the Docket Folder, and look under Supporting Documents).

### **Additional Deference to Tribal Regulations**

#### **§ 3179.401 Deference to Tribal Regulations.**

Tribal commenters stated that the revision of the 2016 rule should provide more opportunity for tribes to exercise their sovereignty over oil and gas development under their jurisdiction. In order to facilitate this, the BLM has chosen to modify the proposed rule to include a new provision that would allow for additional deference to Tribal rules, regulations, and orders concerning the matters addressed in subpart 3179. New § 3179.401(a) states that “[a] Tribe that has rules, regulations, or orders that are applicable to any of the matters addressed in subpart 3179 may seek approval from the BLM to have such rules, regulations, or orders apply in place of any or all of the provisions of subpart 3179 with respect to lands and minerals over which that Tribe has jurisdiction.” Under §

3179.401(b), the BLM will approve the tribe's request as long as it is consistent with the BLM's trust responsibility.

### **C. Summary of Estimated Impacts**

The BLM reviewed the final rule and conducted an RIA and Environmental Assessment (EA) that examine the impacts of the final rule's requirements. The RIA and EA that the BLM prepared have been posted in the docket for the final rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. (In the Searchbox, enter "RIN 1004-AE53", click the "Search" button, open the Docket Folder, and look under Supporting Documents). The following discussion is a summary of the final rule's economic impacts. For a more complete discussion of the expected economic impacts of the final rule, please review the RIA.

The BLM's final rule will remove almost all of the requirements in the 2016 rule that we previously estimated would pose a compliance burden to operators and generate benefits of gas savings or reductions in methane emissions. The final rule replaces the 2016 rule's requirements with requirements largely similar to those that were in NTL-4A. Also, for the most part, the final rule removes the administrative burdens associated with the 2016 rule's subpart 3179.

In conducting this RIA, the BLM also revisited the underlying assumptions used in the RIA for the 2016 rule. Specifically, the BLM revisited the underlying assumptions pertaining to LDAR, administrative burdens, and climate benefits (see Sections 3.2, 3.3, and 7 of the RIA).

For this final rule, we track the impacts over the first 10 years of implementation against the baseline. The period of analysis in the RIA prepared for the 2016 rule was 10

years. Results are provided using the net present value (NPV) of costs and benefits estimated over the evaluation period, calculated using 7 percent and 3 percent discount rates.

#### Estimated Reductions in Compliance Costs

First, we examined the reductions in compliance costs, excluding the savings that would have been realized from product recovery. The final rule reduces compliance costs from the baseline. Over the 10-year evaluation period (2019-2028), we estimate a total reduction in compliance costs of \$1.36 billion to 1.63 billion (NPV using a 7 percent discount rate) or \$1.71 billion to 2.08 billion (NPV using a 3 percent discount rate). We expect very few compliance costs associated with the final rule, including the remaining administrative burdens.

#### Estimated Reduction in Benefits

The final rule reduces benefits from the baseline, since estimated cost savings that would have come from product recovery will be forgone and the emissions reductions would also be forgone. The final rule will result in forgone cost savings from natural gas recovery. Over the 10-year evaluation period (2019-2028), we estimate total forgone cost savings from natural gas recovery (from the baseline) of \$559 million (NPV using a 7 percent discount rate) or \$734 million (NPV using a 3 percent discount rate). The final rule also expects to result in forgone methane emissions reductions. Over the 10-year evaluation period (2019-2028), we estimate total forgone methane emissions reductions from the baseline valued at \$66 million (NPV and interim domestic SC-CH<sub>4</sub> using a 7 percent discount rate) or \$259 million (NPV and interim domestic SC-CH<sub>4</sub> using a 3 percent discount rate).

### Estimated Net Benefits

The final rule is estimated to result in positive net benefits relative to the baseline. More specifically, we estimate that the reduction of compliance costs will exceed the forgone cost savings from recovered natural gas and the value of the forgone methane emissions reductions. Over the 10-year evaluation period (2019-2028), we estimate total net benefits from the baseline of \$734 million to \$1.01 billion (NPV and interim domestic SC-CH<sub>4</sub> using a 7 percent discount rate) or \$720 million to \$1.08 billion (NPV and interim domestic SC-CH<sub>4</sub> using a 3 percent discount rate).

### Energy Systems

The final rule is expected to influence the production of natural gas, natural gas liquids, and crude oil from onshore Federal and Indian oil and gas leases. However, since the relative changes in production are expected to be small, we do not expect that the final rule will significantly impact the price, supply, or distribution of energy. This is not to say that the rule would not have a positive effect on marginal wells and the production of oil and natural gas from marginal wells.

The BLM conducted an analysis to examine the impacts that the 2016 rule would have had on marginal wells. As described in Section II.b of this preamble and Section 4.5.6 of the RIA, the BLM estimates that approximately 73 percent of wells on BLM-administered leases are considered to be marginal wells and that the annual compliance costs associated with the 2016 rule would have constituted 24 percent of the annual revenues of even the highest-producing marginal oil wells and 86 percent of the annual revenues of the highest-producing marginal gas wells. Production from marginal wells represents a smaller fraction of total oil and gas production than that of non-marginal

wells. However, as the BLM's analysis indicates, this means that any associated regulatory burdens would have a disproportionate impact on marginal wells, since the compliance costs represent a much higher fraction of oil and gas revenues for marginal wells than they do for non-marginal wells. Thus, the compliance burdens of the 2016 rule pose a greater cost to marginal well producers.

The BLM also finds that marginal oil and gas production on Federal lands supported an estimated \$2.9 billion in economic output in the national economy in FY 2015. To the extent that the 2016 rule would have adversely impacted production from marginal wells through premature shut-ins, this estimated economic output would have been jeopardized. Therefore, while the BLM has determined that the 2018 final rule would not significantly impact the price, supply, or distribution of energy, the BLM acknowledges that the 2016 rule had the potential to harm the production of oil and natural gas from marginal wells and that this revision of the 2016 rule would avoid those potentially harmful effects.

The final rule will reverse the estimated incremental changes in crude oil and natural gas production associated with the 2016 rule. Over the 10-year evaluation period (2019-2028), we estimate that 18.4 million barrels of crude oil production and 22.7 Bcf of natural gas production will no longer be deferred (as it would have been under the 2016 rule). However, we also estimate that there will be 299 Bcf of forgone natural gas production (that would have been produced and sold under the 2016 rule, rather than vented or flared). See RIA at Section 4.5.1.

For context, we note the share of the total U.S. onshore production in 2015 that the incremental changes in production will represent. The per-year average of the

estimated crude oil volume that will no longer be deferred represents 0.058 percent of the total onshore U.S. crude oil production in 2015.<sup>43</sup> The per-year average of the estimated natural gas volume that will no longer be deferred represents 0.008 percent of the total onshore U.S. natural gas production in 2015.<sup>44</sup> The per-year average of the estimated forgone natural gas production represents 0.109 percent of the total onshore U.S. natural gas production in 2015.<sup>45</sup>

### Royalty Impacts

The 2016 rule would have been expected to impact the production of crude oil and natural gas from Federal and Indian oil and gas leases. In the RIA for the 2016 rule, the BLM estimated that the rule's requirements would generate additional natural gas production, but that substantial volumes of crude oil production would be deferred or shifted to the future. The BLM concluded that the 2016 rule would generate overall additional royalty, with the royalty gains from the additional natural gas produced outweighing the value of the royalty losses from crude oil production (and some associated gas) being deferred into the future.

