

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA**

SIERRA CLUB; CENTER FOR
BIOLOGICAL DIVERSITY; EARTHWORKS;
ENVIRONMENTAL DEFENSE FUND;
NATURAL RESOURCES DEFENSE
COUNCIL; THE WILDERNESS SOCIETY;
NATIONAL WILDLIFE FEDERATION;
CITIZENS FOR A HEALTHY COMMUNITY;
DINÉ CITIZENS AGAINST RUINING OUR
ENVIRONMENT; ENVIRONMENTAL LAW
AND POLICY CENTER; FORT BERTHOLD
PROTECTOR OF WATER AND EARTH
RIGHTS; MONTANA ENVIRONMENTAL
INFORMATION CENTER; SAN JUAN
CITIZENS ALLIANCE; WESTERN
ORGANIZATION OF RESOURCE
COUNCILS; WILDERNESS WORKSHOP;
WILDEARTH GUARDIANS; and WYOMING
OUTDOOR COUNCIL,

Plaintiffs,

v.

RYAN ZINKE, in his official capacity as
Secretary of the Interior; BUREAU OF LAND
MANAGEMENT; and UNITED STATES
DEPARTMENT OF THE INTERIOR,

Defendants.

APPENDIX TO MOTION FOR PRELIMINARY INJUNCTION

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Attachment 1

BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, **Final Rule**, 81 Fed. Reg. 83,008 (Nov. 18, 2016)

DEPARTMENT OF THE INTERIOR**Bureau of Land Management****43 CFR Parts 3100, 3160 and 3170****[17X.LLWO310000.L13100000.PP0000]****RIN 1004-AE14****Waste Prevention, Production Subject to Royalties, and Resource Conservation****AGENCY:** Bureau of Land Management, Interior.**ACTION:** Final rule.

SUMMARY: The Bureau of Land Management (BLM) is promulgating new regulations to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian (other than Osage Tribe) leases. The regulations also clarify when produced gas lost through venting, flaring, or leaks is subject to royalties, and when oil and gas production may be used royalty-free on-site. These regulations replace the existing provisions related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A), which are over 3 decades old.

DATES: The final rule is effective on January 17, 2017.

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Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339 to contact these individuals during normal business hours. FRS is available 24 hours a day, 7 days a week to leave a message or question with these individuals. You will receive a reply during normal business hours.

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II. Executive Summary

A. Background

This final regulation aims to reduce the waste of natural gas from mineral leases administered by the BLM. This gas is lost during oil and gas production activities through venting or flaring of the gas, and through equipment leaks. While oil and gas production technology has advanced dramatically in recent years, the BLM's rules to minimize waste of gas have not been updated in over 30 years. The Mineral Leasing Act of 1920 (MLA) requires the BLM to ensure that lessees "use all reasonable precautions to prevent waste of oil or gas developed in the land,"³⁰ U.S.C. 225, and that leases include "a provision that such rules . . . for the prevention of undue waste as may be prescribed by [the] Secretary shall be observed," *id.* at § 187. The BLM believes there are economical, cost-effective, and reasonable measures that operators can take to minimize gas waste. These measures will enhance our nation's natural gas supplies, boost royalty receipts for American taxpayers, tribes, and States, reduce environmental damage from venting, flaring, and leaks of gas, and ensure the safe and responsible development of oil and gas resources.

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. Domestic production from 96,000 Federal onshore oil and gas wells accounts for 11 percent of the Nation's natural gas supply and 5 percent of its oil. In Fiscal Year (FY) 2015, operators produced 183.4 million barrels (bbl) of oil, 2.2 trillion cubic feet (Tcf) of natural gas, and 3.3 billion gallons of natural gas liquids (NGLs) from onshore Federal and Indian oil and gas leases. The production value of this oil and gas exceeded \$20.9 billion and generated over \$2.3 billion in royalties, which were shared with tribes, Indian

allottee owners, and States.¹ Over the past decade, the United States has experienced a dramatic increase in oil and natural gas production due to technological advances, such as hydraulic fracturing combined with directional drilling. Yet the American public has not benefited from the full potential of this increased production, due to venting, flaring, and leaks of significant quantities of gas during the production process. Federal and Indian onshore lessees and operators reported to the Office of Natural Resources Revenue (ONRR) that they vented or flared 462 billion cubic feet (Bcf) of natural gas between 2009 and 2015—enough gas to serve about 6.2 million households for a year, assuming 2009 usage levels.²

Venting, flaring, and leaks waste a valuable resource that could be put to productive use, and deprive American taxpayers, tribes, and States of royalty revenues. In addition, the wasted gas may harm local communities and surrounding areas through visual and noise impacts from flaring, and contribute to regional and global air pollution problems of smog, particulate matter, and toxics (such as benzene, a carcinogen). Finally, vented or leaked gas contributes to climate change, because the primary constituent of natural gas is methane, an especially powerful greenhouse gas (GHG), with climate impacts roughly 25 times those of carbon dioxide (CO₂), if measured over a 100-year period, or 86 times those of CO₂, if measured over a 20-year period.³ Thus, measures to conserve gas and avoid waste may significantly benefit local communities, public health, and the environment.

Congress has directed the BLM to oversee Federal and Indian oil and gas activities under multiple laws, including the MLA, the Mineral Leasing Act for Acquired Lands of 1947 (MLAAL), the Federal Oil and Gas

Royalty Management Act (FOGRMA), the Federal Land Policy and Management Act of 1976 (FLPMA), the Indian Mineral Leasing Act of 1938 (IMLA), the Indian Mineral Development Act of 1982 (IMDA), and the Act of March 3, 1909.⁴ In particular, the MLA requires the BLM to ensure that lessees "use all reasonable precautions to prevent waste of oil or gas developed in the land."⁵ Leases issued by BLM must ensure that operations are conducted with "reasonable diligence, skill, and care" and that lessees comply with rules "for the prevention of undue waste."⁶

Advancing those mandates, this rule replaces the BLM's decades-old NTL-4A requirements related to venting and flaring, and to royalty-free use of oil and gas production; amends the BLM's oil and gas regulations at 43 CFR part 3160 to include requirements for a waste minimization plan; and adds new subparts 3178 and 3179 to 43 CFR part 3170 that address royalty-free use of lease production (subpart 3178) and waste prevention through reduction of venting, flaring and leaks (subpart 3179). This rule will apply to all Federal and Indian (other than Osage Tribe) onshore oil and gas leases as well as leases and business agreements entered into by tribes (including IMDA agreements), as consistent with those agreements and with principles of Federal Indian law.⁷

This rule implements recommendations from several oversight reviews, including reviews by the Office of the Inspector General of the Department of the Interior (OIG) and the Government Accountability Office (GAO). These reviews raised concerns about waste of gas from Federal and Indian production, found that the BLM's existing requirements regarding venting and flaring are insufficient and outdated, and expressed concerns about the "lack of price flexibility in royalty

¹ Office of Natural Resources Revenue, Statistical Information, <http://statistics.onrr.gov/ReportTool.aspx> using Sales Year—FY 2015—Federal Onshore—All States Sales Value and Revenue for Oil, Natural Gas Liquids (NGL), and Gas products as of September 7, 2016.

² BLM analysis of ONRR Oil and Gas Operations Report Part B (OGOR-B) data provided for 2009–2015; see Energy Information Administration (EIA), *Trends in U.S. Residential Natural Gas Consumption*, http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtrendsresidcon/ngtrendsresidcon.pdf (reporting that in 2009, U.S. residential consumption was approximately 74 Mcf per household with natural gas service).

³ See Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis*, Chapter 8, *Anthropogenic and Natural Radiative Forcing*, at 714 (Table 8.7), available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.

⁴ Mineral Leasing Act, 30 U.S.C. 188–287; Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351–360; Federal Oil and Gas Royalty Management Act, 30 U.S.C. 1701–1758; Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701–1785; Indian Mineral Leasing Act of 1938, 25 U.S.C. 396a–g; Indian Mineral Development Act of 1982, 25 U.S.C. 2101–2108; Act of March 3, 1909, 25 U.S.C. 396.

⁵ 30 U.S.C. 225.

⁶ 30 U.S.C. 187.

⁷ Key statutes underpinning this proposed regulation contain exceptions for the Osage Tribe. Specifically, the Osage Tribe is excepted from the application of both the Indian Mineral Leasing Act and the Federal Oil and Gas Royalty Management Act, 25 U.S.C. 396f; 43 U.S.C. 1702(3), 1702(4). The leasing of Osage Reservation lands for oil and gas mining is subject to special Bureau of Indian Affairs regulations contained in 25 CFR part 226.

rates”⁸ and about royalty-free use of gas. The GAO also noted that “around 40 percent of natural gas estimated to be vented and flared on onshore Federal leases could be economically captured with currently available control technologies.”⁹ The OIG and GAO reports recommended that the BLM update its regulations to require operators to augment their waste prevention efforts, afford the BLM greater flexibility in rate setting, and clarify BLM policies regarding royalty-free, on-site use of oil and gas.

The BLM has engaged in substantial stakeholder outreach in the course of developing this proposal. In 2014, the BLM conducted a series of forums to consult with tribal governments and to solicit stakeholder views to inform the development of this proposed rule, with public meetings (some of which were livestreamed) in Colorado, New Mexico, North Dakota, and Washington, DC.¹⁰ The BLM continued to consult with stakeholders throughout the rule development process, including holding numerous meetings and calls with State and tribal representatives, individual companies, trade associations, and non-governmental organizations (NGOs). The BLM conducted additional outreach with States and tribes where there is extensive oil and gas production from BLM-administered leases. We issued a proposed rule on January 21, 2016, which was published on February 8, 2016, and accepted public comments through April 22, 2016, after extending the comment period. In addition, we held public meetings during the comment period in Farmington, New Mexico; Oklahoma City, Oklahoma; Denver, Colorado; and Dickinson, North Dakota. We also held separate meetings with tribes at each of these locations, and held further government-to-government consultation meetings at the request of several tribes. The BLM received approximately 330,000 public comments on the proposed rule, including approximately 1,000 unique comments.

The BLM is not the only regulator with the responsibility to oversee aspects of onshore oil and gas production, and throughout this

rulemaking the BLM has focused on potential interactions of this rule with other Federal, State, or tribal regulatory requirements. For example, the U.S. Environmental Protection Agency (EPA) issued rules in 2012 and early 2016 to control emissions of methane and volatile organic compounds (VOCs) from new, modified and reconstructed oil and gas wells and production equipment, and many States and tribes regulate aspects of the oil and gas production process to address safety, waste, production accountability, and/or air quality concerns. Regulatory agencies often have overlapping authority and may adopt very similar measures to realize those complementary goals, such as improving air quality and reducing waste. For example, measures in this rule that aim to avoid the waste of methane gas through venting or leaks will also reduce methane pollution.

The BLM recognizes that overlapping regulatory regimes can create difficulties for operators, and has therefore very carefully considered and minimized potential overlaps with other Federal, State, or tribal regulations. The BLM aligned the requirements of this new rule with similar requirements adopted by the EPA and States, where practicable, and exempted equipment complying with relevant EPA requirements from overlapping requirements of this rule. In addition, this rule includes a provision that authorizes the BLM to grant variances from particular BLM requirements if a State or tribe demonstrates that a State, local, or tribal regulation imposes equally effective requirements.

It is critical to note, however, that neither EPA nor State and tribal requirements obviate the need for this rule. First, the BLM has an independent legal responsibility and a proprietary interest as a land and resource manager to oversee and minimize waste from oil and gas production activities conducted pursuant to Federal and Indian (other than Osage Tribe) leases, as well as to ensure that development activities on Federal and Indian leases are performed in a safe, responsible, and environmentally protective matter. The BLM’s existing venting and flaring requirements are over 30 years old and predate significant technological developments. Updating and clarifying those requirements will make them more effective, more transparent, and easier to understand and administer; and will reduce operators’ compliance burdens in some respects. The BLM must carry out its responsibility, delegated by Congress, to ensure that the public’s resources are not wasted

and are developed in a manner that provides for long-term productivity and sustainability.

Second, as a practical matter, neither EPA nor State and tribal regulations fully address the issue of waste of gas from BLM-administered leases. The EPA regulations are directed at air pollution reduction, not waste prevention; they cover only new, modified and reconstructed sources; and they do not address wasteful routine flaring of associated gas from oil wells, among other things. Similarly, no State or tribe has established a comprehensive set of requirements addressing all three avenues for waste—venting, flaring, and leaks—and only a few States have significant requirements in even one of these areas. The BLM therefore believes this rule is a necessary step in fulfilling its statutory mandate to minimize waste of the public’s and tribes’ natural gas resources.

B. Summary of Rule

This rule requires operators to take various actions to reduce waste of gas, establishes clear criteria for when flared gas will qualify as waste and therefore be subject to royalties, and clarifies which on-site uses of gas are exempt from royalties. The rule focuses on several key points or processes in the oil and gas production process where waste-prevention actions are most effective and least costly: Venting and flaring of associated gas from development oil wells (routine flaring occurs at oil wells that dispose of gas as a waste product), gas leaks from equipment at the well site or elsewhere on the lease, operation of high-bleed pneumatic controllers and certain pneumatic pumps, gas emissions from storage vessels, downhole well maintenance and liquids unloading, and well drilling and completions. The following discussion summarizes the rule’s requirements applicable to each of these aspects of the production process, and also outlines the rule’s provisions with respect to royalties, and the interaction between the rule and related EPA and State or tribal regulations.

1. Venting and Flaring

In 2014, operators vented about 30 Bcf and flared at least 81 Bcf of natural gas from BLM-administered leases, totaling 4.1 percent of the total production from those leases in that year, and sufficient gas to supply nearly 1.5 million households with gas for a year.¹¹ In

⁸ GAO, Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment, GAO-08-691, September 2008, 6.

⁹ GAO, Federal Oil and Gas Leases: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases, GAO-11-34, (Oct. 2010), 2.

¹⁰ Further information can be found at the BLM oil and gas program’s outreach-events page: http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.html.

¹¹ RIA at 16; see Energy Information Administration (EIA), *Trends in U.S. Residential Natural Gas Consumption*, http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtrendsresidcon/ngtrendsresidcon.pdf (reporting

2015 operators flared at least 85 Bcf, a 114 percent increase from 2009 levels.¹² Roughly 83 Bcf of this flaring came from oil wells.¹³ Analysis of data supplied by the ONRR suggests that most of the flaring was routine flaring of associated gas from development oil wells (as opposed to flaring during exploration, well testing, and emergencies). Over 88 percent of this flaring occurred in North Dakota, South Dakota, and New Mexico.

This rule prohibits venting of natural gas, except under certain specified conditions, such as in an emergency or when flaring is technically infeasible.¹⁴ With respect to flaring, the rule requires operators to reduce wasteful flaring of gas by capturing for sale or using on the lease a percentage of their gas production. The required capture percentage increases over time, and is also adjusted to provide for a base level of “allowable” flaring that ramps down over time. This capture requirement builds on the proposed rule’s flaring limits, and modifies that approach in response to comments, to make compliance more feasible and less costly, while working towards phasing out routine flaring of associated gas from oil wells by increasing capture. Specifically, beginning one year from the effective date of the final rule, operators must capture 85 percent of their adjusted total volume of gas produced each month. This percentage increases to 90 percent in 2020, 95 percent in 2023, and 98 percent in 2026. An operator’s adjusted total volume of gas produced is calculated based on the quantity of high pressure gas produced from the operator’s development oil wells that are in production, adjusted to exempt a specified volume of gas per well, which declines over time. Beginning one year from the effective date of the final rule, operators are allowed to exempt 5,400 Mcf gas per well per month, and this quantity declines to 3,600 beginning in 2019, 1,800 in 2020, 1,500 in 2021, 1,200 in 2022, 900 in 2024, and 750 from 2025 on.

The final rule gives operators the option to meet their capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State. Giving operators the ability to average their rates of gas capture over

geographic areas beyond individual leases enhances flexibility and makes the targets less costly to meet. Similarly, the more extended phasing in of the capture targets eases costs and compliance burdens, while allowing appropriate planning and investment by industry to meet more stringent targets in out years. At the same time, the BLM recognizes that it has a statutory responsibility to ensure that operators minimize waste of public resources. Accordingly, the BLM has structured the capture targets to ensure that operators will achieve overall reductions in wasteful flaring that are comparable to, and eventually slightly greater than, what the BLM estimated would have been achieved under the proposed rule.

The BLM estimates that, once fully implemented, the capture targets will reduce flaring by up to 49 percent relative to 2015 levels. Like the proposed rule, the final rule also retains the BLM’s discretion to craft alternative requirements for certain operators that cannot meet the baseline flaring reduction obligations. Specifically, the final rule allows the BLM to adjust the capture target for an operator on an existing lease that demonstrates to the BLM that meeting the target would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In assessing the operator’s showing, the BLM will consider the costs of gas capture, and the costs and revenues of all oil and gas production on the lease.

As explained in the proposed rule, the initial flaring limitations were intended to motivate operators to increase their capture of gas associated with oil development, since a reduction in flaring is achieved most effectively by an increase in capture. Consequently, flaring limitations and capture requirements are two sides of the same coin. Increasing capture is the BLM’s primary goal in imposing these waste prevention requirements, and we concluded that it would be a more direct means of achieving that goal to require capture rather than merely encourage it through the imposition of flaring limits. In modifying the rule in this way, we have determined that both approaches are expected to achieve comparable results, in terms of both increasing capture and reducing wasteful flaring.

In addition, this rule finalizes the proposal to require operators to submit a Waste Minimization Plan when they apply for a permit to drill a new development oil well. Preparation of a Waste Minimization Plan ensures that

the operator carefully considers and plans for how it will capture the gas that will be produced, before the operator drills a well. While the provisions of a plan will not be enforceable against the operator, plan submission is mandatory, and the plan must include specific elements listed in the regulations. As in the proposed rule, failure to submit a complete and adequate plan could be grounds for denial of an application for permit to drill (APD).

2. Leaks

Based on our estimates, leaks are the second largest source of vented gas from Federal and Indian leases, accounting for about 4 Bcf of the natural gas lost in 2014.¹⁵ Our analysis indicates that Leak Detection and Repair (LDAR) programs are a cost-effective means of reducing waste in oil and gas production, and multiple studies have found that once leaks are detected, the vast majority can be repaired with a positive return to the operator.¹⁶

Like the proposed rule, the final rule requires operators to use an instrument-based approach to leak detection. The final rule allows operators to use optical gas imaging equipment, portable analyzers deployed according to the protocol prescribed in EPA’s Method 21,¹⁷ or an alternative leak detection device approved by the BLM. In response to comments on the proposed rule, the final rule was revised to be consistent with the EPA’s final requirements under 40 CFR part 60 subpart OOOOa, requiring operators to conduct semi-annual inspections at well sites and quarterly inspections at compressor stations. Operators may also request BLM approval of an alternative instrument-based leak detection program; the BLM may approve such a program if it finds that the program would reduce leaked volumes by at least as much as the BLM program. Operators must repair a leak within 30 days of discovery, absent good cause, and verify that the leak is fixed. Operators must also keep records documenting the dates and results of leak inspections, repairs, and follow-up inspections.

3. Reducing Venting From Equipment and Practices

Like the proposed rule, the final rule includes requirements to update old, inefficient equipment and to follow best practices to minimize waste through venting. These provisions address gas losses from pneumatic controllers and pumps, storage vessels, liquids

that in 2009, U.S. residential consumption was approximately 74 Mcf per household with natural gas service).

¹² BLM analysis of ONRR OGOR-B data provided for 2009–2015 and EPA GHG Inventory data for 2014.

¹³ RIA at 49.

¹⁴ See 43 CFR 3179.6.

¹⁵ RIA at 3.

¹⁶ RIA at 27.

¹⁷ See 40 CFR part 60, appendix A–7.

unloading, and well drilling and completions.

a. Pneumatic Controllers and Pumps

We estimate that on BLM-administered leases in 2014, operators lost about 14.9 Bcf of natural gas from pneumatic controllers and about 2.3 Bcf from pneumatic pumps.¹⁸ A recent study by the consulting firm ICF International (ICF) identified replacement of high-bleed pneumatic controllers (those with bleed rates higher than 6 standard cubic feet (scf)/hour) with low-bleed pneumatic controllers (those with bleed rates of 6 scf/hour or less) as one of the most inexpensive options for reducing methane losses, estimating that replacing these devices would actually save industry \$2.65 per Mcf of avoided methane emissions.¹⁹ Like the proposed rule, the final rule requires operators to replace high-bleed pneumatic controllers with low-bleed or no-bleed pneumatic controllers within one year of the effective date of the final rule. This requirement tracks existing requirements in Colorado and Wyoming (in part of the State), and it applies only to pneumatic controllers that are not covered by EPA regulations.

For pneumatic pumps, the final rule requires the operator to replace pneumatic diaphragm pumps that operate 90 or more days per year with zero-emissions pumps, or route the pump exhaust gas to processing equipment. If use of a pneumatic pump is required based on the function the pump must serve, and the operator determines that routing the exhaust gas to processing equipment would be technically infeasible or unduly costly, the operator must route the pneumatic diaphragm pump to a combustor or flare, if one is located on the site.

The BLM modified the requirements in the proposed rule for pneumatic pumps in response to comments and to better align with the EPA's final subpart OOOOa requirements. For example, the BLM eliminated the proposed requirements for chemical injection pumps and diaphragm injection pumps that operate relatively infrequently, as we believe that these pumps vent relatively small quantities of gas. Like the proposed rule, the final rule does

not apply to pneumatic pumps that are subject to EPA regulations.

The final rule provides that an operator can receive an exemption from the requirements for pneumatic controllers or pumps if the operator demonstrates and the BLM concurs that replacing the pneumatic pump(s) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In making this determination, the BLM will consider the costs of capture, and the costs and revenues of all oil and gas production on the lease.

b. Storage Vessels

We estimate that 2.94 Bcf of natural gas was lost in 2014 from storage tank venting on Federal and Indian lands.²⁰ Of that volume, we estimate that 1.54 Bcf was lost from storage vessels used in natural gas production and 1.4 Bcf of gas was lost from storage vessels used in oil production.²¹ Tank vapors can be controlled by installing a vapor recovery unit (VRU) or by routing them to a flare or combustor. New, modified and reconstructed vessels used in oil and gas production are already subject to EPA emissions limits, which require that individual storage vessels with VOC emissions equal to or greater than 6 tons per year (tpy) achieve at least a 95 percent reduction in VOC emissions from baseline levels. Colorado and part of Wyoming have similar, somewhat more stringent requirements for storage vessels.²²

Like the proposed rule, this final rule includes requirements to reduce gas losses from existing storage vessels, which are not covered by the EPA standards. Using the same applicability threshold as EPA and Colorado (6 tpy of VOCs, which the BLM is using as a proxy for natural gas losses since the VOCs in this context are coming from the natural gas from storage vessels), the rule requires operators to route storage vessel vapor gas to a sales line, if the storage vessel has the potential to emit at least 6 tpy of VOCs. If an operator determines that compliance with this requirement is technically infeasible or unduly costly, the operator may instead route the tank vapor gas to a combustor or flare. Like the proposed rule, this final rule allows operators to request an exemption from these requirements if

the operator demonstrates, and the BLM concurs, that complying with the requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In making this determination, the BLM will consider the costs of compliance, and the costs and revenues of all oil and gas production on the lease.

c. Well Maintenance and Liquids Unloading

We estimate that 3.26 Bcf of natural gas was lost in 2014 during liquids unloading operations on Federal and Indian lands.²³ There are a wide variety of methods for liquids unloading, and technological developments, such as automated well controls and plunger lift systems, now allow liquids to be unloaded with minimal loss of gas. The BLM expects prudent operators to use available technologies and practices to minimize gas losses, and we believe that the failure to use such technologies and practices during liquids unloading constitutes waste.

The final rule does not adopt the provision from the proposed rule that would have prohibited manual well purging from new wells, due to concerns about the technical feasibility of such a ban. Instead, the final rule requires an operator to: (1) Minimize gas vented to unload liquids, consistent with safe operations; (2) optimize the operation of the plunger lift or automated well control system, at wells equipped with such a system, to minimize gas losses from the system to the extent possible; (3) consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly, prior to manually purging a well for the first time; and (4) comply with specified procedures and document venting events when unloading liquids by manual well purging.

d. Reduction of Waste From Drilling, Completion, and Related Operations

We estimate that in 2014, 1.12 Bcf of natural gas was lost during drilling, completion, and refracturing (sometimes referred to by the broader term "workover") operations on BLM-administered leases.²⁴ The EPA requires new hydraulically fractured and refractured oil or gas wells to capture or flare gas that otherwise would be released during drilling and completion operations. The BLM final rule also includes provisions to minimize the waste of gas during these operations by

¹⁸ RIA at 4.

¹⁹ ICF International, Economic Analysis of Methane Emission Reduction Opportunities in the U.S. in the Onshore Oil and Natural Gas Industries, 4–4 (Mar. 2014), available at https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf (ICF 2014 Study) (base case assumed \$4/Mcf price for recovered gas and a 10 percent discount rate/cost of capital).

²⁰ RIA at 17.

²¹ RIA at 17.

²² Colorado Air Quality Control Commission Regulations, Regulation 7, 5 CCR 1001–9, Sections XII.D–F; XVII.C; Wyoming, Nonattainment Area Regulations Ch. 8, Section 6(c) (June 2015), available at <http://sos.wy.state.wy.us/Rules/RULES/9868.pdf>.

²³ RIA at 3.

²⁴ RIA at 3.

requiring operators to capture, use, flare, or inject the gas. While we do not expect that these provisions will obligate operators to take any additional actions beyond what they must do to comply with the EPA requirements, we believe it is appropriate for the BLM to adopt its own provisions governing operator conduct, to fulfill its independent statutory obligation to minimize waste of oil and gas resources on BLM-administered leases.

4. Royalty Provisions Governing New Competitive Leases

The final rule revises 43 CFR 3103.3–1, which governs royalty rates applicable to onshore oil and gas leases, to make the rule text parallel to the BLM's statutory authority, which specifies that competitively-issued BLM-administered leases “shall be conditioned upon the payment of a royalty at a rate of *not less than* 12.5 percent in amount or value of the production removed or sold from the lease.” 30 U.S.C. 226(b)(1)(A). The final version of 43 CFR 3103.3–1 thus makes clear that for competitive leases issued after the effective date of this rule, the BLM has the flexibility to set rates at or above 12.5 percent. This change finalizes this provision as it was proposed, and responds to findings and recommendations in audits from the GAO. The final rule does not, however, set a new rate for competitively-issued leases.

Like the proposed rule, the final rule specifies the fixed, statutory rate of 12.5 percent for all noncompetitive leases issued after the effective date of the rule, as required by statute.²⁵ In addition, the final rule makes clear that the royalty rate on all existing leases remains the rate prescribed in the lease or in regulations applicable at the time of lease issuance.

5. Unavoidable Versus Avoidable Losses of Gas

Like the proposed rule, the final rule also updates the pre-existing royalty provisions in NTL–4A to more clearly and specifically define when a loss of gas is considered “unavoidable” and royalty-free, and when it is considered “avoidable” and subject to royalties. A loss of gas is deemed unavoidable when an operator has complied with all applicable requirements and taken prudent and reasonable steps to avoid waste, and the gas is lost from one of the operations or sources specified in this final regulation, subject to certain limitations. The specified operations and sources include emergencies; well

drilling, completions, and tests; normal operations of pneumatic devices and storage vessels; liquids unloading; leaks; equipment or pipeline maintenance requiring depressurization; and residual gas after stripping of natural gas liquids. A loss of gas is also deemed unavoidable when gas is flared from a well that is not connected to a gas pipeline, provided the BLM has not otherwise determined that the loss of gas is avoidable. All other losses of gas, as well as any gas flared in violation of the capture requirement (regardless of whether the well is connected to a pipeline), are deemed avoidable and subject to royalties. By establishing clear-cut categories for unavoidable and avoidable losses, the final rule will dramatically reduce the large number of requests for approval to flare royalty-free that operators have had to file and the BLM has had to process each year.

6. Interaction With EPA and State Regulations

Like the proposed rule, this final rule seeks to minimize regulatory overlap. Thus, if EPA and/or States or tribes have adopted requirements that are at least as effective as and would potentially overlap with the provisions of this rule, the final rule provides a means for operators to comply with the EPA, State, local or tribal requirements in lieu of the BLM requirements. Specifically, in cases in which EPA rules limit venting from equipment or require leak inspections and repairs, those operators that are in compliance with those EPA requirements are deemed, under this rule, to be in compliance with the comparable BLM requirements. With respect to State, local, or tribal rules, the final rule allows a State or tribe to request a variance from a particular BLM regulation. If the variance is granted, the BLM has the authority to enforce the specific provisions of the State, local, or tribal rule for which the variance was granted, in lieu of the comparable provisions of the BLM rule. As clarified in the final rule, the BLM may grant a State or tribal variance request only if the BLM determines that the State, local, or tribal rule would perform at least as well as the BLM provision to which the variance would apply, 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.

7. Other Provisions

Like the proposed rule, the final rule includes provisions that update and clarify pre-existing BLM requirements regarding when operators may use oil or

gas from a lease for production activities without owing royalties on the oil or gas used. In addition, like the proposed rule, the final rule includes provisions specifying when operators must measure the volumes of gas vented or flared, and requiring operators to report to ONRR volumes of gas vented or flared.

8. Summary of Costs and Benefits

Overall, the BLM estimates that the benefits of this rule would outweigh its costs by a significant margin. Under certain assumptions, for example, the rule is expected to produce net benefits ranging from \$46 million to \$199 million per year (annualizing capital costs using a 7 percent discount rate) or from \$50 million to \$204 million per year (annualizing capital costs using a 3 percent discount rate).²⁶

a. Costs

The BLM estimates that this rule will pose costs ranging from \$114–\$279 million per year (using a 7 percent discount rate to annualize capital costs) or \$110–\$275 million per year (using a 3 percent discount rate to annualize capital costs) over the next 10 years.²⁷ These costs include engineering compliance costs and the social cost of minor additions of carbon dioxide to the atmosphere, resulting from the on-site or downstream use of gas that is newly captured as a result of this rule.²⁸ The engineering compliance costs presented do not include potential cost savings from the recovery and sale of natural gas (those savings are shown in the summary of benefits).

In some areas, operators have already undertaken, or plan to undertake, voluntary actions to address gas losses. To the extent that operators are already in compliance with the requirements of this final rule, the above estimates overstate the likely impacts of the rule.

We expect that cost impacts on individual operators would be small, even for businesses with less than 500 employees. In the Regulatory Impact Analysis (RIA), we estimate that average costs for a representative small operator would increase by about \$55,200, which would result in an average reduction in

²⁶ BLM, Economic Impact and Regulatory Threshold Analysis for 43 CFR 3178 (Royalty Free Use of Production) and 43 CFR 3179 (Venting and Flaring Requirements) (2015) (hereinafter RIA) at 6.

²⁷ RIA at 4.

²⁸ Some gas that would have otherwise been vented would now be combusted on-site or presumably downstream to generate electricity. As described in the RIA, the estimated value of these carbon additions would not exceed \$30,000 in any given year.

²⁵ 30 U.S.C. 226(c)(1).

profit margin of 0.15percentage points.²⁹

b. Benefits

We measure the benefits of the rule as the cost savings that the industry would receive from the recovery and sale of natural gas and the environmental benefits of reducing the amount of methane (a potent GHG) and other air pollutants released into the atmosphere. As with the estimated costs, we expect benefits on an annual basis. The BLM estimates that this rule would result in monetized benefits of \$209–\$403 million per year (using model averages of the social cost of methane with a 3 percent discount rate).³⁰ We estimate that the final rule would reduce methane emissions by 175,000–180,000 tpy, roughly a 35% reduction in methane emissions from the 2014 estimates, and which we estimate to be worth \$189–\$247 million per year (this social benefit is included in the monetized benefit above).³¹

Adoption of the final rule will also have numerous ancillary benefits. These include improved quality of life for nearby residents, who note that flares are noisy and unsightly at night; reduced release of VOCs, including benzene and other hazardous air pollutants; and reduced production of nitrogen oxides (NOx) and particulate matter, which can cause respiratory and heart problems.

c. Net Benefits

Overall, the BLM estimates that the benefits of this rule outweigh its costs by a significant margin. The BLM expects net benefits ranging from \$46–\$199 million per year (using a 7 percent discount rate to annualize capital costs) or \$50–\$204 million per year (using a 3 percent discount rate to annualize capital costs). Specifically, assuming a 7 percent discount rate to annualize capital costs, we estimate the following annual net benefits in selected years:

- \$99–\$115 million in 2018;
- \$51–\$93 million in 2022; and
- \$120–\$189 million in 2026.

Assuming a 3 percent discount rate to annualize capital costs, we estimate the annual net benefits would be:

- \$103–\$119 million in 2018;
- \$55–\$97 million in 2022; and
- \$125–\$193 million in 2026.³²

d. Influence on Production

The final rule has a number of requirements that are expected to influence the production of natural gas, NGLs, and crude oil from onshore Federal and Indian oil and gas leases. We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context. We estimate additional natural gas production, ranging from 9–41 Bcf per year (representing 0.03–0.15 percent of the total U.S. production), and a reduction in crude oil production ranging from 0.0–3.2 million bbl per year (representing 0–0.07 percent of the total U.S. production). We also expect 0.8 Bcf of gas to be combusted on-site that would have otherwise been vented. Combined, the rule will reduce venting by about 35 and reduce flaring by 49%, depending on the year.³³

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.

e. Royalties

We estimate that this final rule will produce additional royalties of \$3–\$10 million per year (discounted at 7 percent) or \$3–\$14 million per year (discounted at 3 percent).³⁴

III. Background

The BLM's onshore oil and gas management program is a major contributor to the nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, comprising nearly a third of the nation's mineral estate. Domestic production from over 96,000 Federal onshore oil and gas wells accounts for 11 percent of the Nation's natural gas supply and 5 percent of its oil supply. In FY 2015, the ONRR reported that operators produced 183.4 million bbl of oil, 2.6 Tcf of natural gas, and 3.3 billion gallons of NGLs from onshore Federal and Indian oil and gas leases. The production value of this oil and gas exceeded \$20.9 billion and generated over \$2.3 billion in royalties.³⁵

Over the past decade, the United States has experienced a dramatic increase in oil and natural gas production due to technological

advances, such as hydraulic fracturing combined with directional drilling. This boost in production has brought many benefits in the form of expanded and more secure domestic supplies, lower prices, increased economic activity in certain regions of the country, and greater royalty revenues for Federal, State, and tribal governments.