This final rule, which reverses most of the 2016 rule's provisions, is expected to reverse the estimated royalty impacts of the 2016 rule. This formulation does not account for the potential countervailing impacts of the reduction in compliance burdens, which might spur additional production on Federal and Indian lands and prolong production from marginal wells, and therefore have a positive impact on royalties.

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<sup>43</sup> Calculation based on total onshore U.S. crude oil production in 2015, as reported by the U.S. EIA. Production data available at [https://www.eia.gov/dnav/pet/pet\\_crd\\_crdpn\\_adc\\_mbb1\\_a.htm](https://www.eia.gov/dnav/pet/pet_crd_crdpn_adc_mbb1_a.htm).

<sup>44</sup> Calculation based on total onshore U.S. natural gas and gross withdrawals in 2015, as reported by the U.S. EIA. Production data available at [https://www.eia.gov/dnav/ng/ng\\_prod\\_sum\\_a\\_EPG0\\_FGW\\_mmcf\\_a.htm](https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm).

<sup>45</sup> Ibid.

We note that royalty impacts are presented separately from the costs, benefits, and net benefits. Royalty payments are recurring income to Federal or tribal governments and costs to the operator or lessee. As such, they are transfer payments that do not affect the total resources available to society. An important but sometimes difficult problem in cost estimation is to distinguish between real costs and transfer payments. While transfers should not be included in the economic analysis estimates of the benefits and costs of a regulation, they may be important for describing the distributional effects of a regulation.

The final rule will result in forgone royalty payments to the Federal Government, tribal governments, States, and private landowners. Over the 10-year evaluation period (2019-2028), we estimate total forgone royalty payments (from the baseline) of \$28.3 million (NPV using a 7 percent discount rate) or \$79.1 million (NPV using a 3 percent discount rate).

#### Consideration of Alternative Approaches

E.O. 13563 reaffirms the principles of E.O. 12866 and requires that agencies, among other things, “identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.”

The 2016 rule established requirements and direct regulation on operators. Under this final rule, the BLM will remove the requirements of the 2016 rule that impose the most substantial direct regulatory burdens on operators. Also, with the final rule, the BLM will remove the duplicative operational and equipment requirements and paperwork and administrative burdens.



In developing this final rule, the BLM considered scenarios for retaining certain requirements previously contained in subpart 3179. For example, we examined the impacts of retaining subpart 3179 in its entirety (essentially taking no action). We also examined the impacts of retaining the gas-capture requirements of the 2016 rule (previous §§ 3179.7 - 3179.8) and the measurement/metering requirements (previous § 3179.9) while rescinding the operational and equipment requirements addressing venting from leaks, pneumatic equipment, and storage tanks. The results of these alternative scenarios are presented in the RIA at Section 4.

#### Employment Impacts

E.O. 13563 reaffirms the principles established in E.O. 12866, but calls for additional consideration of the regulatory impact on employment. E.O. 13563 states, “Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation.” An analysis of employment impacts is a standalone analysis and the impacts should not be included in the estimation of benefits and costs.

This final rule removes or replaces requirements of the BLM’s 2016 rule on waste prevention and is a deregulatory action. As such, we estimate that it will result in a reduction of compliance costs for operators of oil and gas leases on Federal and Indian lands. Therefore, it is likely that the impact, if any, on employment will be positive.

In the RIA for the 2016 rule, the BLM concluded that the requirements were not expected to impact the employment within the oil and gas extraction, drilling oil and gas wells, and support activities industries, in any material way. This determination was based on several reasons. First, the estimated incremental gas production represented only

a small fraction of the U.S. natural gas production volumes. Second, the estimated compliance costs represented only a small fraction of the annual net incomes of companies likely to be impacted. Third, for those operations that would have been impacted, the 2016 rule had provisions that would exempt these operations from compliance to the extent that the compliance costs would force the operator to shut in production. Based on these factors, the BLM determined that the 2016 rule would not alter the investment or employment decisions of firms or significantly adversely impact employment. The RIA also noted that the requirements would necessitate the one-time installation or replacement of equipment and the ongoing implementation of an LDAR program, both of which would require labor.

By removing or revising the requirements of the 2016 rule, the BLM is alleviating the associated compliance burdens on operators. The investment and labor necessary to comply with the 2016 rule will not be needed. We do not believe that the cost savings in themselves will be substantial enough to substantially alter the investment or employment decisions of firms. However, we also recognize that there may be a small positive impact on investment and employment due to the reduction in compliance burdens if the output effects dominate. The magnitude of the reductions will be relatively small but could carry competitiveness impacts, specifically on marginal wells on Federal lands, encouraging investment. In sum, the effect on investment and employment of this rule remains unknown, but we do not believe that the final rule will substantially alter the investment or employment decisions of firms.

#### Small Business Impacts

The BLM reviewed the Small Business Administration (SBA) size standards for small businesses and the number of entities fitting those size standards as reported by the U.S. Census Bureau. We conclude that small entities represent the majority of entities operating in the onshore crude oil and natural gas extraction industry and, therefore, the final rule will impact a substantial number of small entities. To examine the economic impact of the rule on small entities, the BLM performed a screening analysis on a sample of potentially affected small entities, comparing the reduction of compliance costs to entity profit margins. This screening analysis showed that the estimated per-entity reduction in compliance costs would result in an average increase in profit margin of 0.19 percentage points (based on the 2014 company data).<sup>46</sup>

The BLM performed the screening analysis pursuant to its obligations under the Regulatory Flexibility Act and the Small Business Regulatory Enforcement Fairness Act. The BLM recognizes that there are many operators of Federal and Indian leases that are substantially smaller than the SBA size standards for small businesses in the affected industries.<sup>47</sup> For these smaller operators, the estimated reduction in compliance costs would result in a larger increase in profits than the average increase shown above.

The BLM also notes that most of the emissions-based requirements in the 2016 rule (including LDAR, pneumatic controllers, pneumatic pumps, and liquids unloading requirements) would have imposed a particular burden on marginal or low-producing

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<sup>46</sup> Average commodity price in 2014 was higher than subsequent years; therefore, the result in profit margin may not be representative of the increase in profit margin as a result of the updated rulemaking.