At the same time, the American public has not benefited from the full potential of this increased production, as the increase in oil production has been accompanied by significant and growing quantities of wasted natural gas. Between 2009 and 2015, operators on BLM-administered leases wasted enough natural gas to serve over 6.2 million homes for 1 year, according to data reported to ONRR.³⁶

A. Impacts of Waste and Loss of Gas

As explained in the proposed rule preamble section IV.B, natural gas is a limited and valuable public resource, which is critical to U.S. energy security and national security. Natural gas also provides significant economic benefits as an energy source for electricity generation and industrial and residential use, and as a feedstock for manufacturing. Royalty payments on natural gas sales provide Federal, State, and tribal governments with over \$3 billion in revenues each year.

Venting, flaring, and leaks of natural gas from production on BLM-administered sites waste this limited natural resource and deprive the American public and tribes of the security and economic benefits that this resource, which belongs to the public and tribes, would otherwise provide. In addition to the economic and security losses, the waste of natural gas also imposes public health and environmental costs, in the form of air pollution, such as smog and regional haze; emissions of hazardous air pollutants, some of which are carcinogenic; and emissions of methane, a powerful contributor to global warming and a primary target for reduction under the President's Climate Action Plan.³⁷ Absent stronger provisions to reduce natural gas waste on Federal lands, the avoidable loss of gas will continue to threaten climate

²⁹ RIA at 129. These estimates rely on 2014 company data, and use a 7 percent discount rate.

³⁰ RIA at 5.

³¹ RIA at 110. We also estimate that the final rule would have an incidental benefit of reducing VOC emissions by 250,000–267,000 tpy (this benefit is not monetized in our calculations).

³² RIA at 111.

³³ RIA at 5.

³⁴ RIA at 143.

³⁵ Office of Natural Resources Revenue, Statistical Information, <http://statistics.onrr.gov/ReportTool.aspx> using Sales Year–FY 2015–Federal Onshore–All States Sales Value and Revenue for Oil, NGL, and Gas products as of September 21, 2016.

³⁶ Office of Natural Resources Revenue, Statistical Information, <http://statistics.onrr.gov/ReportTool.aspx> using Sales Year–FY 2015–Federal Onshore–All States Sales Value and Revenue for Oil, NGL, and Gas products as of September 7, 2016.

³⁷ The President's Climate Action Plan (June 2013) (<https://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf>).

stability and undermine respiratory and cardiovascular health.

B. Purpose of the Rule

1. Overview

The purpose of this rule is to reduce waste of natural gas owned by the American public and tribes, which occurs during the oil and gas production process. While the BLM already regulates venting and flaring of natural gas during oil and gas production on Federal and Indian (other than Osage Tribe) leases, the current requirements are over 30 years old and do not reflect modern technologies, practices, and understanding of the harms caused by venting, flaring, and leaks of gas. Oversight reviews have also suggested that the current requirements are insufficiently clear in their directives, which complicates implementation for BLM staff and creates uncertainty for oil and gas operators. Today's rule updates the existing provisions to direct operators to take reasonable and common-sense measures to prohibit routine venting, minimize the quantities of natural gas routinely flared, reduce natural gas losses through leaks, and deploy up-to-date technology to reduce routine losses from production equipment.

2. Issues Addressed by Rule

a. Large Quantities of Natural Gas Are Wasted on Federal and Indian Leases

As explained in the proposed rule preamble section IV.H.1, while there is some uncertainty regarding the total volume of natural gas lost during production on public and tribal lands, the volume is unacceptably high.

There is no single definitive source for the total volume of natural gas losses from oil and gas production on Federal Lands. BLM efforts to estimate the total volume are informed by the Oil and Gas Operations Report Part B (OGOR-B) filed with the ONRR, the EPA Greenhouse Gas Inventory,³⁸ data from the EPA Greenhouse Gas Reporting Program,³⁹ and numerous studies discussed in the preamble to the proposed rule and provided by commenters. Each data set, however, has limitations. The ONRR data rely on self-reporting, and there is substantial variation in the types of losses that different operators report (and certain

types of losses, such as most leaks, are not reported at all). The EPA data are based on emissions factors that are representative rather than actual.⁴⁰ Even though data in these programs have recently been updated, they are still incomplete, and recent studies suggest actual emissions may be somewhat, or even substantially, higher than the emissions factors suggest.⁴¹ Thus, we believe that the estimates of losses used to support today's rule, while substantial, are conservative. For purposes of this final rule, ONRR provided the BLM with data evidencing 7 years of vented and flared volumes reported on the OGOR-Bs. The data analyzed included gas flared and vented from both oil and gas wells from 2009 through 2015. During this period, operators reported that they vented or flared a total of 462 Bcf of natural gas, or about 2.7 percent of the 16.8 Tcf of natural gas that was produced from BLM-administered leases from 2009 through 2015.⁴² This is enough natural gas to supply over 6.2 million households—or every household in the States of Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming—for 1 year.⁴³

These data are reported by operators on BLM-administered leases, but the production is actually derived from lands with various ownership patterns. Of the vented and flared gas reported to ONRR, 15 percent came from wells extracting only Federal minerals; 8.8 percent came from wells extracting only Indian minerals, and 76.2 percent from wells extracting minerals with mixed ownership (some combination of Federal, Indian, fee (private) and State minerals).

Finally, the BLM notes that available data suggest the problem of natural gas loss on BLM-administered leases is growing. The total amounts of annual reported flaring from Federal and Indian leases increased by over 1000 percent from 2009 through 2015.⁴⁴ During this period, reported volumes of flared oil-well gas increased by 318 percent, while reported volumes of flared gas-well gas

decreased by 86 percent.⁴⁵ The reduction in flaring at gas wells coincides with the adoption of EPA 40 CFR part 60 subpart OOOO (“subpart OOOO”) air pollution requirements, which limit emissions from gas wells hydraulically fractured after August 23, 2011.⁴⁶

Another indicator of the increase of flaring on Federal and Indian lands is the increased number of applications to vent or flare royalty-free that the BLM has received from operators. In 2005, the BLM received just 50 applications to vent or flare gas. In 2011, the BLM received 622 applications, and this doubled again within 3 years to 1,248 applications in 2014. BLM field offices indicate that most of the additional applications were for flaring of associated gas from oil wells in New Mexico, Montana, the Dakotas, and, to a lesser extent, Wyoming.

b. Recent Studies of Venting and Leaks

The proposed rule preamble section IV.H.2 discussed recent efforts to improve our understanding of the quantities of natural gas lost through venting and leaks during the production process, and it highlighted a number of recent studies. These include both “bottom up” studies, which attempt to improve the accuracy and understanding of current estimates by conducting site-specific intensive measurements of losses during the production process, and “top down” studies, which use aircraft and tracers to quantify atmospheric methane levels and attribute them to oil and gas production activities. Several of these recent studies by government, industry, and environmental organizations suggest that emission levels are higher than those estimated using the DOI and EPA data, and in particular, some studies highlighted emissions levels two to three times higher than those based on EPA data. They also provided information on the distribution of gas leaks, which are heavily concentrated at “super-emitter” facilities, and highlighted the challenges in predicting which sites will experience super-emitter conditions. Commenters on the proposed rule pointed to additional studies, some issued after the proposal, that further demonstrate significant gas loss, the potential to reduce such waste through various technologies and practices, and the need for widespread leak detection and repair.

³⁸ EPA, 2016 GHG Inventory Report: 1990–2014. Available at <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>.

⁴¹ Env't Def. Fund, *New EPA Stats Confirm: Oil & Gas Methane Emissions Far Exceed Prior Estimates* (Apr. 15, 2016), <https://www.edf.org/media/new-epa-stats-confirm-oil-gas-methane-emissions-far-exceed-prior-estimates>.

⁴² BLM analysis of ONRR OGOR-B data provided for 2009–2015.

⁴³ Using U.S. Energy Information Administration Natural Gas Consumption by End Use for 2015 found at http://www.eia.gov/dnav/ng/ng_cons_sum_a_EPG0_vrs_mmcf_a.htm.

⁴⁴ BLM analysis of ONRR OGOR-B data provided for 2009–2015.

⁴⁵ BLM query of AFMSS database for the number of Flaring Sundry Notices filed on Federal and Indian lands between 2009 and 2015 on November 4, 2011.

⁴⁶ 79 FR 49490 (Aug. 16, 2012).

Commenters pointed to both bottom up and top down studies that suggest BLM's estimate of natural gas waste is conservative. For example, EPA's 2016 GHG Inventory was released in April 2016 (after BLM issued its proposed rule), and provides estimates of methane loss from the oil and gas sector that are significantly greater than previous estimates.⁴⁷ EPA updated its method for estimating emissions using the latest peer-reviewed science published over the last several years. The data also revealed that emissions had grown by more than 10 percent between 2010 and 2014.

Commenters also referenced a 2013 top-down study led by the National Oceanic and Atmospheric Administration (NOAA) that estimated emissions from an oil and natural gas production field in Uintah County, Utah, using atmospheric measurements in a mass balance approach. The measurements, published in *Geophysical Research Letters*, suggested an emission rate between 6.2 and 11.7 percent of production, allowing for uncertainties in gas composition and gas production.⁴⁸ This is significantly higher than estimates from bottom up inventories, such as the 1.4 percent of production assumed in the 2012 EPA Greenhouse Gas Inventory, and further suggests that natural gas waste is likely underestimated in commonly cited inventories.

In meetings pursuant to E.O. 12866, stakeholders referenced a new study published in *Nature* on October 5, 2016, entitled "Upward revision of global fossil fuel methane emissions based on isotope database."⁴⁹ The research was

conducted by scientists from NOAA and the Cooperative Institute for Research in Environmental Sciences at the University of Colorado, Boulder. The study relied on the largest isotopic methane source signature database ever assembled to estimate total global methane emissions and identify the sources of emissions. It finds that methane emissions from fossil fuel production are 20% to 60% greater than previous estimates, and that they represent 20% to 25% of global methane emissions. The study also highlights that methane emissions by microbial sources (e.g., cows, agriculture, landfills, and wetlands) are responsible for 58% to 67% of total methane emissions each year, and that these sources drove most of the global increase in methane emissions observed between 2007 and 2013. Thus, the study affirms the potential for methane mitigation from fossil fuel production, while indicating that significant further reductions may be available from expanding mitigation efforts to other sectors as well.

There have also been recent and ongoing studies of so-called "super-emitters," which account for a disproportionate quantity of the losses. One of these is a study by Zavala et al., published on July 7, 2015, in *Environmental Science and Technology*. The study used data collected from gas wells in the Barnett Shale region in Texas to identify unusually high emitters—that is, emissions outliers—by focusing on a site's absolute methane emissions divided by production rate. The study referred to this metric as the proportional loss rate, and demonstrated that sites with "high proportional loss rates have excess emissions resulting from abnormal or otherwise avoidable operating conditions such as improperly functioning equipment." The study then concluded that these sources' "reduction potential"—that is, their ability to reduce their losses—is likely greater than that suggested by emission-factor based estimates. The study also found that the losses and abnormal operating conditions that characterize these super-emitters are not specific to a given set or type of sources, but can and do occur at different sources over time.⁵⁰

Isotope Database." *Nature*, 88 Vol. 538, (Oct. 5, 2016) (<http://www.nature.com/nature/journal/v538/n7623/full/nature19797.html>); U.S. Department of Commerce, National Oceanic and Atmospheric Administration. *Study Finds Fossil Fuel Methane Emissions Greater Than Previously Expected* (2016) (<http://www.noaa.gov/media-release/study-finds-fossil-fuel-methane-emissions-greater-than-previously-estimated>).

⁵⁰ Zavala-Araiza, et al., (2015) "Toward a Function Definition of Methane Super-Emitters:

In 2015, a team of scientists at Colorado State University published studies based on direct measurements of emissions from 114 gathering facilities at sixteen different processing plants. The study found that 30 percent of facilities were responsible for approximately 80 percent of the venting. Substantial venting occurred at liquid storage tanks at approximately 20 percent of the facilities where emission rates were four times the average rate. Moreover, the high emitting facilities were generally capable of immediate emission reductions through operating adjustments, such as adjusting the operating pressure of the separation equipment.⁵¹

In 2012, the City of Fort Worth, Texas, sponsored a study of 375 oil and gas production facilities. It found that thief hatches were the largest source, and pneumatic controllers were the most frequent source, of fugitive emissions at well pads and compressor stations. These leaks were often due to operator error or inadequate maintenance.⁵²

Commenters also pointed to the largely random nature of significant leaks. A recent study, authored by Lyon et al., used optical gas imaging to survey 8,220 oil and gas well pads through aerial surveys. The study found only a small correlation between the probability of detection of a leak and site characteristics, such as well count, well age, gas production, oil production, and water production. The stochastic and diverse nature of the sites with leaks, along with the level of waste observed, provides further support for broadly applicable leak detection and repair programs.⁵³

Both the Zavala and Lyon studies observed that leak rates are not strongly correlated with well production rates—that is, higher and lower producing wells can both have significant levels of natural gas waste. Specifically, the Zavala study found small producing sites (10–100 Mcf/day) were twice as likely as those sites an order of magnitude larger (100–1,000 Mcf/day) to be among the 5% of sites with the

Application to Natural Gas Production Sites," *Environ. Sci. Technol.*, 49, at 8167–8174 ("Zavala-Araiza (2015)"), available at <http://pubs.acs.org/doi/abs/10.1021/acs.est.5b00133>.

⁵¹ Mitchell, A.L., et al. (2015) "Measurements of Methane Emissions from Natural Gas Gathering Facilities and Processing Plants," *Environ. Sci. Technol.*, 49 (5), pp 3219–3227, available at <http://pubs.acs.org/doi/abs/10.1021/es5052809>.

⁵² Eastern Research Group and Sage Environmental Consulting, City of Fort Worth Natural Gas Air Quality Study (Final Report) 3–99 (2011), available at http://fortworthtexas.gov/uploadedFiles/Gas_Wells/AirQualityStudy_final.pdf.

⁵³ David R. Lyon et. al, Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites, 1 *Envtl. Sci. Tech.* (2016)

⁴⁷ EPA, *U.S. Greenhouse Gas Inventory Report: 1990–2014* at 3–69, Table 3–46 (2016), available at <https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf> ("2016 GHG Inventory"); EPA, *U.S. Greenhouse Gas Inventory Report: 1990–2013* at 3–70, Table 3–44 (2016), available at <https://www.epa.gov/sites/production/files/2016-03/documents/us-ghg-inventory-2015-main-text.pdf> ("2015 GHG Inventory"). See also *Env'tl Def. Fund, New EPA Stats Confirm: Oil & Gas Methane Emissions Far Exceed Prior Estimates* (Apr. 15, 2016), <https://www.edf.org/media/new-epa-stats-confirm-oilgas-methane-emissions-far-exceed-prior-estimates>; A.R. Brandt et al., *Methane Leaks from North American Natural Gas Systems*, 343 *Science* 733 (2014), available at <http://www.novim.org/images/pdf/ScienceMethane.02.14.14.pdf>; Gina McCarthy, *Remarks on Climate Action at CERA in Houston, Texas* (Feb. 24, 2016), available at <https://yosemite.epa.gov/opa/admpress.nsf/8d49f7ad4bbcf4ef852573590040b7f6/5c432a7068e191e985257f630054fea8!OpenDocument>.

⁴⁸ Anna Karion et al., *Methane Emissions Estimate from Airborne Measurements Over a Western United States Natural Gas Field*, 40, *Geophysical Research Letters* 4393, 4393 (2013) (<http://onlinelibrary.wiley.com/doi/10.1002/grl.50811/full>).

⁴⁹ Schwietzke, Stefan et al. "Upward Revision of Global Fossil Fuel Methane Emissions Based on

highest emissions. The Lyon study found that well pad characteristics, such as oil production levels, could only collectively explain about 14% of the variation in observed emissions. While a statistically significant correlation between size and leaks is observed, both studies note that it is a weak linear correlation and that leak occurrence is largely stochastic. The Lyon study found that over 15 percent of the high-emitting sites detected in its survey were low production sites, producing 15 barrel of oil equivalent (BOE) per day or less.⁵⁴

Another recent study by the Colorado Air Pollution Control Division surveyed oil and gas wells over two years using optical gas imaging. The research revealed a significant number of leaks, but also highlighted that it is possible to achieve immediate reduction or minimization of waste from production facilities with timely identification and repair of leaks. The survey spanned from July 2013 through June of 2015 and covered over 4,400 facilities. The optical gas imaging technology identified gas lost through leaks or vents at more than 25 percent of the facilities, with the majority of these leaks or vents occurring at storage tanks.⁵⁵

c. Existing BLM Regulations Need To Be Updated

As discussed in detail in the proposed rule preamble at section IV.E, venting, flaring, and royalty-free uses of oil and natural gas on BLM-administered leases are currently governed by NTL-4A. This "Notice to Lessees" was issued by the U.S. Geological Survey on December 27, 1979, before the BLM assumed oversight responsibility for onshore oil and gas development and production. NTL-4A places limitations on venting or flaring of gas-well or oil-well gas, unless approved in writing by BLM. NTL-4A also specifies the circumstances under which an operator owes royalties on oil or gas that is lost from a lease.

In the past 37 years since NTL-4A was issued, oil and gas production technologies and practices have advanced considerably, particularly with the development of modern hydraulic fracturing techniques and

directional drilling. Technologies for capturing and using gas on-site, detecting leaks, powering equipment, controlling vapors from storage vessels, removing liquids from gas wells, and many other aspects of the production process have also advanced. Not surprisingly, NTL-4A neither reflects today's best practices and advanced technologies, nor is particularly effective in minimizing waste of public minerals, as the previously described data and studies show. In addition, as discussed in the preamble to the proposed rule, ambiguities have arisen regarding how NTL-4A is interpreted and implemented by various BLM offices and industry entities. There is a compelling need to update these requirements to make them clearer, more effective, and reflective of modern technologies and practices.

d. Concerns Identified Through Oversight

External oversight reviews strongly support the BLM's conclusion that the current NTL-4A requirements need to be updated, and many of the changes made in this rule implement recommendations from relevant oversight reviews. As discussed in the proposed rule, key oversight reviews that influenced the development of this rule include: (1) A December 2007 Royalty Policy Committee (RPC) report, *Mineral Revenue Collection from Federal and Indian Lands and the Outer Continental Shelf*, which recommended that the BLM update its rules and identified many specific actions to improve production accountability; (2) a March 2010 report by the OIG, *BLM and MMS Beneficial Use Deductions*, which recommended that the BLM clarify its requirements for royalty-free use of natural gas; and (3) an October 2010 GAO report, *Federal Oil and Gas Leases—Opportunities Exist to Capture Vented and Flared Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases*, which recommended that the BLM update its regulations to take advantage of opportunities to capture economically recoverable natural gas using available technologies.

In July 2016, the GAO issued another report relevant to this rule. The 2016 report entitled, "OIL AND GAS—Interior Could Do More to Account for and Manage Natural Gas Emissions," reviewed the DOI's provisions to account for and manage natural gas emissions. The GAO found that DOI agencies, including the BLM and ONRR, have historically focused on determining the volume of natural gas production and accounting for the percent of that volume that is royalty-

bearing, but have not focused enough on providing operators clear guidance on how to determine, account for, and report the volumes of natural gas that are *not* royalty bearing. The GAO suggested that lack of specific guidance in these areas has resulted in substantial variation in how operators obtain and report the data, and may result in inaccuracy in the DOI's data on natural gas emissions. The GAO recommended that the BLM provide operators with specific instructions regarding how to estimate natural gas emissions, which the GAO suggests would improve emissions data and better ensure that, when appropriate, royalties are collected on these lost quantities of natural gas. The GAO also addressed recommendations to the ONRR that are closely related to provisions of this rule. For example, the GAO recommended that the ONRR provide additional guidance on how to report royalty-free and royalty-bearing flaring, and how to report unreported or underreported emissions from sources such as tanks. Some of the changes made in today's rule will help clarify the regulatory requirements that relate to some of these reporting concerns.

3. Relationship to Other Federal, State, and Industry Activities

Understanding that other Federal, State and tribal rules also apply to aspects of onshore oil and gas production, the BLM has aimed to ensure that this rule will complement other regulatory requirements. As noted earlier, for example, the EPA issued rules in 2012 and May of 2016 to control emissions of methane and VOCs from new, modified and reconstructed oil and gas wells and production equipment, and many States and tribes also regulate aspects of the production process to address safety, waste, production accountability, and/or air quality concerns.

In updating the BLM regulations, the BLM carefully considered and accounted for these potentially overlapping regimes. Thus, to the maximum extent possible, today's rule aligns its requirements with similar requirements adopted by the EPA or the States, exempts equipment and processes covered by EPA requirements, and authorizes the BLM to grant variances from particular rule provisions if a petitioner State or tribe can show that a State, local, or tribal requirement is at least as effective as the corresponding provision of this rule. The BLM is also committed to working with the EPA to ensure that any future EPA regulations align to the extent possible with the BLM requirements. To

⁵⁴ David R. Lyon et. al, *Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites*, 1 *Envtl. Sci. Tech.* (2016) available at <http://pubs.acs.org/doi/abs/10.1021/acs.est.6b00705>. See supporting information "Site-level parameter data for well pads in the surveyed areas and basins" file columns M and N in the "Surveyed Well Pads" worksheet.

⁵⁵ Colorado Department of Public Health and Environment Air Pollution Control Division Colorado Optical Gas Imaging Infrared Camera Pilot Project: Final Assessment July 11, 2016 Author: Tim Taylor

the extent that additional State or tribal regulations are adopted in the future, the State and tribal variance provisions in section 3179.401 provide a mechanism for the BLM to approve compliance with those regulations in lieu of the BLM regulations, where the State or tribal regulations meet the criteria for a variance.

As noted earlier, even though EPA, State, and tribal requirements address some gas waste, there is still a clear need for this rule. For one thing, the BLM has independent legal and proprietary responsibilities to prevent waste in the production of Federal and tribal minerals, as well as to ensure the safe, responsible, and environmentally protective use of BLM-managed lands and resources. This rule will update the BLM's decades-old venting and flaring requirements, and represents an important element of BLM's larger effort to ensure that its oil and gas regulations are effective, transparent, and easy to understand and administer, and that the provisions of those regulations adequately account for significant recent technological advances in the industry.

The BLM also notes that this regulation covers a range of sources and activities that are not adequately addressed by existing BLM, State, or tribal regulations. Further, EPA regulations cover only new, modified, and reconstructed sources, not the many existing and unmodified sources on BLM-administered leases. EPA regulations also do not address flaring or activities such as liquids unloading. Finally, State and tribal regulations are effective only within the jurisdiction of the relevant State or tribe, and State and tribal regulations do not consistently address all the sources of waste BLM seeks to prevent via this rule. Indeed, no State or tribe has requirements covering all the sources of waste addressed by this rule.

In the proposed rule preamble section IV.I.2., the BLM also discussed the commendable efforts that some oil and gas operators have made to reduce waste of gas through venting, flaring, and leaks. While steps in the right direction, these voluntary efforts are insufficient by themselves, given the large and growing volumes of waste. Moreover, for the one specific activity area for which industry has identified a reduction in gas losses over the past few years—well completions at hydraulically fractured gas wells—the decreases appear to be largely driven by the adoption of the EPA subpart OOOO requirements for green completions at those wells.

The following sections provide a brief overview of EPA and State regulations

that are particularly relevant to this rulemaking.

a. EPA Regulations

The EPA regulates air pollution from oil and gas production, and since measures to reduce emissions tend to limit releases of natural gas, the EPA's air pollution regulations to reduce emissions from the oil and gas sector have the co-benefit of reducing waste of natural gas and increasing gas capture. BLM very carefully coordinated the waste prevention requirements under today's rule with EPA requirements applicable to some of the same sources, to minimize compliance burdens for operators and to avoid unnecessary duplication.

As explained in section IV.I.3 of the proposed rule preamble, the EPA adopted new source performance standards (NSPS) in 2012 (subpart OOOO) that require new, modified, or reconstructed sources to limit the release of VOCs by requiring that operators use "green completions" at hydraulically fractured natural gas wells.⁵⁶ The EPA's NSPS also imposed requirements at gas processing plants and boosting stations.⁵⁷

On September 18, 2015, EPA proposed NSPS standards that would update the 2012 standards to limit methane in addition to VOCs, as described in the BLM proposed rule, to be codified in proposed 40 CFR part 60 subpart OOOOa.⁵⁸ This rule also proposed to limit methane and VOC emissions from additional sources not covered under the 2012 subpart OOOO rule. EPA finalized 40 CFR part 60 subpart OOOOa on May 12, 2016, after receiving over 900,000 public comments and holding three public hearings, and the rule went into effect in August 2016. As with the subpart OOOO standards, subpart OOOOa applies only to new, modified, or reconstructed sources, and not to existing equipment and operations. The final OOOOa rule regulates greenhouse gases through limits on methane emissions that owners and operators can meet using readily available and cost-effective technologies.⁵⁹ It also requires leak detection and repair at new, modified, and reconstructed sources, and it covers additional new, modified, and

reconstructed equipment and activity in the oil and gas production sector not addressed in the subpart OOOO standards, such as hydraulically fractured oil well completions, pneumatic pumps, and fugitive emissions from well sites and compressor stations. The final 40 CFR subpart OOOOa rule includes several changes from the EPA's proposed rule that are particularly noteworthy with respect to the BLM's rulemaking, including: (1) It establishes a fixed semi-annual schedule for monitoring leaks from well sites; (2) it does not adopt a proposed exemption from the LDAR requirements for low-production wells; and (3) it does not adopt proposed requirements to limit emissions from pneumatic piston pumps.

On May 12, 2016, EPA also announced the availability of Control Technique Guidelines (CTGs) to help States reduce VOC emissions from *existing* sources in certain ozone nonattainment areas. Although reducing methane emissions is not the purpose of CTGs, control of VOC emissions also results in co-control of methane emissions. These CTGs identify many of the same types of measures required by the OOOOa standards, but the guidelines are not legally binding. Rather, the CTGs are a set of recommendations that State and local air pollution control agencies must consider when evaluating what they will identify as Reasonably Available Control Technology (RACT) for existing sources covered under State ozone nonattainment plans to implement Clean Air Act requirements, known as State Implementation Plans (SIPs). States are only required to include RACT measures in their SIPs for ozone nonattainment areas whose air quality levels violate the Clean Air Act air quality standard for ozone and are classified as moderate nonattainment or higher.⁶⁰ In October of 2015, EPA revised the health-based ambient air quality standard for ozone pollution to 70 parts per billion. The changes to SIPs required to address that pollution would be due to EPA within two years after the ozone classifications are published in the **Federal Register**, which is projected to be no later than Jan. 21, 2021.⁶¹ It appears that few, if any, areas with significant Federal or Indian oil and gas production are likely to be classified as moderate nonattainment or above for the most recent ozone standard. Moreover, even if some areas with

⁵⁶ 79 FR 49490, August 16, 2012.

⁵⁷ Subpart OOOO imposed emission standards for pneumatic controllers, centrifugal compressors and storage vessels, and required work practices for reciprocating compressors and equipment leaks at gas processing plants. Subpart OOOO also imposed a sulfur dioxide emission standard for sweetening units at gas processing plants.

⁵⁸ 80 FR 56593, Sept. 18, 2015.

⁵⁹ 81 FR 35823, June 3, 2016.

⁶⁰ *I.e.*, nonattainment areas designated "moderate" or above.

⁶¹ These are the attainment dates for areas designated as moderate nonattainment or above.

significant Federal or Indian oil and gas production are identified as having ozone pollution problems, the changes to SIPs required to address that pollution would not likely be due to EPA for a number of years.

The EPA has also taken the first steps to gather information to promulgate regulations that would require subsequent State regulation of existing sources under Clean Air Act (CAA) section 111(d). When the EPA establishes NSPS for new sources in a particular source category, as it did for the oil and gas sector in its OOOOa regulations promulgated in May 2016, the EPA is also required, under CAA section 111(d)(1), to prescribe regulations for States to submit plans establishing emissions performance standards for existing sources in that source category. Acting under this CAA mandate, in March of 2016 the EPA announced its intention to regulate existing oil and gas sources for methane and VOC emissions.⁶² To begin this process, the EPA issued a draft information collection request (ICR) on May 12, 2016, and a second draft ICR on September 23, 2016.⁶³ Once the ICR is approved by the Office of Management and Budget, the ICR is expected to gather a broad range of information on the oil and gas industry regarding emission control efficacy, costs, and timing requirements.⁶⁴ The EPA then expects to use this information in developing regulations to guide State plans to reduce emissions from existing sources. This rulemaking would then be followed by State development and adoption of State plans containing enforceable performance standards for sources, State plan approvals by EPA, and subsequent implementation by industry to meet compliance deadlines established in the State plans. Given the length of this process and the uncertainty regarding the final outcomes, and in light of the BLM's independent statutory mandate to prevent waste from Federal and Indian oil and gas leases based on information currently available, the BLM has

determined that it is necessary and prudent to update and finalize this regulation at this time.

b. State Regulations

In developing this rule, the BLM consulted with State regulators and reviewed analogous State requirements related to waste of oil and gas resources. Specifically, the BLM reviewed requirements from Alaska, California, Colorado, Montana, North Dakota, Ohio, Pennsylvania, Utah, and Wyoming. Most of these State requirements were discussed in the preamble to the proposed rule, which also explained that these State requirements, and the outcomes they produce, vary widely.⁶⁵ As noted in the preamble to the proposed rule, of the States with extensive oil and gas operations on BLM-administered leases, only one has comprehensive requirements to reduce flaring, and only one has comprehensive statewide requirements to control losses from venting and leaks.⁶⁶ Furthermore, State regulations do not apply to BLM-administered leases on Indian lands, and States do not have a statutory mandate or trust responsibility to reduce the waste of Federal and Indian oil and gas. Finally, because State laws and regulations are subject to change, BLM reliance on State standards risks additional waste of public resources and adverse environmental impacts to Federal and Indian lands should the State standards change to allow for additional waste and environmental impacts. There is therefore a need for uniform, modern waste reduction standards for oil and gas operations on public and Indian lands across the country. Nonetheless, the BLM did look to some of the most effective State approaches as models. In particular, we have drawn on approaches that Colorado, Wyoming and North Dakota adopted to address rising rates of flaring, waste of minerals, and pollution impacts in those states.

The BLM also notes that at least two States have recently expressed an intent to further reduce methane emissions through regulatory action. On February 1, 2016, California's Air Resources Board proposed new rules to reduce emissions of methane through venting and leaks during oil and gas production, processing, and storage.⁶⁷ These proposed rules would require the use of vapor collection systems and the control of vapors with 95 percent efficiency.

The rules would limit the use of combustion; however, if a combustion control device must be used, the rules would require the use of a low-emissions incinerator. In January 2016, the Pennsylvania Department of Environmental Protection also announced that it would pursue an enhanced strategy for reducing methane emissions.⁶⁸ Importantly, though, neither of these proposed regimes nor any existing State regimes cover the full suite of oil and gas activities addressed by this rule.

C. Legal Authority

Pursuant to a delegation of Secretarial authority, the BLM is authorized to regulate oil and gas activities on Federal and Indian lands under a variety of statutes, including the MLA, the MLAAL, FOGRMA, FLPMA, the IMLA, the IMDA, and the Act of March 3, 1909.⁶⁹ 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.⁷⁰

The MLA rests on the fundamental principle that the public should benefit from mineral production on public lands.⁷¹ A primary instrument for public benefit is the requirement that a lessee return a portion of the proceeds from production to the public through the payment of royalties to Federal, State, and/or tribal governments. For competitively issued leases, the MLA requires the payment of a royalty "at a rate *not less than* 12.5 percent in amount or value of the production removed or sold from the lease"; for non-competitive leases, the MLA sets the royalty "at a rate of 12.5 percent in amount or value of the production

⁶² McCarthy, Gina. "EPA Taking Steps to Cut Methane Emissions from Existing Oil and Gas Sources". March 10, 2016. Available at <https://blog.epa.gov/blog/2016/03/epa-taking-steps-to-cut-methane-emissions-from-existing-oil-and-gas-sources>.

⁶³ 81 FR 35763 and 81 FR 66692.

⁶⁴ On September 23, 2016, EPA issued a second draft ICR, and public comments are due October 31, 2016. Once all of the public comments are reviewed and incorporated, and the ICR is approved by the Office of Management and Budget, the EPA will issue a final ICR, using its authority under CAA Section 114. Industry will have at least 30 days to complete the operator survey and 120 days to respond to the facility survey. <https://www.gpo.gov/fdsys/pkg/FR-2016-09-29/pdf/2016-23463.pdf>.

⁶⁵ 81 FR at 6633–34.

⁶⁶ 81 FR at 6636.

⁶⁷ State of California Air Resources Board Staff Report: Statement of Reasons, available at: <http://www.arb.ca.gov/cc/oil-gas/Oil%20and%20Gas%20ISOR.pdf>.

⁶⁸ Pennsylvania Department of Environmental Protection, A Pennsylvania Framework of Actions for Methane Reductions from the Oil and Gas Sector, available at: <http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Methane/DEP%20Methane%20Strategy%201-19-2016%20PDF.pdf>.