<sup>47</sup> This rule directly affects entities classified within the Crude Petroleum and Natural Gas Extraction (North American Industry Classification System (NAICS) code 211111), Natural Gas Liquid Extraction (NAICS code 211112), Drilling of Oil and Natural Gas Wells (NAICS code 213111), and Support Activities for Oil and Gas Operations (213112) industries. The SBA size standards for these industries are 1,250 employees, 1,000 employees, and annual receipts of less than \$38.5 million, respectively.

wells.<sup>48</sup> There is concern that those wells would not have been able to be operated profitably with the additional compliance costs imposed by the 2016 rule. While the 2016 rule allows for exemptions when compliance would impose such costs that the operator would cease production and abandon significant recoverable reserves, due to the prevalence of marginal and low-producing wells, the BLM expects that many exemptions would have been warranted, making the burdens imposed by the exemption process, in itself, excessive. The prospect of either shutting-in a marginal well or assuming unwarranted administrative burdens to avoid compliance costs potentially represented a substantial loss of income for companies operating marginal wells. The BLM's final rule rescinds or revises these requirements in the 2016 rule, thus reducing compliance costs for all wells, including marginal wells, and reducing the potential economic harm to small businesses.

#### Impacts Associated with Oil and Gas Operations on Tribal Lands

The final rule applies to oil and gas operations on both Federal and Indian leases. In the RIA, the BLM estimates the impacts associated with operations on Indian leases, as well as royalty implications for tribal governments. We estimate these impacts by scaling down the total impacts by the share of oil wells on Indian lands and the share of gas wells on Indian Lands. Please reference the RIA at Section 4.4.5 for a full explanation of the estimated impacts.

#### **IV. Procedural Matters**

##### **Regulatory Planning and Review (E.O. 12866, E.O. 13563)**

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<sup>48</sup> As explained previously, the IOGCC defines a marginal well as one that produces 10 barrels of oil or 60 Mcf of natural gas per day or less and reports that about 69.1 and 75.9 percent of the Nation's operating oil and gas wells, respectively, are marginal. EIA estimates that 73.3 percent of wells are marginal.

Executive Order 12866 provides that the Office of Information and Regulatory Affairs within the Office of Management and Budget (OMB) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this final rule is economically significant because it will:

- Have an annual effect of \$100 million or more on the economy; and
- Raise novel legal or policy issues.

Executive Order 13563 reaffirms the principles of Executive Order 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The Executive Order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

This final rule rescinds or revises portions of the BLM's 2016 rule. We have developed this final rule in a manner consistent with the requirements in Executive Order 12866 and Executive Order 13563.

The BLM reviewed the requirements of the final rule and determined that it will not adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. For more detailed information, see the RIA

prepared for this final rule. The RIA has been posted in the docket for the proposed rule on the Federal eRulemaking Portal: <https://www.regulations.gov>. (In the Searchbox, enter "RIN 1004-AE53", click the "Search" button, open the Docket Folder, and look under Supporting Documents).

### **Reducing Regulation and Controlling Regulatory Costs (E.O. 13771)**

This final rule is expected to be an E.O. 13771 deregulatory action. Details on the estimated cost savings of this proposed rule can be found in the rule's RIA.

### **Regulatory Flexibility Act**

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) (RFA) generally requires that Federal agencies prepare a regulatory flexibility analysis for rules subject to the notice-and-comment rulemaking requirements under the Administrative Procedure Act (5 U.S.C. 500 *et seq.*), if the rule would have a significant economic impact, whether detrimental or beneficial, on a substantial number of small entities. *See* 5 U.S.C. 601 – 612. Congress enacted the RFA to ensure that government regulations do not unnecessarily or disproportionately burden small entities. Small entities include small businesses, small governmental jurisdictions, and small not-for-profit enterprises.

The BLM reviewed the SBA size standards for small businesses and the number of entities fitting those size standards as reported by the U.S. Census Bureau in the Economic Census. The BLM concludes that the vast majority of entities operating in the relevant sectors are small businesses as defined by the SBA. As such, the final rule will likely affect a substantial number of small entities.

The BLM reviewed the final rule and estimates that it will generate cost savings of about \$72,000 per entity per year. These estimated cost savings will provide relief to

small operators, which, the BLM notes, represent the overwhelming majority of operators of Federal and Indian leases.

For the purpose of carrying out its review pursuant to the RFA, the BLM believes that the final rule will not have a “significant economic impact on a substantial number of small entities,” as that phrase is used in 5 U.S.C. 605. An initial regulatory flexibility analysis is therefore not required. In making a significance determination under the RFA, BLM used an estimated per-entity cost savings to conduct a screening analysis. The analysis shows that the average reduction in compliance costs associated with this final rule are a small enough percentage of the profit margin for small entities, so as not be considered “significant” under the RFA.

Details on this determination can be found in the RIA for the final rule.

### **Small Business Regulatory Enforcement Fairness Act**

This final rule is a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This final rule:

- (a) Will have an annual effect on the economy of \$100 million or more.
- (b) Will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions.
- (c) Will not have a significant adverse effect on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

### **Unfunded Mandates Reform Act (UMRA)**

This final rule will not impose an unfunded mandate on State, local, or tribal governments, or the private sector of \$100 million or more per year. The final rule will not have a significant or unique effect on State, local, or tribal governments or the private sector. The final rule contains no requirements that would apply to State, local, or tribal governments. It will rescind or revise requirements that would otherwise apply to the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1531 *et seq.*) is not required for the final rule. This final rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments, because it contains no requirements that apply to such governments, nor does it impose obligations upon them.

**Governmental Actions and Interference with Constitutionally Protected Property Right - Takings (Executive Order 12630)**

This final rule would not effect a taking of private property or otherwise have taking implications under Executive Order 12630. A takings implication assessment is not required. The final rule rescinds or revises many of the requirements placed on operators by the 2016 rule. Operators will not have to undertake the associated compliance activities, either operational or administrative. Therefore, the final rule impacts some operational and administrative requirements on Federal and Indian lands. All such operations are subject to lease terms which expressly require that subsequent lease activities be conducted in compliance with subsequently adopted Federal laws and regulations. This final rule conforms to the terms of those leases and applicable statutes and, as such, the rule is not a government action capable of interfering with



constitutionally protected property rights. Therefore, the BLM has determined that the rule will not cause a taking of private property or require further discussion of takings implications under Executive Order 12630.

**Federalism (Executive Order 13132)**

Under the criteria in section 1 of Executive Order 13132, this final rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement. A federalism impact statement is not required.

The final rule will not have a substantial direct effect on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the levels of government. It would not apply to States or local governments or State or local governmental entities. The rule will affect the relationship between operators, lessees, and the BLM, but it does not directly impact the States. Therefore, in accordance with Executive Order 13132, the BLM has determined that this final rule does not have sufficient federalism implications to warrant preparation of a Federalism Assessment.

**Civil Justice Reform (Executive Order 12988)**

This final rule complies with the requirements of Executive Order 12988. More specifically, this final rule meets the criteria of section 3(a), which requires agencies to review all regulations to eliminate errors and ambiguity and to write all regulations to minimize litigation. This final rule also meets the criteria of section 3(b)(2), which requires agencies to write all regulations in clear language with clear legal standards.

**Consultation and Coordination with Indian Tribal Governments (Executive Order 13175 and Departmental Policy)**

The Department strives to strengthen its government-to-government relationship with Indian tribes through a commitment to consultation with Indian tribes and recognition of their right to self-governance and tribal sovereignty. We have evaluated this final rule under the Department's consultation policy and under the criteria in Executive Order 13175 and have identified substantial direct effects on federally recognized Indian tribes that will result from this final rule. Under this final rule, oil and gas operations on tribal and allotted lands will no longer be subject to many of the requirements placed on operators by the 2016 rule.

The BLM believes that revising the requirements of subpart 3179 will prevent Indian lands from being viewed as less attractive to oil and gas operators than non-Indian lands due to unnecessary and burdensome compliance costs, thereby preventing economic harm to tribes and allottees. The BLM conducted tribal outreach which it believes is appropriate given that the final rule will remove many of the compliance burdens of the 2016 rule, defer to tribal laws, regulations, rules, and orders, with respect to oil-well gas flaring from Indian leases, and otherwise revise subpart 3179 in a manner that aligns it with NTL-4A.

The BLM is committed to engaging in meaningful Tribal Consultation. Through a letter dated November 21, 2017, the BLM notified 428 Tribal leaders and representatives of its intent to propose a rule to revise the 2016 final rule. In the letter, the BLM offered to participate in government-to-government consultations or to accept for consideration written comments, at the recipient's convenience. These letters were sent three months before the BLM published the proposed rule in the Federal Register.

The BLM received letters from several tribes seeking government-to-government consultation. The BLM also received comments from three allottees and members of tribes who did not request consultation. In response, the BLM conducted government-to-government consultations with the tribes who had requested consultation. During each of these government-to-government consultations, the BLM discussed the regulatory action with the tribes. The feedback the BLM received was overall positive, particularly about the opportunity for greater tribal sovereignty.

### **Paperwork Reduction Act**

#### 1. Overview

The Paperwork Reduction Act (PRA) (44 U.S.C. 3501–3521) provides that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless it displays a currently valid control number. 44 U.S.C. 3512. Collections of information include requests and requirements that an individual, partnership, or corporation obtain information, and report it to a Federal agency. 44 U.S.C. 3502(3); 5 CFR 1320.3(c) and (k).

OMB approved 24 information collection activities in the 2016 rule pertaining to waste prevention and assigned control number 1004-0211 to those activities. See “Waste Prevention, Production Subject to Royalties, and Resource Conservation,” Final Rule, 81 FR 83008 (Nov. 18, 2016). In the Notice of Action approving the 24 information collection activities in the 2016 rule, OMB announced that the control number will expire on January 31, 2018. The Notice of Action also included terms of clearance.

On October 5, 2017, the BLM proposed a rule that would suspend or delay several regulations in the 2016 rule. In that proposed rule, the BLM requested the extension of control number 1004-0211 until January 31, 2019, including the 24 information collection activities in the 2016 rule. The BLM invited public comment on the proposed extension of control no. 1004-0211. The BLM also submitted the information collection request for the proposed rule to OMB for review in accordance with the PRA.

The BLM finalized that rule on December 8, 2017. See 82 FR 58050. OMB approved the information collection activities in the rule with an expiration date of December 31, 2020, and with a Term of Clearance that maintains the effectiveness of the Terms of Clearance associated with the 2016 rule. That Term of Clearance requires the BLM to submit to the Office of Information and Regulatory Affairs draft guidance to implement the collection of information requirements of the 2016 rule no later than 3 months after January 17, 2019.

This final rule does not modify any regulations in 43 CFR subpart 3178. Accordingly, the BLM requests continuation of the information collection activity at 43 CFR 3178.5, 3178.7, 3178.8, and 3178.9 (“Request for Approval for Royalty-Free Uses On-Lease or Off-Lease”).

The final rule removes the information collection activity at 43 CFR 3162.3-1(j) (“Plan to Minimize Waste of Natural Gas”). The final rule also removes or revises many regulations and information collection activities in 43 CFR subpart 3179. As a result, the BLM now requests revision of control number 1004-0211 to include:

- The information collection activities in this final rule; and

- The information collection activity entitled, “Request for Approval for Royalty-Free Uses On-Lease or Off-Lease.”

## 2. Summary of Information Collection Activities

*Title:* Waste Prevention, Production Subject to Royalties, and Resource Conservation (43 CFR parts 3160 and 3170).

*OMB Control Number:* 1004–0211.

*Form:* Form 3160–5, Sundry Notices and Reports on Wells.

*Description of Respondents:* Holders of Federal and Indian (except Osage Tribe) oil and gas leases, those who belong to Federally approved units or communitized areas, and those who are parties to oil and gas agreements under the Indian Mineral Development Act, 25 U.S.C. 2101–2108.

*Respondents’ Obligation:* Required to obtain or retain a benefit.

*Frequency of Collection:* On occasion.

*Abstract:* The BLM requests that control number 1004-0211 be revised to include the information collection activities in this final rule, as well as the information collection activity in 43 CFR subpart 3178 that was in the 2016 rule. The BLM also requests the removal of the information collection activity in 43 CFR 3162.3-1(j) that was in the 2016 rule, and the removal or revision of the information collection activities that were in 43 CFR subpart 3179 of the 2016 rule.

*Estimated Number of Responses:* 1,075.

*Estimated Total Annual Burden Hours:* 4,010.

*Estimated Total Non-Hour Cost:* None.

## 2. Information Collection Request

- A. The BLM requests that OMB control number 1004-0211 continue to include the following information collection activity that was included at 43 CFR subpart 3178 of the 2016 rule: Request for Approval for Royalty-Free Uses On-Lease or Off-Lease (43 CFR 3178.5, 3178.7, 3178.8, and 3178.9)

Section 3178.5 requires submission of a Sundry Notice (Form 3160-5) to request prior written BLM approval for use of gas royalty free for the following operations and production purposes on the lease, unit or communitized area:

- Using oil or gas that an operator removes from the pipeline at a location downstream of the facility measurement point (FMP);
- Removal of gas initially from a lease, unit PA, or communitized area for treatment or processing because of particular physical characteristics of the gas, prior to use on the lease, unit PA or communitized area; and
- Any other type of use of produced oil or gas for operations and production purposes pursuant to § 3178.3 that is not identified in § 3178.4
- Section 3178.7 requires submission of a Sundry Notice (Form 3160-5) to request prior written BLM approval for off-lease royalty-free uses in the following circumstances:
  - The equipment or facility in which the operation is conducted is located off the lease, unit, or communitized area for engineering, economic, resource-protection, or physical-accessibility reasons; and
  - The operations are conducted upstream of the FMP.

Section 3178.8 requires that an operator measure or estimate the volume of royalty-free gas used in operations upstream of the FMP. In general, the operator is free

to choose whether to measure or estimate, with the exception that the operator must in all cases measure the following volumes:

- Royalty-free gas removed downstream of the FMP and used pursuant to §§ 3178.4 through 3178.7; and
- Royalty-free oil used pursuant to §§ 3178.4 through 3178.7.