⁶⁹ Mineral Leasing Act, 30 U.S.C. 188–287; Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351–360; Federal Oil and Gas Royalty Management Act, 30 U.S.C. 1701–1758; Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701–1785; Indian Mineral Leasing Act of 1938, 25 U.S.C. 396a–g; Indian Mineral Development Act of 1982, 25 U.S.C. 2101–2108; Act of March 3, 1909, 25 U.S.C. 396.

⁷⁰ 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.

⁷¹ 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").

removed or sold from the lease.”⁷² The BLM is responsible for specifying royalty rates and determining the quantity of produced oil and gas that is subject to royalties under the terms and conditions of a Federal lease.

Another important means of ensuring that the public benefits from mineral production on public lands is minimizing and deterring the waste of oil and gas produced from the Federal mineral estate. To this end, the MLA requires oil and gas lessees to “use all reasonable precautions to prevent waste of oil or gas developed in the land, . . .”⁷³ The MLA requires lessees to exercise “reasonable diligence, skill, and care” in their operations and also requires oil and gas lessees to observe “such rules . . . for the prevention of undue waste as may be prescribed by [the] Secretary.”⁷⁴ Lessees are not only responsible for taking measures to prevent waste, but also responsible for making royalty payments on wasted oil and gas when waste does occur. In FOGRMA, Congress expressly made lessees “liable for royalty payments on oil or gas lost or wasted from a lease site 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 [FOGRMA] or any mineral leasing law.”⁷⁵

In addition to ensuring that the public benefits from oil and gas production from public lands, the BLM is also tasked with regulating the physical impacts of oil and gas development on public lands. The MLA directs the Secretary to “regulate all surface-disturbing activities conducted pursuant to any lease” and to “determine reclamation and other actions as required in the interest of conservation of surface resources.”⁷⁶ The MLA requires oil and gas leases to include provisions “for the protection of the interests of the United States . . . and for the safeguarding of the public welfare,” which includes lease terms for the prevention of environmental harm.⁷⁷ The Secretary may suspend lease operations “in the interest of conservation of natural resources,” a

phrase that encompasses not just conservation of mineral deposits, but also preventing environmental harm.⁷⁸ The Secretary also may refuse to lease lands in order to protect the public’s interest in other natural resources and the environment.⁷⁹ BLM’s regulations governing oil and gas operations on the public lands have always required operators to avoid damaging other natural resources or environmental quality.⁸⁰

The MLA additionally requires oil and gas leases to contain “a provision that such rules for the safety and welfare of the miners . . . as may be prescribed by the Secretary shall be observed . . .”⁸¹ This rule helps to ensure safety of workers engaged in the production of oil and gas on Federal and Indian lands by requiring, except in special circumstances, the combustion of natural gas loosed from wells and equipment during production.

FLPMA further authorizes BLM to “regulate” the “use, occupancy, and development” of the public lands via “published rules.”⁸² FLPMA also mandates that the Secretary, “[i]n managing the public lands . . . shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.”⁸³ And FLPMA authorizes BLM to “promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to the public lands.”⁸⁴ FLPMA expressly declares that the BLM should balance the need for domestic sources of minerals against the need to “protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values; . . . [and] provide for outdoor recreation and human occupancy and use.”⁸⁵

FLPMA requires the BLM to manage public lands under principles of multiple use and sustained yield.⁸⁶ The statutory definition of “multiple use” explicitly includes the consideration of environmental resources. Multiple use is a “combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and

nonrenewable resources . . .”⁸⁷

Multiple use also requires resources to be managed in a “harmonious and coordinated” manner “without permanent impairment to the productivity of the land and the quality of the environment.”⁸⁸ Significantly, FLPMA admonishes the Secretary to consider “the relative values of the resources and not necessarily . . . the combination of uses that will give the greatest economic return or the greatest unit output.”⁸⁹

Finally, the promulgation of this rule helps to meet the Secretary’s statutory trust responsibilities with respect to the development of Indian oil and gas interests. The Secretary’s management and regulation of Indian mineral interests carries with it the duty to act as a trustee for benefit of the Indian mineral owners.⁹⁰ The Congress has directed the Secretary to “aggressively carry out [her] trust responsibility in the administration of Indian oil and gas.”⁹¹ In furtherance of her trust obligations, the Secretary has delegated regulatory authority for administering operations on Indian oil and gas leases to the BLM,⁹² which has developed specialized expertise through regulating the production of oil and gas from public lands administered by the Department. In choosing from among reasonable regulatory alternatives for Indian mineral development, the BLM is obligated to adopt the alternative that is in the best interest of the tribe and individual Indian mineral owners.⁹³ What is in the best interest of the tribe and individual Indian mineral owners is determined by a consideration of all relevant factors, including economic considerations as well as potential environmental and social effects.⁹⁴ The BLM believes that this rule is in the best interest of Indian mineral owners because it will prevent unnecessary and excessive losses (“waste”) of natural gas from Indian lands. In so doing, this rule will help ensure that the extraction of natural gas from Indian lands results in the payment of royalties to Indian mineral owners, rather than the waste of

⁷² 30 U.S.C. 226(b)(1)(A) (emphasis added); 30 U.S.C. 226(c)(1); see also 30 U.S.C. 352 (applying that requirement to leases on acquired land). The same royalty provision is included in the lease instruments for leases of Indian tribal and allotted lands under applicable regulations, although that rate is set at no less than 16⅔%, absent approval of the Secretary. 25 CFR 211.41, 212.41.

⁷³ 30 U.S.C. 225.

⁷⁴ 30 U.S.C. 187.

⁷⁵ 30 U.S.C. 1756.

⁷⁶ 30 U.S.C. 226(g).

⁷⁷ See *Natural Resources Defense Council, Inc. v. Berkland*, 458 F. Supp. 925, 936 n.17 (D. DC 1978).

⁷⁸ 30 U.S.C. 209; *Copper Valley Machine Works v. Andrus*, 653 F.2d 595, 601 & nn.7–8 (D.C. Cir. 1981); *Hoyl v. Babbitt*, 129 F.3d 1377, 1380 (10th Cir. 1997); *Getty Oil Co. v. Clark*, 614 F. Supp. 904, 916 (D. Wyo. 1985).

⁷⁹ *Udall v. Tallman*, 380 U.S. 1, 4 (1965); *Duesing v. Udall*, 350 F.2d 748, 751–52 (1965).

⁸⁰ See 43 CFR 3162.5–1 to .5–2 (1983–2014).

⁸¹ 30 U.S.C. 187.

⁸² 43 U.S.C. 1732(b).

⁸³ 43 U.S.C. 1732(b).

⁸⁴ 43 U.S.C. 1740.

⁸⁵ 43 U.S.C. 1701(a)(8).

⁸⁶ 43 U.S.C. 1702(c), 1732(a).

⁸⁷ 43 U.S.C. 1702(c).

⁸⁸ 43 U.S.C. 1702(c).

⁸⁹ 43 U.S.C. 1702(c).

⁹⁰ See *Woods Petroleum Corp. v. Department of Interior*, 47 F.3d 1032, 1038 (10th Cir. 1995) (*en banc*).

⁹¹ 30 U.S.C. 1701(a)(4).

⁹² 235 DM 1.1.K.

⁹³ See *Jicarilla Apache Tribe v. Supron Energy Corp.*, 728 F.2d 1555, 1567 (10th Cir. 1984) (Seymour, J., concurring in part and dissenting in part), adopted as majority opinion as modified *en banc*, 782 F.2d 855 (10th Cir. 1986).

⁹⁴ See 25 CFR 211.3.

the owners' mineral resources.⁹⁵ Additionally, the BLM believes tribal members and individual Indian mineral owners who live near Indian oil and gas development will realize environmental benefits as a result of this rule's reductions in flaring and air pollution from Indian oil and gas development. During public comment hearings, the BLM heard from a number of tribal members who raised concerns about the impacts of vented and leaked gas on their health, highlighting in particular increases in ozone pollution and air toxics. Tribal members also detailed the impacts of living near numerous large flares, noting the resulting noise and light pollution. The BLM believes that this rule will help to reduce some of these impacts on tribal members.

In short, the BLM has the authority to manage public and tribal oil and gas resources to reduce waste and ensure environmentally responsible development. In response to the notice of proposed rulemaking, the BLM received many comments asserting a range of different arguments regarding the BLM's exercise of its legal authority in promulgating this rule. The most salient of these arguments are addressed later in this preamble, but the BLM did not make any changes to this rule based on comments about the BLM's authority.

D. Stakeholder Outreach

In 2014 and again in 2016, the BLM conducted a series of forums to consult with tribal governments⁹⁶ and solicit stakeholder views to inform the BLM's development of the proposed and final rules. In 2014, the BLM held public meetings in Denver, Colorado (March 19, 2014), Albuquerque, New Mexico (May 7, 2014), Dickinson, North Dakota (May 9, 2014), and Washington, DC (May 14, 2014).⁹⁷ On each of those days, the BLM held a tribal outreach session in the morning and a public outreach session in the afternoon. In advance of the tribal outreach sessions, the BLM sent letters to over 200 tribal leaders that have previously expressed interest in oil and gas related matters. These letters explained generally the proposed rulemaking, invited the tribal leaders to attend the outreach sessions, provided

contact persons for further information, and provided an email address for submitting comments. At the 2014 Denver, Colorado, and Washington, DC sessions, the tribal and public meetings were live streamed to allow for the greatest possible participation by interested parties. The tribal outreach sessions also served as initial consultation with Indian tribes to comply with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

As part of our pre-proposal outreach efforts, the BLM accepted informal comments generated as a result of the public/tribal outreach sessions through May 30, 2014. A total of 29 unique comments were received: 12 from the oil and gas industry and trade associations, 6 from NGOs representing 37 organizations, 2 from government officials or elected representatives, and 9 from private citizens. Two hundred and sixty comments from private citizens were part of an email campaign.

After the proposed rule was published on February 8, 2016, we conducted a second series of paired outreach meetings, with a tribal meeting each morning and a public meeting each afternoon. We held these meetings at four locations: Farmington, New Mexico (February 16, 2016), Oklahoma City, Oklahoma (February 18, 2016), Denver, Colorado (March 1, 2016), and Dickinson, North Dakota (March 3, 2016). Again, in advance of the tribal outreach sessions, the BLM sent letters to over 200 tribal leaders that have previously expressed interest in oil and gas related matters. These letters explained generally the proposed rule, invited the tribal leaders to attend the outreach sessions, provided contact persons for further information, and provided an email address for submitting comments. The public outreach sessions included a telephone conference call-in number to allow members of the public who could not attend in person to listen live to the proceedings.

In addition, the BLM conducted outreach to States with extensive oil and gas production on BLM-administered leases. Prior to the proposal, the BLM reviewed State regulations and guidance, and contacted State regulatory bodies that oversee aspects of oil and gas production to discuss their requirements and practices. After issuing the proposal, the BLM conducted seven online meeting sessions with State regulators from Alaska, Colorado, New Mexico, North Dakota, Utah (two meetings), and Wyoming.

In response to the proposed rule and these outreach meetings, the BLM received approximately 330,000 total comment submissions from Federal, State, and local governments and agencies, tribal organizations, industry representatives, non-governmental organizations, individuals, and other stakeholders. Of the approximately 330,000 comment submissions, approximately 1,000 were unique comments, with the remaining comments coming from mass-mailing campaigns from several organizations. The BLM closely reviewed and analyzed the comments we received, and made revisions to the proposed rule based on the information, data, analysis, insights, and viewpoints provided in the comments. The final rule reflects the very extensive input that the BLM gathered from these public meetings, discussions with States and tribes, and the public comment process.

IV. Summary of Final Rule

Like the proposed rule, the final rule focuses on key areas in the oil and gas production process where waste-prevention actions are most effective and least costly. Specifically, we are adopting requirements to reduce waste from the following: Venting or flaring of associated gas from producing oil wells; gas leaks from equipment and facilities located at the well site, as well as from compressors located on the lease; operation of high-bleed pneumatic controllers and certain pneumatic pumps; gas emissions from storage vessels; well maintenance and liquids unloading; and well drilling and completions. Based on the available data regarding methane emissions and the numbers and types of sources of gas losses from Federal and Indian leases, we believe that these aspects of the production process offer the best opportunities for reducing waste.

Like the proposed rule, the final rule requires operators to flare gas rather than vent it, except in specified circumstances, such as emergencies, the routine operation of certain equipment, and when flaring is technically infeasible. The final rule then requires operators to avoid wasteful flaring of gas by capturing for sale or using on-site specified percentages of their adjusted total gas production. Beginning one year from the effective date of the final rule, operators must capture 85 percent of their adjusted total gas production each month, and this gradually increases to 98 percent by 2026. An operator's adjusted total gas production is based on the quantity of high pressure gas produced from the operator's development wells that are in

⁹⁵ The remainder of this preamble refers to this analysis as the BLM's determination that, as a result of its trust obligations, it has an obligation or mandate to reduce waste from Indian lands, just as it does to reduce waste from BLM-administered Federal Lands.

⁹⁶ In developing this rule, the BLM consulted with tribal stakeholders in compliance with 25 U.S.C. 2107, 512 DM 4, and 512 DM 5.

⁹⁷ See the BLM oil and gas program's outreach-events page: http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.

production, adjusted to exempt a specified volume of gas per well. The exempted or “flaring allowable” volume declines over time. Beginning one year from the effective date of the final rule, operators are allowed to exempt 5,400 Mcf gas per well per month, and this quantity gradually declines to 750 Mcf by 2025.

With respect to leaks, the final rule largely follows the proposed rule, except that the required frequency of inspection is set at two times a year, and does not vary according to the number of leaks found. Operators must use optical gas imaging equipment or portable analyzers deployed according to Method 21, and leaks must be repaired and retested within specified time frames. The final rule clarifies the approval process for alternative leak detection devices and for operators’ individual alternative leak inspection programs.

Like the proposed rule, the final rule includes requirements to update old and inefficient equipment, and to follow best practices to minimize waste through venting. Thus, operators must replace high-bleed pneumatic controllers and certain pneumatic pumps with less wasteful controllers and pumps, and capture or flare any high volumes of gas that would otherwise be vented from tanks. In addition, the final rule requires operators to capture, flare, use, or reinject gas produced during well drilling and well completions, and it limits the quantities of gas that may be vented royalty-free during well testing.

The final rule continues to address whether and when lost oil or gas is royalty-bearing, based on whether the loss is deemed unavoidable (royalty-free) or avoidable (royalty-bearing). Relative to the proposed rule, and after our evaluation of public comments, the final rule somewhat expands the list of circumstances in which a loss of oil or gas is deemed unavoidable (thereby expanding the circumstances under which the loss of gas is considered royalty-free), and retains the proposed approach that all oil or gas that is not specifically defined as unavoidably lost is deemed to be avoidably lost and subject to royalties. Unavoidable losses include oil or gas lost in emergencies, losses from normal equipment operation when the operator is in compliance with all requirements to update equipment, and gas that is flared from wells not connected to a gas pipeline (unless the operator has not met applicable gas capture requirements). Because the BLM believes that it is reasonable to expect operators to reduce waste in order to comply with the final rule’s capture

percentage requirements, any quantities of flared gas that cause the operator to violate the applicable capture requirements are deemed avoidable losses and subject to royalties.

In addition, the BLM is finalizing the proposed change to the royalty provisions, to align the provisions with the BLM’s statutory authority and allow the BLM to set royalties for competitive leases at or above 12.5 percent. At this time, however, the BLM is not setting the royalty rate above 12.5 percent in this regulation.

Like the proposed rule, the final rule aligns the requirements of this rule to the extent practicable with EPA and State requirements. It also avoids potential regulatory overlap by exempting certain equipment covered by relevant EPA rules, and deeming the operator’s compliance with relevant EPA requirements to satisfy the BLM requirements as well.

The final rule also allows a State or tribe to request a variance from particular BLM requirements. If the variance is granted, the BLM has authority to enforce the specific provision(s) of the State, local, or tribal rule for which the variance was granted, instead of the comparable provision(s) of the BLM rule. As clarified in the final rule, the BLM may grant a State or tribal variance request if the BLM determines that the State, local, or tribal rule would perform at least as well as the affected BLM regulatory provision in 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.

V. Major Changes From Proposed Rule

Based on information that has become available since the proposed rule, and the extensive material BLM received through public comments, the BLM has made changes and adjustments to the proposed regulatory text. This section of the preamble summarizes the most significant of those changes and addresses some of the key public comments.

This section only addresses a few substantive areas in which the BLM made significant changes from the proposed rule. Section VI discusses significant comments received on other aspects of the rule. The final text of all of the rule provisions, and changes made in light of all public comments, are discussed in Section VII, Section by Section. Finally, additional public comments are addressed in the separate Response to Comments document, which is available to the public on the

BLM Web site and is part of the rule-making record.

A. Venting Prohibition and Capture Targets

As discussed in section III.B.2.a of this preamble, routine venting and flaring of gas from oil or gas wells waste significant volumes of natural gas. In 2014, for example, operators vented about 30 Bcf and flared at least 81 Bcf from BLM-administered leases—4.1 percent of the total production from those leases in that year, and sufficient gas to supply nearly 1.5 million households with gas for a year.⁹⁸ The final rule aims to reduce this waste using a two-pronged approach: A prohibition on venting, and capture targets to reduce flaring.

1. Venting Prohibition

a. Requirements of Final Rule

First, final rule § 3179.6 prohibits venting from oil and gas wells, except under certain enumerated conditions. The circumstances in which venting is permissible include: When flaring is technically infeasible, such as when the gas is not readily combustible or the volumes are small; when the gas is vented during normal operation of an on-site, gas-activated pneumatic pump or controller; when the gas is vented from a storage vessel, provided that § 3179.203 does not require flaring of the gas; when the gas is vented during downhole well maintenance or liquids unloading, provided those operations are conducted in accordance with § 3179.204 of the final rule; and when gas is vented through a leak, provided that the operator is complying with the rule’s LDAR provisions in §§ 3179.301–3179.305. Venting is also permissible during “emergencies,” which final rule § 3179.105 defines as situations in which the loss of gas is “uncontrollable,” and venting or flaring is “necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.” In addition, venting is allowed if necessary to allow facility or pipeline non-routine maintenance to be performed. Any venting of gas from oil or gas wells that does not fit within one of the circumstances listed in § 3179.6 is a violation of this rule and could result in enforcement actions. In addition, gas vented in violation of this rule will be deemed “avoidable” under final rule § 3179.4, and thus subject to royalties under final rule § 3179.5.

⁹⁸ BLM analysis of ONRR OGOR–B data provided for 2009–2015 and EPA GHG Inventory data for 2014.

b. Changes From Proposed Rule and Significant Comments

The final venting prohibition largely tracks proposed section § 3179.6, although the BLM modified a few provisions and added additional express exemptions in response to comments received. First, proposed § 3179.6(a)(3), which exempted gas vented from storage vessels subject to conditions specified in § 3179.203, has been renumbered § 3179.6(b)(4) and reworded for clarity. Second, proposed § 3179.6(a)(4), which exempted gas vented during normal operations of natural gas-activated pneumatic controllers and pumps, has been renumbered § 3179.6(b)(3). Third, the BLM added a provision, final rule § 3179.6(b)(5), to clarify that gas may be vented during downhole well maintenance or liquids unloading activities, provided those activities are performed in compliance with § 3179.204. This change responds to comments noting that while this rule requires operators to use best practices to minimize venting from liquids unloading operations, these operations will still release some quantity of gas, and it is not practical to capture and flare that gas regardless of whether the operator uses plunger lifts, manual purging, or another method to unload liquids. Fourth, in response to comments noting that there are additional losses through venting not listed in the proposed provision, the BLM added § 3179.6(b)(6) to the final rule, to clarify that an operator is not required to flare gas that is lost due to leaks, provided the operator is in full compliance with the leak detection and repair requirements in final rule §§ 3179.301–305. Fifth, the BLM added § 3179.6(b)(7) to the final rule, to respond to commenters' concern that some gas is released when pressurized equipment must be depressurized for maintenance, and their assertion that it is difficult and costly to route such infrequent, low-volume emissions to capture or a flare. This exemption from the venting prohibition is limited to venting associated with non-routine maintenance activities. In justifying their request for an exemption for venting associated with maintenance activities, commenters emphasized that these activities release only small quantities of gas in total because they occur infrequently and each incidence involves a relatively small volume of gas. The BLM is aware, however, that activities such as pigging a gathering line may release a not insignificant volume of gas, and, under some circumstances, operators conduct

pigging routinely, such as monthly, weekly, or even several times a day. Under those circumstances, the BLM expects that a prudent operator would configure its operations or deploy capture or flaring equipment so as to avoid routine venting, and the final rule requires operators to avoid such routine venting. Finally, the BLM added § 3179.6(b)(8) to the final rule in response to commenters' observations that it may be necessary to vent gas when applicable laws, regulations, or permit terms prohibit flaring in particular areas or at particular times, such as flaring prohibitions that may be imposed in permafrost areas or during an extreme fire hazard.

2. Capture Targets

a. Requirements of Final Rule

The second prong of the final rule's approach to routine venting and flaring is laid out in final rule §§ 3179.7 and 3179.8, which together target routine flaring of associated gas from "development" oil wells.⁹⁹ These final rule provisions are based on proposed rule §§ 3179.6(b) and 3179.7, respectively, but the provisions have been renumbered and revised in the final rule in response to numerous comments received during the public comment period. This discussion first describes the approach taken in the final rule, and then, in part b., details how this modified approach responds to comments received.

First, in response to comments, the final rule shifts from numerical limits on per-well flaring volumes (the approach taken in proposed rule § 3179.6(b)) to a more flexible approach modeled in part on existing North Dakota rules. The new approach sets targets for the percent of associated gas from development oil wells that must be captured in a given month, either on a per lease/unit/communitized area basis or averaged over a county or state. The capture targets do not, however, apply to the full volume of gas that an operator flares. Instead, like the proposed rule, the final rule allows operators to flare a specified volume of gas that declines over time. In the final rule, however, this allowed flaring has been recast as a "flaring allowable" volume that operators can subtract from their total flaring volume *prior* to calculating their capture percentage. Overall, then, the

⁹⁹ As defined in final rule § 3179.3, a "development" oil or gas well is a well "drilled to produce oil or gas, respectively, from an established field in which commercial quantities of hydrocarbons have been discovered and are being produced." The BLM retains the authority to determine whether the well in question is a development oil or gas well. *Id.*

final rule's approach to flaring has three parts: Capture targets, which increase over time; averaging provisions that allow operators to choose whether to comply with the capture targets one lease/unit/communitized area at a time, or instead on an area-wide average basis; and finally, a flaring allowable volume that declines over time, which operators can subtract from their total flaring prior to assessing their compliance with the capture targets.

The mechanics of implementing this approach are as follows. First, final rule § 3179.7 establishes required capture targets that incrementally increase over the first nine years of rule implementation. The schedule for the capture targets is provided in § 3179.7(b)(1)–(4) and reproduced in Table 1:

TABLE 1

Date range	Required monthly capture target (percent of associated gas captured per month)
1/17/2018 through 12/31/2019	85
1/1/2020 through 12/31/2022 ...	90
1/1/2023 through 12/31/2025 ...	95
Beginning 1/1/2026	98

Section 3179.7(c)(3) of the final rule then provides that, in order to demonstrate compliance with the relevant monthly capture target, operators must choose the "relevant area" over which they intend to assess their capture percentage(s). An operator may choose whether to comply with the capture targets on each of the operator's leases, units, or communitized areas (the "lease-by-lease approach," see final rule § 3179.7(c)(3)(i)), or instead to comply on a county-wide or state-wide basis (the "averaging approach," see final rule § 3179.7(c)(3)(ii)). An operator that chooses the lease-by-lease approach must demonstrate that *each* lease, unit, or communitized area is *individually* in compliance with the relevant capture target each month. An operator that chooses the averaging approach must notify the BLM by Sundry Notice of its choice by January 1 of the relevant year, and may then demonstrate monthly compliance with the relevant capture target on an area-wide average basis.

The second step to demonstrating compliance with the capture targets, detailed in final rule § 3179.7(c), is for an operator to determine its total volume of gas produced from development oil wells in the relevant

area, subtract the flaring allowable volume, and then divide the result of that calculation into the total volume of gas that the operator sold or used, to determine the operator's actual capture percentage. The operator must then compare its actual capture percentage to the required gas capture percentage for the applicable period, to determine whether the operator meets or exceeds the required capture target for the given month.

More specifically, the volume of gas that the operator sold or used is the volume of gas that the operator sold over the month from all of the operator's development oil wells in the relevant area plus the volume of gas that the operator used on lease, unit, or communitized area across the relevant area. The volume of gas flared is the volume that the operator flared from high pressure flares over the month in the relevant area. The flaring allowable concept derives from the flaring limits introduced in proposed rule § 3179.6(b), and it represents the volume of flared gas that is exempt from the capture target. Flaring allowable equals the total number of development oil wells "in production"¹⁰⁰ in the relevant area multiplied by the relevant flaring allowable quantity, which is specified in final rule § 3179.7(c)(2)(i) through (iv) and reproduced in Table 2. The final rule allows an operator to choose whether to calculate each of these volumes—the volumes of gas sold, used, or flared, and the flaring allowable volume—for each BLM-administered lease, unit, or communitized area (under the lease-by-lease approach), or instead to calculate them on an area-wide average basis for all BLM-administered leases, units, and communitized areas in the county or State (under the averaging approach).

TABLE 2

Date range	Monthly flaring allowable per well (Mcf)
1/17/2018 through 12/31/2018	5,400
1/1/2019 through 12/31/2019 ...	3,600
1/1/2020 through 12/31/2020 ...	1,800
1/1/2021 through 12/31/2021 ...	1,500
1/1/2022 through 12/31/2023 ...	1,200
1/1/2024 through 12/31/2024 ...	900
Beginning 1/1/2025	750

¹⁰⁰ As defined in § 3179.7(c)(4), a well is considered "in production" after "a completion, a completion report, or a notice of first production, whichever occurs first, and only during a month in which it produces gas (that is sold or flared) for 10 or more days."

If the operator's actual capture percentage for a given lease, unit, or communitized area (lease-by-lease approach), or for the county or State (averaging approach), falls short of the required capture target for the given month, then the operator may face enforcement action, and must pay royalties on the excess flared gas, which is considered avoidably lost. The excess flared gas is the volume of gas by which the operator missed its required capture target, and it is calculated as follows:

Excess flared gas = (Required capture target * (total volume of produced gas – flaring allowable)) – (volume of gas sold or used).

Royalties on the excess flared gas would be prorated across an operator's leases, units or communitized areas that reported high-pressure flaring during the month.

Alternatively, an operator may request that the BLM establish an alternative capture target under final rule § 3179.8, if three conditions are met: (1) The operator has chosen to comply with the capture target using the lease-by-lease basis rather than the averaging approach; (2) the potentially noncompliant lease was issued before the effective date of this final rule; and (3) the operator demonstrates via Sundry Notice, and the BLM agrees, that the applicable capture percentage under final rule § 3179.7 "would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease."

b. Changes From Proposed Rule and Significant Comments

Proposed rule § 3179.6(b) would have imposed a monthly limit on flaring, beginning on the effective date of the final rule, with the specific limit decreasing over the first three years of the final rule. Specifically, the proposed rule would have established a flaring limit of 7,200 Mcf/month per development oil well in production on the lease, unit, or communitized area, for the first year the rule was in effect (proposed rule § 3179.6(b)(1)); 3,600 Mcf/month per development oil well in production on the lease, unit, or communitized area for the second year the rule was in effect (proposed rule § 3179.6(b)(2)); and 1,800 Mcf/month per development oil well in production on the lease, unit, or communitized area for every month beginning in year three and thereafter (proposed rule § 3179.6(b)(3)).

The proposed rule included a broad request for comments on a range of issues relating to this section, including: The feasibility and costs of imposing a

long-term limit on routine flaring of associated gas from development oil wells; whether the specific long-term flaring limit should be lower or higher than 1,800 Mcf/month/well, to further reduce flaring or reduce compliance costs, respectively; operators' likely operational response(s) to the imposition of a flaring limit; the feasibility and costs of the proposed three-year timeline for decreasing the flaring limit from 7,200 to 1,800 Mcf/month/well; and the effectiveness of the proposed method and conditions in § 3179.7 for allowing operators to obtain an alternative flaring limit.

The BLM developed the capture target approach in final rule § 3179.7, and the alternative capture target provisions in final rule § 3179.8, after careful consideration of the many comments received on the flaring limit approach set forth in proposed rule §§ 3179.6(b) and 3179.7. In particular, the BLM gave careful consideration to operators' assertions that the numerical values of the proposed flaring limits, the proposed schedule for meeting those limits, and the prescriptive nature of the limits would make it prohibitively expensive—and, in some areas of the country, technically impossible—for operators to comply with the terms of the proposed rule. After reviewing the flaring data provided by these commenters, obtaining additional updated and more detailed data from ONRR, and reanalyzing these provisions, the BLM determined that the final rule should phase in its approach to routine flaring over a longer period of time, and provide operators with more flexibility to take better account of variable conditions on different leases, units, and communitized areas in different parts of the country.

The BLM remains committed to requiring operators to significantly reduce routine flaring of associated gas from development oil wells on BLM-administered leases, thereby increasing gas capture. We have structured final rule §§ 3179.7 and 3179.8 to achieve a comparable volume of flaring reductions as proposed rule §§ 3179.6(b) and 3179.7, although over a somewhat longer timeframe, and then to achieve additional reductions in later years.

The final rule's capture targets and the proposed rules flaring limits operate in a similar manner, with the latter approach a refinement of the former to enhance opportunities for compliance. For example, the long-term flaring limit of 1,800 Mcf/month/well in proposed rule § 3179.6(b)(3) is *exactly* equivalent to a capture target of 100 percent, with a flaring allowable volume of 1,800 Mcf/month/well, applied on a lease-by-lease

basis. The final rule phases in a 98 percent (rather than 100 percent) capture target over nine years, and converts the proposed volumetric flaring limits from the proposed rule into declining allowances against the capture target. The differences between proposed rule § 3179.6(b) and final rule § 3179.7(b) are therefore more a matter of form than function, with the final rule designed to achieve flaring reductions comparable to the reductions that the BLM expected from the proposed rule, but to allow operators more compliance flexibility.

That said, the proposed and final approaches to reducing routine flaring do differ in certain key respects, as a result of public comments. The five most significant differences are as follows.

First, the final rule uses specified capture targets, rather than requiring that operators capture 100 percent of their associated gas above fixed volumetric limits as initially proposed, in response to comments indicating that, in some states (notably North Dakota and New Mexico), gas volumes are so high and the availability of capture infrastructure so variable that it is extremely difficult to identify a fixed volumetric limit on flaring that would both be achievable and also provide meaningful reductions in all States. Commenters asserted that given the high gas-to-oil ratios (GOR) in the Bakken basin, there are certain areas where an operator could exceed the proposed flaring limit of 1,800 Mcf/month/well in a period of hours. Commenters argued that even after averaging over a month and across a lease, as the proposed rule would have allowed, the 1,800 Mcf/month/well limit would significantly impact future development in the Bakken and Permian basins. Operators in these areas suggested that allowing averaging of flaring volumes across multiple leases, units, or communitized areas—or even across counties or across a State—would enable operators to use high capture rates in areas with low GOR and/or significant gas capture capability to offset lower capture rates in other areas, and thereby avoid having to curtail production.

Based on these concerns, the BLM restructured the fixed flaring limits as capture targets both to better take account of geographically varying volumes of associated gas and to allow operators some greater flexibility to absorb the impacts of intermittent interruptions or reductions in capture capacity. Final rule § 3179.7, therefore, requires capture of a specified percentage of gas above the flaring allowable volume; this specified capture

target incrementally increases from 85 percent in year two (e.g., one year after the effective date of the final rule) to 98 percent in year nine. As noted, this flexible capture target approach is modeled in large part on North Dakota's regulations, which also impose an escalating capture target, as described in the preamble to the proposed rule.¹⁰¹

Second, the BLM extended the compliance dates in response to commenters' concern that coming into compliance with a long-term flaring limit of 1,800 Mcf/month/well would take longer than the three years that the BLM had proposed. The final rule postpones the effective date of any capture requirements for one full year after the effective date of the rule. Thereafter, the final rule incrementally increases the required capture targets over a nine year period and incrementally decreases the flaring allowable volumes over an eight year period. Final rule § 3179.7(b) extends the time an operator has to meet the flaring allowable volume of 1,800 Mcf/month/well until calendar year 2021, about four years after the effective date of the final rule (and about two additional years after the 1,800 Mcf/month/well fixed flaring limit would have taken effect under § 3179.6(b)(3) of the proposed rule).

Third, and conversely, the BLM has reduced the long-term flaring allowable volumes that apply once the final rule is fully phased in, in response to other commenters' concerns that the proposed approach allowed significant quantities of wasteful flaring to continue unabated from 2020 on and did not provide sufficient incentives for industry to continue to decrease flaring over time. Natural gas is a valuable resource that should be put to productive use, and the MLA requires that we minimize the waste of public resources, consistent with existing lease obligations. In addition, if the only changes the BLM made to the final rule were to allow averaging over a broad geographic area and to impose capture targets that never ramp up to 100%, the final rule would achieve far less of a reduction in wasteful flaring than the proposed rule. While providing operators more flexibility to reduce flaring at lower costs by shifting from the proposed rule's fixed flaring limits to the final rule's capture targets and allowable flaring volumes, the BLM strived to ensure that the final rule still achieves meaningful flaring reductions, comparable to the reductions that the BLM expected from the proposed rule. The key change necessary to meet that

goal was the shift from a fixed long-term flaring limit of 1,800 Mcf/month/well (proposed rule § 3179.6(b)(3)) over three years to a flaring allowable volume that decreases over time to 750 Mcf/month/well in year 2025 (final rule § 3179.7(c)(2)(iv)).