If oil is used on the lease, unit or communitized area, it is most likely to be removed from a storage tank on the lease, unit or communitized area. Thus, this regulation also requires the operator to document the removal of the oil from the tank or pipeline.

Section 3178.8(e) requires that operators use best available information to estimate gas volumes, where estimation is allowed. For both oil and gas, the operator must report the volumes measured or estimated, as applicable, under ONRR reporting requirements. As revisions to Onshore Oil and Gas Orders No. 4 and 5 have now been finalized as 43 CFR subparts 3174 and 3175, respectively, the final rule text now references § 3173.12, as well as § 3178.4 through § 3178.7 to clarify that royalty-free use must adhere to the provisions in those sections.

Section 3178.9 requires the following additional information in a request for prior approval of royalty-free use under § 3178.5, or for prior approval of off-lease royalty-free use under § 3178.7:

- A complete description of the operation to be conducted, including the location of all facilities and equipment involved in the operation and the location of the FMP;
- The volume of oil or gas that the operator expects will be used in the operation and the method of measuring or estimating that volume;

- If the volume expected to be used will be estimated, the basis for the estimate (e.g., equipment manufacturer’s published consumption or usage rates); and
- The proposed disposition of the oil or gas used (e.g., whether gas used would be consumed as fuel, vented through use of a gas-activated pneumatic controller, returned to the reservoir, or disposed by some other method).

B. The BLM requests the revision of the following information collection activities in accordance with this final rule:

1. Request for Extension of Royalty-Free Flaring During Initial Production Testing (43 CFR 3179.101)

A regulation in the 2016 rule, 43 CFR 3179.103, allows gas to be flared royalty free during initial production testing. The regulation lists specific volume and time limits for such testing. An operator may seek an extension of those limits on royalty-free flaring by submitting a Sundry Notice (Form 3160-5) to the BLM.

A regulation in this final rule, 43 CFR 3179.101, is similar to the 2016 rule in addressing the royalty-free treatment of gas volumes flared during initial production testing. 43 CFR 3179.101 in this final rule would provide that gas flared during the initial production test of each completed interval in a well is royalty free until one of the following occurs:

- The operator determines that it has obtained adequate reservoir information;
- 30 days have passed since the beginning of the production test, unless the BLM approves a longer test period; or
- The operator has flared 50 MMcf of gas.



Section 3179.101 of this final rule also provides that an operator may request a longer test period by submitting a Sundry Notice.

## 2. Request for Extension of Royalty-Free Flaring During Subsequent Well Testing (43 CFR 3179.102)

A regulation in the 2016 rule, 43 CFR 3179.104, allows gas to be flared royalty free for no more than 24 hours during well tests subsequent to the initial production test. That regulation allows an operator to seek authorization to flare royalty free for a longer period by submitting a Sundry Notice (Form 3160-5) to the BLM.

A regulation in this final rule, 43 CFR 3179.102, is substantively identical to 43 CFR 3179.104 in the 2016 rule. Accordingly, the BLM requests that the information collection activity at 43 CFR 3179.102 of this final rule replace the activity at 43 CFR 3179.104 of the 2016 rule.

## 3. Emergencies (43 CFR 3179.103)

A regulation in the 2016 rule, 43 CFR 3179.105, allows an operator to flare gas royalty free during a temporary, short-term, infrequent, and unavoidable emergency. A regulation in this final rule, at 43 CFR 3179.103, is almost identical to 43 CFR 3179.105 of the 2016 rule. The BLM thus requests that the information collection activity entitled, “Reporting of Venting or Flaring (43 CFR 3179.105)” be re-named “Emergencies (43 CFR 3179.103).”

As provided at 43 CFR 3179.103(a) of this final rule, gas flared or vented during an emergency would be royalty-free for a period not to exceed 24 hours, unless the BLM determines that emergency conditions exist necessitating venting or flaring for a longer period. Section 3179.103(d) of this final rule would require the operator to report to the

BLM on a Sundry Notice, within 45 days of the start of an emergency, the estimated volumes flared or vented beyond the timeframe specified in paragraph (a).

As defined at 43 CFR 3179.103(b) of this final rule, an “emergency” for purposes of 43 CFR subpart 3179 is a temporary, infrequent and unavoidable situation in which the loss of gas or oil is uncontrollable or necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment, and is not due to operator negligence.

As provided at 43 CFR 3179.103(c) of this final rule, the following events would not constitute emergencies for the purposes of royalty assessment:

- The operator's failure to install appropriate equipment of a sufficient capacity to accommodate the production conditions;
- Failure to limit production when the production rate exceeds the capacity of the related equipment, pipeline, or gas plant, or exceeds sales contract volumes of oil or gas;
- Scheduled maintenance;
- A situation caused by operator negligence, including recurring equipment failures;  
or
- A situation on a lease, unit, or communitized area that has already experienced 3 or more emergencies within the past 30 days, unless the BLM determines that the occurrence of more than 3 emergencies within the 30 day period could not have been anticipated and was beyond the operator's control.

D. The BLM requests the removal of the following information collection activities in accordance with this final rule:

1. “Plan to Minimize Waste of Natural Gas”;
2. “Notification of Choice to Comply on County- or State-wide Basis”;
3. “Request for Approval of Alternative Capture Requirement”;
4. “Request for Exemption from Well Completion Requirements”;
5. “Notification of Functional Needs for a Pneumatic Controller”;
6. “Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Controller)”;
7. “Showing in Support of Replacement of Pneumatic Controller within 3 Years”;
8. “Showing that a Pneumatic Diaphragm Pump was Operated on Fewer than 90 Individual Days in the Prior Calendar Year”;
9. “Notification of Functional Needs for a Pneumatic Diaphragm Pump”;
10. “Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pump)”;
11. “Showing in Support of Replacement of Pneumatic Diaphragm Pump within 3 Years”;
12. “Storage Vessels”;
13. “Downhole Well Maintenance and Liquids Unloading – Documentation and Reporting”;
14. “Downhole Well Maintenance and Liquids Unloading – Notification of Excessive Duration or Volume”;
15. “Leak Detection – Compliance with EPA Regulations”;
16. “Leak Detection – Request to Use an Alternative Monitoring Device and Protocol”;
17. “Leak Detection – Operator Request to Use an Alternative Leak Detection Program”;
18. “Leak Detection – Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program that Does Not Meet Specified Criteria”;
19. “Leak Detection – Notification of Delay in Repairing Leaks”;
20. “Leak Detection — Inspection Recordkeeping and Reporting”; and
21. “Leak Detection – Annual Reporting of Inspections.”

E. The BLM requests the addition of following information collection activity, in accordance with this final rule: Oil-Well Gas (43 CFR 3179.201)

A regulation in this final rule, 43 CFR 3179.201, would provide that, except as otherwise provided in 43 CFR subpart 3179, oil-well gas may not be vented or flared royalty free unless BLM approves such action in writing. The BLM would be authorized to approve an application for royalty-free venting or flaring of oil-well gas upon determining that royalty-free venting or flaring is justified by the operator's submission of either:

- 1) An evaluation report supported by engineering, geologic, and economic data that demonstrates to the BLM's satisfaction that the expenditures necessary to market or beneficially use such gas are not economically justified; or
- 2) An action plan showing how the operator will minimize the venting or flaring of the gas within 1 year or within a greater amount of time if the operator justifies an extended deadline. If the operator fails to implement the action plan, the gas vented or flared during the time covered by the action plan would be subject to royalty.