Fourth, the final rule allows greater flexibility in how operators may comply with the capture targets. Commenters indicated that leases, units, and communitized areas vary greatly in both the volumes of associated gas produced from oil wells and the availability of gas capture infrastructure, and asserted that complying with a single flaring limit that applies uniformly to every lease, unit, and communitized area would be prohibitively expensive or even, in some areas of the country, technically impossible. Commenters contended that as a result, they would be forced to submit numerous Sundry Notices under proposed rule § 3179.7 to request alternative flaring limits. Commenters asserted that North Dakota's approach, which allows operators to comply with capture targets on a statewide average basis, would reduce the need to request alternative limits and thus achieve comparable overall flaring reductions at significantly lower cost. The BLM agrees, and has in response to these comments structured the final rule to provide operators with greater discretion in how they choose to comply. Specifically, final rule § 3179.7(c)(3) allows an operator to choose whether to comply with the capture targets on a county- or statewide average basis, or instead to comply on each lease, unit, or communitized area. This flexibility, too, is modeled on North Dakota's regulations, which allow for compliance on a well-, field-, county- or state-wide basis, as described in the preamble to the proposed rule.¹⁰²

Fifth and finally, the final rule makes certain changes to the alternative flaring provisions (proposed rule § 3179.7, renumbered as final rule § 3179.8) in part to address some commenters' concerns that the proposed renewable 2-year exemption (proposed rule § 3179.7(d)) would allow too many operators to evade the flaring limits and should therefore be eliminated. The changes also account for the change in the final rule from flaring limits to capture targets, and for the BLM's decision to allow operators to choose to demonstrate compliance with the capture targets on an area-wide average basis. Specifically, the BLM deleted the proposed 2-year exemption provision and restyled proposed rule § 3179.7 as an alternative capture target rather than

¹⁰¹ 81 FR at 6634.

¹⁰² 81 FR at 6634.

an alternative flaring limit. The change to a capture target approach and the decision to allow operators to choose to comply by averaging their flaring over an entire county or State significantly reduce the risk that a single remote lease, unit, or communitized area with high levels of flaring and little or no access to capture infrastructure will make it impossible for an operator to comply. Under the averaging approach, such leases, units, or communitized areas need not receive a blanket exemption from the capture target. Rather, an operator concerned about the ability of a lease, unit, or communitized area to comply with the capture target can either (a) reduce its flaring at other sites in the relevant area to compensate for the high levels of flaring at that remote lease, or (b) apply for an alternative capture target for that lease under final rule § 3179.8 (if the predicate conditions are met). Because fewer leases are likely to raise such concerns under the final rule's capture target approach than under the proposed rule, the BLM anticipates receiving fewer requests for alternative capture targets and having an increased capacity to process such requests on a case-by-case basis.

To set the capture targets and flaring allowable volumes in the final rule, the BLM conducted a detailed analysis of 2015 data submitted to ONRR of sales, on lease use and flaring volumes month-by-month for operators within a state. These data go substantially beyond what was available to BLM in preparing the proposed rule, and while the results show that the proposed rule would have reduced flaring less than we initially estimated, we have higher confidence in the updated estimates. Using the new data to reanalyze the likely flaring reductions from the proposed rule, the BLM estimates that the proposed rule would have reduced the quantity of flared gas in 2020 by 42 percent relative to 2015 levels.

Using the same data and assumptions, the BLM estimates that the final rule's approach, which allows operators to average over their statewide production and establishes a capture target of 98% over time, will reduce the quantity of flared gas in 2020 by roughly 26 percent relative to 2015 levels. With the additional time and flexibility provided in the final rule, operators will be able to plan for and build out the additional infrastructure necessary to capture and transport greater volumes of gas in later years. Thus, the final rule further steps down the allowable flaring volumes after 2020, and likewise steps up the required capture percentages, to achieve almost a 50% reduction in flaring by

2025, 8 years after the rule comes into effect.

Thus, the BLM expects that the final rule's schedule and targets for reducing flaring will achieve a total volume of flaring reductions somewhat greater than the proposed rule, and at lower cost, though over a longer timeframe. Moreover, the final rule establishes a structure in § 3179.7 for reducing routine flaring that could be adapted to achieve more ambitious flaring reductions, if and when the BLM deems those reductions to be technologically feasible and cost effective. The BLM has only specified capture targets and flaring allowable volumes out to 2026. As additional data on flaring become available, and capture technologies improve, the BLM could choose to increase the capture targets further over time, and/or decrease the flaring allowable volumes, through future rulemakings in order to continue to reduce routine flaring of associated gas from BLM-administered leases, units, and communitized areas, consistent with the United States' March 2016 endorsement of the World Bank's Zero Routine Flaring by 2030 Initiative.¹⁰³

B. Leak Detection and Repair

1. Requirements of Final Rule

As discussed in detail in the RIA, we estimate using data from the EPA GHG Inventory that about 4.01 Bcf of natural gas was lost in 2014 as a result of leaks or other fugitive emissions from various components, including valves, fittings, pumps, storage vessels and compressors on well site operations on BLM-administered leases.¹⁰⁴ This quantity of gas would supply nearly 55,000 homes each year.¹⁰⁵

LDAR programs are a cost-effective means of reducing waste of gas in the oil and gas production process, as indicated by the studies and State programs discussed in the proposed rule, as well as additional information provided since the proposal, which is discussed in the background section III. Provisions in §§ 3179.301 through 3179.305 of the final rule require operators to carry out leak inspections and repairs at their well sites and associated equipment,

meeting specified standards for leak detection methodology and frequency, and for the timing of repairs. Within one year of the effective date of the rule (or within 60 days of beginning production, for new sites), operators must use an instrument-based approach to conduct semi-annual inspections at well sites and quarterly inspections at compressor stations. Operators may also request BLM approval of an alternative instrument-based leak detection program, which the BLM may approve if it finds that the program would reduce leaked volumes by at least as much as the BLM program. Operators must repair a leak within 30 days of discovery, absent good cause, and verify that the leak is fixed. Operators must also keep records documenting the dates and results of leak inspections, repairs, and follow-up inspections, and submit annual reports with this information.

Section 3179.301 provides that the leak detection requirements in the final rule apply to sites¹⁰⁶ and associated equipment that is used to produce, process, compress, treat, store, or measure natural gas from or allocated to a Federal or Indian lease (or from a unit or communitized area that includes such a lease), where such sites are upstream of or contain the approved royalty point of measurements. These requirements also apply to each site located on a Federal or Indian lease, and all associated equipment operated by the operator, which is used to store, measure, or dispose of produced water. An operator is not required to inspect sites that contain only a wellhead or wellheads and no other equipment, nor is the operator required to inspect the "leak components"¹⁰⁷ that are not accessible.

In response to multiple requests from industry and NGO commenters, the final rule provides greater specificity on what constitutes a "leak", which includes releases not associated with the normal operation of the component (e.g., releases from equipment designed to vent that exceed the quantities and frequencies expected during normal operation of the equipment). Similarly,

¹⁰⁶ A "site" is defined as a discrete area containing a wellhead, wellhead equipment, or other equipment used to produce, process, compress, treat, store, or measure natural gas or store, measure, or dispose of produced water, which is suitable for inspection in a single visit.

¹⁰⁷ Under the definitions in the final rule, "leak component" means any component that has the potential to leak gas and can be tested in the manner described in sections 3179.301 through 3179.305 of this subpart, including, but not limited to, valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

¹⁰³ "Zero Routine Flaring by 2030" is a voluntary initiative introduced by the World Bank in 2015 and endorsed by multiple governments, oil companies, and development institutions. The initiative focuses on the phase-out of routine, high-pressure flaring of the type addressed by the BLM's capture targets in § 3179.7 of the final rule, not flaring for safety and other non-routine reasons. For more information and a list of endorsers, see <http://www.worldbank.org/en/programs/zero-routine-flaring-by-2030>.

¹⁰⁴ RIA at 17.

¹⁰⁵ Based on an estimate of 74 Mcf of gas used per household per year. See footnote 2.

releases due to operator error or equipment malfunctions, or from control equipment that does not meet the level of control required by this or other regulations, are also considered leaks. These types of leaks include releases from: A thief hatch left open; a vapor recovery unit that is not operating properly; a tank or combustor that is inadequately sized to handle the throughput of gas; or an intermittent controller that actuates continuously.

Section 3179.301(j) and (k) integrate the final rule with EPA NSPS requirements for operators to conduct a fugitive emissions inspection and repair program. Section 3179.301(j) provides that for new, modified or reconstructed equipment, an operator will be deemed to be in compliance with the BLM LDAR requirements if the operator is in compliance with the EPA subpart OOOOa requirements applicable to the equipment. Paragraph (k) further allows an operator to choose to comply with the EPA fugitive emissions monitoring requirements in subpart OOOOa and apply those requirements to all sites and equipment on a lease not already deemed in compliance with the BLM LDAR provisions, in lieu of complying with the BLM LDAR provisions. This provision allows an operator with new, modified or reconstructed facilities (which must comply with subpart OOOOa) as well as existing facilities (which are not subject to subpart OOOOa) to apply a single leak detection regime to all of their facilities, rather than complying with subpart OOOOa for some facilities and the BLM requirements for others.

The final BLM LDAR provisions also apply to a few specific types of equipment that EPA addresses under requirements that are separate from EPA's subpart OOOOa fugitive emissions program—specifically, certain covers and closed vent systems, and thief hatches or other openings on controlled storage vessels, which are covered under 40 CFR 60.5411a or 60.5395a, rather than under the fugitive emissions requirements in subpart OOOOa. The final rule provides that if an operator chooses to comply with the EPA subpart OOOOa fugitive emissions requirements in lieu of the BLM LDAR requirements for all equipment on a lease, the operator must apply the EPA fugitive emissions requirements to sources covered under 40 CFR 60.5411a or 60.5395a as well.¹⁰⁸ Absent this requirement, these equipment covers,

closed vent systems, and openings on controlled storage vessels would not be subject to the BLM's LDAR requirements or the EPA's subpart OOOOa fugitive emission inspection requirements if the operator chose to comply with the EPA requirements in lieu of the BLM requirements.

The final rule requires operators to use an instrument-based approach to leak detection. This is consistent with the proposed rule, and with EPA, Colorado, and Wyoming leak detection requirements. Under final rule § 3179.302, operators must use an optical gas imaging device (also commonly referred to as an infrared camera), or a portable analyzer device capable of detecting leaks and used according to the specifications of Method 21, a protocol prescribed by EPA for effectively using these devices.¹⁰⁹ Use of a portable analyzer device must also be assisted by audio, visual, and olfactory (AVO) inspection, as these devices have much more narrowly-focused leak detection capabilities compared to optical gas imaging, which can be used to scan across broad arrays of equipment. The final rule includes specifications for acceptable optical gas imaging equipment, requires all instruments to be used according to the manufacturer's specifications, and requires the operator of any leak detection instrument to be adequately trained in its proper use.

Final section 3179.302 also allows any person to request and the BLM to approve the use of an alternative monitoring device, accompanied by a monitoring protocol, and, in response to comments, this section also details the information that must be included in a request. The BLM may approve an alternative leak detection device and inspection protocol, if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks, compared with optical gas imaging used as required. The BLM may approve the device for use for all or most applications, or may approve use on a pilot project or demonstration basis. Finally, the BLM will provide public notice of a request for approval of an alternative monitoring device and will post on the BLM Web site a list of each approved monitoring device and protocol, along with any limitations on its use. The BLM intends that the decision to approve the use of an alternative monitoring device would be made only at the national level, by the Director, Deputy Director, or an Assistant Director, as, once approved,

the alternative monitoring device could be used anywhere in the country.

Section 3179.303 specifies the required frequency for inspections, which is fully aligned with the requirements of Subpart OOOOa. Operators must inspect each well site at least semi-annually, with consecutive inspections spaced at least four months apart. Operators must inspect each compressor station at least quarterly, with consecutive inspections spaced at least 60 days apart.

In addition to alternative monitoring devices, the final rule allows for BLM approval of alternative monitoring programs. Specifically, like the proposed rule, the final rule allows an operator to request the BLM to approve an alternative instrument-based leak detection program in place of the program specified in the regulations. The BLM may approve the alternative program if it finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in the regulations. Because approval of inadequate alternative programs could unintentionally but significantly undermine the effectiveness of the LDAR requirements, the BLM intends that the decision to approve an alternative program would be made only by the relevant BLM State Director, or, with respect to requests that cover operations in more than one State, at the national level by the BLM Director, Deputy Director, or an Assistant Director. In addition, the BLM will post approved alternative programs online both to provide public transparency and to allow other operators to see examples of alternative programs that the BLM believes will be effective.

Section 3179.304 requires operators to repair the leaks that they find. Operators must repair a leak as soon as practicable, and within 30 days of discovery, unless there is good cause to delay the repair. When an operator repairs a leak, the operator must verify that the repair was effective within 30 days of the date of the repair using optical gas imaging, a portable analyzer using Method 21, or a soap-bubble test.

Section 3179.305 requires operators to keep records related to leak detection inspections and repairs, make them available to the BLM upon request, and submit an annual summary report on the previous year's inspection activities.

2. Changes From Proposed Rule

The final rule provisions on leak detection and repair largely track the proposal, however, we adjusted the frequency of inspections, based upon public comments along with a desire to

¹⁰⁸ See Section VII, Section by Section, for discussion of treatment of sources exempt from the EPA fugitive emissions program specified in section 43 CFR 60.5397a.

¹⁰⁹ See 40 CFR part 60, appendix A–7.

align these requirements with EPA's final rule, and made other minor adjustments. The BLM had proposed an approach in which the initial required frequency of inspection was semi-annual, but then the frequency varied for each site according to the number of leaks found. An operator that found more than three leaks in each of two inspections would have been required to increase its inspection frequency to quarterly, while an operator that found fewer than three leaks in each of two inspections would have been allowed to drop its inspection frequency to annually. A broad swathe of commenters opposed this approach in the proposed rule (as well as in the EPA's proposed OOOOa). The final rule replaces this approach with a fixed semi-annual rate of inspections for all sites other than compressor stations, and a quarterly inspection rate for compressor stations, consistent with the final OOOOa as well.

Another change from proposed to final rule concerns the effective date of the leak detection requirements. The proposed rule would have imposed the leak detection requirements as of the effective date of the rule, with the first inspection required within six months of that date. In response to comments, the final rule extends the time for initial compliance to give operators one year from the effective date of the rule to make their first inspection.

The BLM made several other changes that adopt commenters' suggestions. We added a provision allowing approval of an alternative, potentially less effective, leak detection program for an operator that demonstrates that compliance with the LDAR requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves. We also added a requirement that operators provide an annual summary report on the results of their leak inspections. Consistent with the final subpart OOOOa, the final rule also includes a new exemption from LDAR requirements for sites that contain only a wellhead(s), and no other equipment.

In addition, the BLM made various smaller changes to enhance the clarity of the final rule. The final rule has refined and clarified the specific sites and equipment subject to the leak inspection requirements. The final rule applies to all equipment handling Federal or Indian gas, upstream of and including the site where the royalty measurement point is located—whether the equipment is on or off the lease and regardless of the ownership of the equipment. The final rule also specifies that with respect to equipment

associated with the storage, measurement, or disposal of produced water, the leak detection requirements apply only to such equipment operated by the operator and located on the Federal or Indian lease.

The final rule retains and refines the proposed rule's provision allowing an operator to satisfy the leak detection requirements by complying with the EPA leak detection requirements under 40 CFR part 60, subpart OOOOa. First, the final rule provides that for new, modified and reconstructed equipment, an operator that is in compliance with the EPA fugitive emissions requirements will be deemed to be in compliance with the BLM LDAR requirements, without any requirement to file a Sundry Notice and demonstrate compliance, as the BLM had proposed. Second, it clarifies that that an operator who chooses to comply with the EPA fugitive emissions monitoring requirements in subpart OOOOa in lieu of the BLM LDAR requirements must apply the EPA requirements to all sites and equipment on a lease not already deemed in compliance with the BLM LDAR provisions.

The final rule includes this change because leaks from some types of new, modified and reconstructed equipment, such as covers and closed vent systems, and thief hatches on controlled storage vessels, are not covered by the fugitive emissions requirements under subpart OOOOa, but instead are addressed through specific provisions for storage vessel affected facilities and any associated covers and closed vent systems in subpart OOOOa—namely 40 CFR 60.5395a and 60.5411a. These provisions establish comprehensive control programs for storage vessel affected facilities, including separate and distinct inspection regimes. This final rule ensures that if an operator elects to comply with the EPA fugitive emissions requirements in lieu of the BLM leak detection requirements for equipment on a given lease, the operator must apply the EPA fugitive emissions requirements to all equipment covered by the BLM leak detection requirements, including equipment such as covers, closed vent systems, and thief hatches. Absent this provision, operators could potentially avoid any leak detection program with respect to existing sources in these categories.