The data in the evaluation report that is mentioned above would need to include:

- The applicant's estimates of the volumes of oil and gas that would be produced to the economic limit if the application to vent or flare were approved; and
- The volumes of the oil and gas that would be produced if the applicant were required to market or use the gas.

The BLM would be authorized to require the operator to provide an updated evaluation report as additional development occurs or economic conditions improve. In

addition, the BLM would be authorized to determine that gas is avoidably lost and therefore subject to royalty if flaring exceeds 10 MMcf per well during any month.

The BLM notes that there are no additional reporting requirements associated with 43 CFR 3179.301 in the final rule. Section 3179.301, which is a revision of 43 CFR 3179.9, is already covered under an approved OMB control number 1012-0004. The provision provides that the operator must estimate or measure volumes of gas vented or flared, and report those volumes under "applicable ONRR reporting requirements," which is authorized under control number 1012-0004. An ONRR regulation (30 CFR 1210.102) requires operators to submit a form that is included in that control number (Form ONRR-4054, Oil and Gas Operations Report) monthly for all oil and gas production. Volumes of vented gas and flared gas must be included in that report, using codes to identify those volumes. ONRR uses the information on Form ONRR-4054 to track all oil and gas from the point of production to the point of first sale or other disposition, to ensure proper royalties are paid. The BLM and other Federal Government agencies use the data to monitor and inspect lease operations. As revised, proposed 43 CFR 3179.301 does not change the burdens that ONRR estimates for Form ONRR-4054.

#### 4. Burden Estimates

This final rule results in the following adjustments in hour or cost burdens:

1. The hours per response for Request for Approval for Royalty-Free Uses On-Lease or Off-Lease are increased from 4 to 8.

2. The number of responses for "Request for Extension of Royalty-Free Flaring During Initial Well Testing" are increased from 500 to 750.

Program changes in this final rule would result in 62,125 fewer responses than in the 2016 rule (1,075 responses minus 63,200 responses) and 78,160 fewer burden hours than in the 2016 rule (4,010 responses minus 82,170 responses). The program changes and their reasons are itemized in Tables 15-1 and 15-2 of the supporting statement.

The following table details the annual estimated hour burdens for the information activities described above:

<b>A. Type of Response</b>	<b>B. Number of Responses</b>	<b>C. Hours per Response</b>	<b>D. Total Hours (Column B x Column C)</b>
Request for Approval for Royalty-Free Uses On-Lease or Off-Lease 43 CFR 3178.5, 3178.7, 3178.8, and 3178.9 Form 3160-5	50	8	400
Request for Extension of Royalty- Free Flaring During Initial Production Testing 43 CFR 3179.101 Form 3160-5	750	2	1,500
Request for Extension of Royalty-Free Flaring During Subsequent Well Testing 43 CFR 3179.102 Form 3160-5	5	2	10
Emergencies 43 CFR 3179.103 Form 3160-5	250	2	500
Oil-Well Gas 43 CFR 3179.201	20	80	1,600
Totals	1,075	—	4,010

### **National Environmental Policy Act**

The BLM has prepared an Environmental Assessment (EA) to determine whether this proposed rule would have a significant impact on the quality of the human

environment under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*). Based on this EA, the BLM has concluded that the final rule would not have a significant impact on the quality of the human environment. This conclusion is detailed in the BLM's Finding of No Significant Impact (FONSI). Both the EA and the FONSI for the final rule are available in the docket for the rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. (In the Searchbox, enter "RIN 1004-AE53", click the "Search" button, open the Docket Folder, and look under Supporting Documents.)

**Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (Executive Order 13211)**

This final rule is not a significant energy action under the definition in Executive Order 13211. A statement of Energy Effects is not required.

Section 4(b) of Executive Order 13211 defines a “significant energy action” as “any action by an agency (normally published in the *Federal Register*) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of rulemaking, and notices of rulemaking: (1)(i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) Is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) That is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.”

The rule rescinds or revises certain requirements in the 2016 rule and reduces compliance burdens. The BLM determined that the 2016 rule would not have impacted the supply, distribution, or use of energy. It stands to reason that a revision in a manner

that conforms 43 CFR subpart 3179 with the policies governing venting and flaring prior to the 2016 rule will likewise not have an impact on the supply, distribution, or use of energy. As such, we do not consider the final rule to be a “significant energy action” as defined in Executive Order 13211.

### **Authors**

The principal authors of this final rule are: James Tichenor, Justin Abernathy, Michael Riches, and Nathan Packer of the BLM Washington Office; Adam Stern of the Department of the Interior’s Office of Policy Analysis; Beth Poindexter of the BLM Montana and North Dakota State Office; David Mankiewicz of the BLM Farmington, New Mexico Field Office; and Jennifer Sanchez of the BLM Roswell, New Mexico Field Office; assisted by Faith Bremner of the BLM’s Division of Regulatory Affairs and by the Department of the Interior’s Office of the Solicitor.

### **List of Subjects**

#### **43 CFR Part 3160**

Administrative practice and procedure; Government contracts; Indians-lands; Mineral royalties; Oil and gas exploration; Penalties; Public lands--mineral resources; Reporting and recordkeeping requirements.

#### **43 CFR Part 3170**

Administrative practice and procedure; Flaring; Government contracts; Incorporation by reference; Indians-lands; Mineral royalties; Immediate assessments; Oil and gas exploration; Oil and gas measurement; Public lands--mineral resources; Reporting and record keeping requirements; Royalty-free use; Venting.



Dated: \_\_\_\_\_

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**Joseph R. Balash,**

*Assistant Secretary for Land and Minerals Management*

## **43 CFR Chapter II**

For the reasons set out in the preamble, the Bureau of Land Management amends 43 CFR parts 3160 and 3170 as follows:

### **PART 3160 – ONSHORE OIL AND GAS OPERATIONS**

1. The authority citation for part 3160 continues to read as follows:

AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740; and Sec. 107, Pub. L. 114-74, 129 Stat. 599, unless otherwise noted.

#### **§ 3162.3-1 [Amended]**

2. Amend § 3162.3-1 by removing paragraph (j).

### **PART 3170 – ONSHORE OIL AND GAS PRODUCTION**

3. The authority citation for part 3170 continues to read as follows:

AUTHORITY: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

4. Revise subpart 3179 to read as follows:

#### **SUBPART 3179—WASTE PREVENTION AND RESOURCE CONSERVATION**

##### **SECS.**

3179.1 Purpose.

3179.2 Scope.

3179.3 Definitions and acronyms.

3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.

3179.5 When lost production is subject to royalty.

3179.6 Venting limitations.

## **AUTHORIZED FLARING AND VENTING OF GAS**

3179.101 Initial production testing.

3179.102 Subsequent well tests.

3179.103 Emergencies.

3179.104 Downhole well maintenance and liquids unloading.

## **OTHER VENTING OR FLARING**

3179.201 Oil-well gas.

## **MEASUREMENT AND REPORTING RESPONSIBILITIES**

3179.301 Measuring and reporting volumes of gas vented and flared.

## **ADDITIONAL DEFERENCE TO TRIBAL REGULATIONS**

3179.401 Deference to tribal regulations.

## **SUBPART 3179—WASTE PREVENTION AND RESOURCE CONSERVATION**

### **§ 3179.1 Purpose.**

The purpose of this subpart is to implement and carry out the purposes of statutes relating to prevention of waste from Federal and Indian (other than Osage Tribe) leases, conservation of surface resources, and management of the public lands for multiple use and sustained yield. This subpart supersedes those portions of Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A), pertaining to, among other things, flaring and venting of produced gas, unavoidably and avoidably lost gas, and waste prevention.

### **§ 3179.2 Scope.**

(a) This subpart applies to:

- (1) All onshore Federal and Indian (other than Osage Tribe) oil and gas leases, units, and communitized areas, except as otherwise provided in this subpart;
- (2) IMDA oil and gas agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement;
- (3) Leases and other business agreements and contracts for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary, unless specifically excluded in the lease, other business agreement, or Tribal Energy Resource Agreement;
- (4) Committed State or private tracts in a federally approved unit or communitization agreement defined by or established under 43 CFR subpart 3105 or 43 CFR part 3180; and
- (5) All onshore well facilities located on a Federal or Indian lease or a federally approved unit or communitized area.

(b) For purposes of this subpart, the term “lease” also includes IMDA agreements.

**§ 3179.3 Definitions and acronyms.**

As used in this subpart, the term:

*Automatic ignition system* means an automatic ignitor and, where needed to ensure continuous combustion, a continuous pilot flame.

*Capture* means the physical containment of natural gas for transportation to market or productive use of natural gas, and includes injection and royalty-free on-site uses pursuant to subpart 3178.

*Gas-to-oil ratio (GOR)* means the ratio of gas to oil in the production stream expressed in standard cubic feet of gas per barrel of oil.

*Gas well* means a well for which the energy equivalent of the gas produced, including its entrained liquefiable hydrocarbons, exceeds the energy equivalent of the oil produced, as determined at the time of well completion.

*Liquids unloading* means the removal of an accumulation of liquid hydrocarbons or water from the wellbore of a completed gas well.

*Lost oil or lost gas* means produced oil or gas that escapes containment, either intentionally or unintentionally, or is flared before being removed from the lease, unit, or communitized area, and cannot be recovered.

*Oil well* means a well for which the energy equivalent of the oil produced exceeds the energy equivalent of the gas produced, as determined at the time of well completion.

*Waste of oil or gas* means any act or failure to act by the operator that is not sanctioned by the authorized officer as necessary for proper development and production, where compliance costs are not greater than the monetary value of the resources they are expected to conserve, and which results in: (1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir under prudent and proper operations; or (2) avoidable surface loss of oil or gas.

**§ 3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.**

For purposes of this subpart:

(a) *Avoidably lost* production means:

(1) Gas that is vented or flared without the authorization or approval of the BLM;

or

(2) Produced oil or gas that is lost when the BLM determines that such loss occurred as a result of:

- (i) Negligence on the part of the operator;
- (ii) The failure of the operator to take all reasonable measures to prevent or control the loss; or
- (iii) The failure of the operator to comply fully with the applicable lease terms and regulations, appropriate provisions of the approved operating plan, or prior written orders of the BLM.

(b) *Unavoidably lost* production means:

- (1) Oil or gas that is lost because of line failures, equipment malfunctions, blowouts, fires, or other similar circumstances, except where the BLM determines that the loss was avoidable pursuant to § 3179.4(a)(2);
- (2) Oil or gas that is lost from the following operations or sources, except where the BLM determines that the loss was avoidable pursuant to § 3179.4(a)(2):
  - (i) Well drilling;
  - (ii) Well completion and related operations;
  - (iii) Initial production tests, subject to the limitations in § 3179.101;
  - (iv) Subsequent well tests, subject to the limitations in § 3179.102;
  - (v) Exploratory coalbed methane well dewatering;
  - (vi) Emergencies, subject to the limitations in § 3179.103;
  - (vii) Normal gas vapor losses from a storage tank or other low pressure production vessel, unless the BLM determines that recovery of the gas vapors is warranted;

(viii) Well venting in the course of downhole well maintenance and/or liquids unloading performed in compliance with § 3179.104; or

(ix) Facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance or repairs; or

(3) Produced gas that is flared or vented with BLM authorization or approval.

**§ 3179.5 When lost production is subject to royalty.**

(a) Royalty is due on all avoidably lost oil or gas.

(b) Royalty is not due on any unavoidably lost oil or gas.

**§ 3179.6 Venting limitations.**

(a) Gas well gas may not be flared or vented, except where it is unavoidably lost pursuant to § 3179.4(b).

(b) The operator must flare, rather than vent, any gas that is not captured, except:

(1) When flaring the gas is technically infeasible, such as when the gas is not readily combustible or the volumes are too small to flare;

(2) Under emergency conditions, as defined in § 3179.105, when the loss of gas is uncontrollable or venting is necessary for safety;

(3) When the gas is vented through normal operation of a natural gas-activated pneumatic controller or pump;

(4) When gas vapor is vented from a storage tank or other low pressure production vessel, unless the BLM determines that recovery of the gas vapors is warranted;

- (5) When the gas is vented during downhole well maintenance or liquids unloading activities;
  - (6) When the gas venting is necessary to allow non-routine facility and pipeline maintenance to be performed, such as when an operator must, upon occasion, blow-down and depressurize equipment to perform maintenance or repairs; or
  - (7) When a release of gas is unavoidable under § 3179.4 and flaring is prohibited by Federal, State, local or tribal law, regulation, or enforceable permit term.
- (c) For purposes of this subpart, all flares or combustion devices must be equipped with an automatic ignition system.

#### **AUTHORIZED FLARING AND VENTING OF GAS**

##### **§ 3179.101 Initial production testing.**

- (a) Gas flared during the initial production test of each completed interval in a well is royalty free until one of the following occurs:
- (1) The operator determines that it has obtained adequate reservoir information;
  - (2) 30 days have passed since the beginning of the production test, unless the BLM approves a longer test period; or
  - (3) The operator has flared 50 million cubic feet (MMcf) of gas.
- (b) The operator may request a longer test period and must submit its request using a Sundry Notice.

##### **§ 3179.102 Subsequent well tests.**

- (a) Gas flared during well tests subsequent to the initial production test is royalty free for a period not to exceed 24 hours, unless the BLM approves or requires a longer test period.



(b) The operator may request a longer test period and must submit its request using a Sundry Notice.

**§ 3179.103 Emergencies.**

(a) Gas flared or vented during an emergency is royalty free for a period not to exceed 24 hours, unless the BLM determines that emergency conditions exist necessitating venting or flaring for a longer period.

(b) For purposes of this subpart, an “emergency” is a temporary, infrequent and unavoidable situation in which the loss of gas or oil is uncontrollable or necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment, and is not due to operator negligence.

(c) The following do not constitute emergencies for the purpose of royalty assessment:

(1) The operator’s failure to install appropriate equipment of a sufficient capacity to accommodate the production conditions;

(2) Failure to limit production when the production rate exceeds the capacity of the related equipment, pipeline, or gas plant, or exceeds sales contract volumes of oil or gas;

(3) Scheduled maintenance;

(4) A situation caused by operator negligence, including recurring equipment failures; or

(5) A situation on a lease, unit, or communitized area that has already experienced 3 or more emergencies within the past 30 days, unless the BLM determines that the occurrence of more than 3 emergencies within the 30 day period could not have been anticipated and was beyond the operator's control.

(d) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframe specified in paragraph (a) of this section.

**§ 3179.104 Downhole well maintenance and liquids unloading.**

(a) Gas vented or flared during downhole well maintenance and well purging is royalty free for a period not to exceed 24 hours per event, provided that the requirements of paragraphs (b) through (d) of this section are met. Gas vented or flared from a plunger lift system and/or an automated well control system is royalty free, provided the requirements of paragraphs (b) and (c) of this section are met.

(b) The operator must minimize the loss of gas associated with downhole well maintenance and liquids unloading, consistent with safe operations.

(c) For wells equipped with a plunger lift system and/or an automated well control system, minimizing gas loss under paragraph (b) of this section includes optimizing the operation of the system to minimize gas losses to the extent possible consistent with removing liquids that would inhibit proper function of the well.

(d) For any liquids unloading by manual well purging, the operator must ensure that the person conducting the well purging remains present on-site throughout the event to end the event as soon as practical, thereby minimizing to the maximum extent practicable any venting to the atmosphere;

(e) For purposes of this section, “well purging” means blowing accumulated liquids out of a wellbore by reservoir gas pressure, whether manually or by an automatic control system that relies on real-time pressure or flow, timers, or other well data, where the gas

is vented to the atmosphere, and it does not apply to wells equipped with a plunger lift system.

#### **OTHER VENTING OR FLARING**

##### **§ 3179.201 Oil-well gas.**

(a) Except as provided in §§ 3179.101, 3179.102, 3179.103, and 3179.104 of this subpart, vented or flared oil-well gas is royalty free if it is vented or flared pursuant to applicable rules, regulations, or orders of the appropriate State regulatory agency or tribe.

Applicable State or tribal rules, regulations, or orders are appropriate if they place limitations on the venting and flaring of oil-well gas, including through general or qualified prohibitions, volume or time limitations, capture percentage requirements, or trading mechanisms.

(b) With respect to production from Indian leases, vented or flared oil-well gas will be treated as royalty free pursuant to paragraph (a) of this section only to the extent it is consistent with the BLM's trust responsibility.

(c) Except as otherwise provided in this subpart, oil-well gas may not be vented or flared royalty free unless the BLM approves it in writing. The BLM may approve an application for royalty-free venting or flaring of oil-well gas if it determines that it is justified by the operator's submission of either:

- (1) An evaluation report supported by engineering, geologic, and economic data that demonstrates to the BLM's satisfaction that the expenditures necessary to market or beneficially use such gas are not economically justified. If flaring exceeds 10 MMcf per well during any month, the BLM may determine that the gas is avoidably lost and therefore subject to royalty; or

(2) An action plan showing how the operator will minimize the venting or flaring of the oil-well gas within 1 year. An operator may apply for approval of an extension of the 1-year time limit, if justified. If the operator fails to implement the action plan, the gas vented or flared during the time covered by the action plan will be subject to royalty. If flaring exceeds 10 MMcf per well during any month, the BLM may determine that the gas is avoidably lost and therefore subject to royalty.

(d) The evaluation report in paragraph (c)(1) of this section:

(1) Must include all appropriate engineering, geologic, and economic data to support the applicant's determination that marketing or using the gas is not economically viable. The information provided must include the applicant's estimates of the volumes of oil and gas that would be produced to the economic limit if the application to vent or flare were approved and the volumes of the oil and gas that would be produced if the applicant was required to market or use the gas. When evaluating the feasibility of marketing or using of the gas, the BLM will determine whether the operator can economically operate the lease if it is required to market or use the gas, considering the total leasehold production, including both oil and gas, as well as the economics of a field-wide plan; and

(2) The BLM may require the operator to provide an updated evaluation report as additional development occurs or economic conditions improve, but no more than once a year.

(e) An approval to flare royalty free, which is in effect as of the effective date of this rule, will continue in effect unless:

(1) The approval is no longer necessary because the venting or flaring is authorized by the applicable rules, regulations, or orders of an appropriate State regulatory agency or tribe, as provided in paragraph (a) of this section; or

(2) The BLM requires an updated evaluation report under paragraph (d)(2) of this section and determines to amend or revoke its approval.

## **MEASUREMENT AND REPORTING RESPONSIBILITIES**

### **§ 3179.301 Measuring and reporting volumes of gas vented and flared.**

(a) The operator must estimate or measure all volumes of lost oil and gas, whether avoidably or unavoidably lost, from wells, facilities and equipment on a lease, unit PA, or communitized area and report those volumes under applicable ONRR reporting requirements.

(b) The operator may:

(1) Estimate or measure vented or flared gas in accordance with applicable rules, regulations, or orders of the appropriate State or tribal regulatory agency;

(2) Estimate the volume of the vented or flared gas based on the results of a regularly performed GOR test and measured values for the volumes of oil production and gas sales, to allow BLM to independently verify the volume, rate, and heating value of the flared gas; or

(3) Measure the volume of the flared gas.

(c) The BLM may require the installation of additional measurement equipment whenever it is determined that the existing methods are inadequate to meet the purposes of this subpart.

(d) The operator may combine gas from multiple leases, unit PAs, or communitized areas for the purpose of flaring or venting at a common point, but must use a method approved by the BLM to allocate the quantities of the vented or flared gas to each lease, unit PA, or communitized area.

#### **ADDITIONAL DEFERENCE TO TRIBAL REGULATIONS**

##### **§ 3179.401 Deference to tribal regulations.**

(a) A tribe that has rules, regulations, or orders that are applicable to any of the matters addressed in subpart 3179 may seek approval from the BLM to have such rules, regulations, or orders apply in place of any or all of the provisions of subpart 3179 with respect to lands and minerals over which that tribe has jurisdiction.

(b) The BLM will approve a tribe's request under paragraph (a) to the extent that it is consistent with the BLM's trust responsibility.

(c) The deference to tribal rules, regulations, or orders provided for in this section is supplemental to, and does not limit, the deference to tribal rules, regulations, or orders provided for in § 3179.201.