The final rule also modifies the requirement in the proposed rule that operators who choose to comply with the EPA requirements in lieu of the BLM requirements must file a Sundry Notice demonstrating compliance with the EPA rule. The final rule provides that the operator need only notify the

BLM through a Sundry Notice that it is complying with the EPA rule in lieu of the BLM requirements for equipment on a lease. While the BLM needs to know for oversight purposes if an operator has elected not to comply with the BLM requirements, we agree with commenters that requiring a "demonstration" of compliance with the EPA requirements is unnecessary.

As noted earlier, the final rule also contains a more detailed definition of a "leak" than the proposed rule, as well as more detailed specifications of approved leak detection instruments and methods. In addition, the final rule separates approval of an alternative monitoring device and protocol from approval of an operator's alternative leak detection program, and it adds specificity on what is required for each of these. The final rule also adds a required minimum interval between inspections, which was not specified in the proposal, but is consistent with final subpart OOOOa. Other minor changes that align the rule with final subpart OOOOa include: A 30- rather than 15-day period for repair and follow-up inspections; additional detail on what constitutes good cause for delay of repair; and a new, two-year outer limit on the timeline for completing repairs delayed for good cause. In addition, while the proposal had required operators to verify the effectiveness of repair using the same method used to identify the leak, in response to comments, the final rule allows operators to use any approved monitoring instrument or the soap bubble test to verify the effectiveness of repair.

3. Significant Comments

Commenters provided many detailed comments on numerous aspects of the leak detection program. This section highlights the most significant comments; additional comments are addressed in Section V. and the Response to Comments document. Comments addressed here include: Coverage of the program (*i.e.*, which types of operations and equipment should be included in the program); program structure (how inspection frequency is to be determined, and the required frequency of inspection); the instruments and methods to be used for leak detection; opportunities for use of new instruments and methods; requirements for repairs; and potential exemptions from the requirements.

a. Coverage

Comments: Many commenters addressed the coverage of the program. Some commenters supported applying

the program broadly to catch as many leaks as possible, while others urged the BLM to use risk-based or other approaches to target the program more narrowly to exclude certain types of sites and equipment and/or to focus on the most likely sources of significant leaks and improve the program's cost-effectiveness.

Some commenters urged the BLM to exclude sites where the commenters asserted that there is less likelihood of leaks and/or smaller leaks. For example, they suggested excluding oil or gas low production wells (also commonly called "marginal" or "stripper" wells) that produce less than 15 barrels of oil equivalent per day; oil well sites that produce crude oil with either an API gravity less than 18° or a GOR less than 300 scf/bbl; and sites that have just wellheads without co-located production equipment.

Some commenters alleged that wells producing less than 15 BOE per day do not have the potential to emit at the same rate as larger producing facilities or enough production to have significant waste from leaks. Hence, they argued, the costs of LDAR for a marginal well far outweigh any benefits in terms of recovery of lost gas. One commenter stated that sites with marginal wells have less equipment on-site, fewer components that could leak, and thus a smaller likelihood of leaks. Commenters also noted that the EPA proposed to exclude low production wells from its fugitive emissions program, and argued that the BLM should do the same. Some asserted that these wells are only marginally profitable to begin with, and the costs of LDAR could make these wells uneconomical, leading to premature shut-in and a loss of mineral resources. Commenters also recommended that, at minimum, these low production wells should be subject to more relaxed LDAR requirements, such as one-time or annual instrument-based inspections, possibly in combination with AVO inspections, rather than semi-annual instrument-based inspections.

Commenters also asserted that the requirement to inspect for leaks should be limited to certain specified facilities or components because those facilities or components are more likely to leak, and to have higher leak rates. Various commenters recommended that the rule focus on valves, open-ended lines, pumps, or components with potential to operate at or above sales line pressure. Other commenters suggested limiting the LDAR requirements to facilities with components that tend to vibrate or are in thermal operation, and specifically those with controlled storage vessels,

compressors, and/or vapor recovery units. Commenters also asserted that the 2013 Carbon Limits Study and the 2014 CAPP study show that compressor stations leak more than well sites, and that components tend to have greater average emissions when subjected to frequent thermal cycling, vibrations or cryogenic service.

In addition, commenters urged the BLM to exclude from the LDAR requirements storage vessels that would not be required to have emission controls under the proposed BLM and final EPA rules (*i.e.*, tanks with the potential to emit less than 6 tpy of VOCs), and equipment designed to vent, such as pneumatic pumps and pneumatic controllers, as well as other types of equipment and sites discussed in Section V.

On the other hand, other commenters strongly opposed narrowing the applicability of the LDAR program, and in particular, excluding low production wells from that program. These commenters cited recent peer-reviewed studies concluding that the occurrence of leaks is fairly random; the probability of a production site being among the highest emitting sites does not increase uniformly with production volumes; and relatedly, both high- and low-producing sites can be associated with high-emitting events. These commenters provided estimates of calculated methane emissions from low production and non-low production wells nationwide based on data reported to EPA and the EPA GHG Inventory, finding that 83 percent of the total methane emissions from oil and gas wells was attributable to low production wells, while only 17 percent was attributable to other wells. The commenters also provided calculations based on an EPA estimate of the cost of semi-annual inspections. These calculations showed, the commenters argued, that even for low production wells, the cost of LDAR compliance would on average be only a small fraction of the annual revenue per well. These commenters further argued that the majority of all existing wells, including those on public lands, meet the definition of "marginal," and that excluding such wells from the LDAR requirements would allow large amounts of gas waste to continue unabated.

Response: The final rule covers largely the same types of sites and equipment as the proposed rule, with a few small exceptions. As discussed above, natural gas leaks during the oil and gas production process are wasteful and can cause significant environmental harm. The BLM is adopting a broadly

applicable LDAR requirement to reduce leaks as much as reasonably possible.

The BLM carefully considered numerous and varied approaches that might improve the program's cost-effectiveness by narrowing the coverage of the LDAR program while maintaining its benefits. In evaluating suggestions to exclude certain types of sites from the LDAR requirements, the BLM looked for evidence indicating that the frequency of leaks, size of leaks, and overall amounts of gas lost through leaks relate to the type of site being inspected. In requesting comments on this topic, the BLM had urged commenters to present data or other information to support their assertions, and specifically requested "information regarding the relationship between well production and levels of leaked methane from a site."¹¹⁰

With respect to suggestions that the BLM exclude low production wells from the LDAR requirements, we note that roughly 85 percent of wells on Federal and Indian leases are classified as low production wells (*i.e.*, produce 15 barrels of oil equivalent per day or less). Thus, unless these wells are, in fact, unlikely to leak significant volumes of gas, a decision to exclude these wells from the LDAR program would have a significant negative effect on the waste reduction benefits of this rule.

The information submitted by commenters on low production wells does not support their exclusion from the LDAR requirements. As discussed above, some commenters suggested, without providing supporting data, that sites with low production would be expected to lose smaller quantities of gas overall from leaks. However, others disagreed, pointing to the Zavala-Araiza study. As discussed in section III, this study showed that the probability of a production site being among the highest emitting sites does not increase uniformly with production volume, and it found significant opportunities to reduce losses by finding and fixing leaks at lower production wells. These commenters noted that the Lyon et al. study also demonstrates that both high- and low-production sites can be associated with high-emitting events with roughly 15 percent of the identified high-emissions sites in that study being associated with low production wells. Commenters urging an exclusion for low production wells did not provide data refuting these findings. Without additional data on this issue, the BLM simply cannot conclude that low-production sites pose

¹¹⁰ Proposed Rule at ____.

low leak risks and therefore merit exclusion from semi-annual LDAR.

As commenters noted, the EPA had proposed to exclude wells with less than 15 barrels a day oil-equivalent production from the OOOOa fugitive emissions requirements. In the final OOOOa rule, however, the EPA reached the same conclusion as the BLM and dropped the proposed exemption. EPA found that the record for the final rule did not support excluding these wells from the fugitive emissions requirements. In the preamble to the final rule, EPA stated: “We did not receive data showing that low production well sites have lower GHG (principally as methane) or VOC emissions other [sic] than non-low production well sites. In fact, the data that were provided indicated that the potential emissions from these well sites could be as significant as the emissions from non-low production well sites because the type of equipment and the well pressures are more than likely the same.”¹¹¹ Thus, including low production wells under the BLM requirements also maintains consistency between the BLM and EPA rules.

In addition, the BLM does not anticipate a significant number of individual well shut-ins or any lease-wide shut-ins as a result of the LDAR requirements, even with respect to low production wells. As discussed in the RIA, third-party providers offer LDAR services at a relatively modest cost, and operators may recoup some of the costs of the program through the saved gas. Also, operators have the option to design and request approval of an alternative LDAR program that is less costly for their particular circumstances, provided they can demonstrate that their alternative program is equally effective. Finally, an operator may request approval of an alternative leak detection program that is *not* as effective as the BLM’s requirements, if the operator demonstrates that compliance with the BLM’s LDAR requirements or an equally effective alternative would be so costly as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under a lease.

With respect to oil well sites that produce crude oil with either an API gravity less than 18° or a gas-to-oil ratio (GOR) less than 300 scf/bbl, as with low production wells, the BLM does not have data to be able to conclude that these oil well sites are likely to be responsible for a sufficiently small quantity of gas lost through leaks that they should be excluded from the LDAR

requirements or subject to less stringent requirements.

The BLM does, however, agree with commenters that the risk of leaks is substantially lower at sites with only a wellhead, compared to sites with one or more pieces of production equipment, such as a tank, compressor, dehydrator, or vapor recovery unit. Industry commenters asserted that there is a greater likelihood of leaks from moving or vibrating equipment, or from equipment in thermal operation, because a valve may stick open, vibrations may cause a connection to loosen, or heat may cause a seal to degrade. While the BLM does not have data about the likelihood and/or size of leaks in these circumstances, the BLM’s experience in the field supports the general point. In addition, studies have identified many leaks from the identified equipment, including tanks, compressors, and dehydrators.¹¹² At a wellhead without co-located production equipment, there are significantly fewer components capable of leaking. Exempting these sites from the LDAR requirements will provide some cost savings for operators, and based on the information available, the BLM believes that realizing those savings will have only a minimal impact on the overall benefits of the LDAR program. Moreover, excluding wellhead-only sites is directionally consistent with some of the other suggestions for narrowing program applicability, such as focusing on sites with tanks or compressors. In the final OOOOa rule, the EPA reached the same conclusion and exempted wellhead-only sites from its fugitive emissions requirements.

Other than the exclusion for sites with only a wellhead, the BLM is not limiting the LDAR requirement to covering only certain specified types of equipment or equipment components. BLM does not believe that it has sufficient information to appropriately distinguish between types of production equipment or equipment components on the basis of the likely quantity of gas lost through leaks. In addition, once an operator is at a site conducting a leak detection inspection, inspecting all of the on-site equipment should add little time and cost, particularly when the operator is using optical gas imaging. The BLM believes that trying to identify and exclude specific types of equipment from inspection adds complexity to the inspection system and introduces the

likelihood of errors that would allow leaks to escape detection. It is simpler and more effective for operators simply to inspect all of the equipment located at a site. If, however, an operator has data that show it is possible to conduct an equally effective LDAR monitoring program while excluding certain types of equipment, or sites that only have that type of equipment, the operator may submit a proposed alternative monitoring protocol to BLM for review and potential approval.

Some commenters pointed out that pneumatic controllers are designed to vent and argued that these releases should not be considered leaks. The BLM agrees, and has excluded normal operation of this equipment from the final rule’s leak definition. The BLM notes, however, that pneumatic controllers can and do malfunction, such as getting stuck in an open position, which can lead to unnecessary losses of gas. Additionally, as other commenters stated, these malfunctions can be identified through leak inspections. The BLM, therefore, believes it would be inappropriate to exclude this equipment from the rule’s LDAR requirements.

Commenters make similar arguments with respect to uncontrolled storage vessels (*i.e.*, tanks that are not required to capture or flare their releases), which are allowed to release up to 6 tons per year of VOCs. Commenters argued that venting from an uncontrolled tank is necessary for proper relief of overpressure. Again, the BLM believes that the commenters’ concerns should be addressed through the definition of a “leak,” which now excludes releases due to normal operation of a storage vessel or pressure relief valve, rather than by removing uncontrolled storage vessels from coverage under the LDAR program.

As an initial point, uncontrolled tanks are not open to the atmosphere—rather, they are typically vapor tight, slightly pressurized, and equipped with a thief hatch to allow measurement of production and a pressure relief valve to allow gas release of overpressure. This standard industry practice, which preserves the product and prevents unlimited release of vapors, was recently reinforced in the BLM’s oil measurement rule, 43 CFR subpart 3174. The oil measurement rule requires oil storage tanks, hatches, connections, and other access points to be vapor tight, and it sets specifications for pressure relief valves. Using leak inspections to ensure that thief hatches are closed, seals are sound, and pressure relief valves are operating properly will reduce waste of gas.

¹¹² See, e.g., Warneke, C., Geiger, et al.: Volatile organic compound emissions from the oil and natural gas industry in the Uintah Basin, Utah: oil and gas well pad emissions compared to ambient air composition, *Atmos. Chem. Phys.*, 14, 10977–10988, doi:10.5194/acp-14-10977-2014, 2014.

¹¹¹ 81 FR at 35856.

Moreover, as discussed in section III., recent studies indicate that tanks are a very significant source of lost gas. As noted earlier, the Lyon et al. study, a helicopter survey of over 8,000 oil and gas wells, reported that over 90 percent of the detected emission incidences were from tanks. Similarly, the Colorado State University studies found substantial venting at tanks, and the City of Fort Worth study found that thief hatches are the largest source of fugitive emissions. The BLM believes that including both controlled and uncontrolled storage tanks in the LDAR program will allow operators to identify leaks and malfunctions that allow significant quantities of gas to be lost.

b. Definition of a Leak

Comments: Many commenters noted that the proposed rule did not define a “leak,” and they asserted that this would cause confusion, variations in interpretations, and inequitable implementation of these provisions, as well as potentially requiring repairs for very small releases. Some commenters also urged the BLM to define a leak to distinguish it from normal, intended operation (e.g., pneumatic device actuation, crank case ventilation, etc.).

Many commenters suggested that BLM identify the quality or quantity of a release that would trigger repair requirements under the leak detection program. Commenters generally supported defining a leak as any visible hydrocarbon emission detected by use of an optical gas imaging instrument, or the formation of visible bubbles when equipment is tested with soap solution. With respect to portable analyzers, commenters generally supported setting a numeric threshold, but differed on the number. Some commenters urged the BLM to use 10,000 ppm of hydrocarbon as the threshold for a “leak,” while others recommended using 500 ppm, stating that this is protective and consistent with the Colorado requirements.

Response: The BLM agrees that the rule should define what constitutes a “leak” and has included a definition in the final rule. As noted earlier, the definition excludes losses due to normal operation of equipment intended to vent, provided the releases do not exceed the quantities and frequencies expected during normal operations. The definition further clarifies that “leaks” include releases due to operator errors or equipment malfunctions.

The purpose of a leak detection program is to find and fix losses of gas that are not part of normal operations. A prudent operator should conduct reasonable levels of monitoring, staff

training, and preventative maintenance to minimize the occurrence and duration of such losses. We are adopting a definition of “leak” sufficiently broad in coverage to give operators the incentive to avoid wasteful losses, whether they occur due to aging equipment or due to operator error, including errors in appropriately sizing equipment to handle the quantities of production. As found in multiple recent surveys, all of these types of unnecessary losses occur and they are frequently identified using leak detection methods.

The BLM has also slightly modified the definition of “leak component,” and clarified that the inspection requirement applies to leak components at a covered site. Industry commenters had requested that the BLM limit the inspection requirement to specific components on a site. For the reasons previously discussed, the BLM believes it is reasonable to require operators to inspect all pieces of equipment that have the potential to leak gas and that can be tested for leaks. Moreover, as discussed in the proposed rule, repairing leaks generally pays for itself over a reasonably short time-frame through gas savings. To provide additional clarity, the BLM has added to the definition of “leak component” examples of specific types of components that are covered, including but not limited to: Valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

With respect to leak thresholds, and consistent with the proposed rule, EPA and State provisions, and commenters’ suggestions, the BLM is defining “leak” as including “a visible hydrocarbon emission” detected using optical gas imaging, or a release of gas forming visible bubbles with soap solution. Including soap solution allows operators to deploy an additional detection methodology that is inexpensive and effective in confirming that leak repairs have worked. The BLM agrees with commenters that portable analyzers can detect extremely small releases, so the rule needs to specify a threshold for the size of leak that requires repair. The final rule identifies 500 ppm as the appropriate threshold. This threshold is consistent with both the Colorado and EPA fugitive emissions programs, and aligning the BLM and other Federal, State and tribal programs is important to enhance clarity and consistency and reduce confusion and costs. Additionally, the BLM does not believe that this threshold is too

burdensome for operators because once a leak is identified, repairs are generally cost-effective. On average, many repairs pay for themselves in terms of gas savings, and even if some smaller leaks may cost more to repair than they return in gas savings, we generally expect that the benefits to the public exceed the costs of repair.¹¹³

c. Inspection Frequency

Comments: Numerous commenters opposed the BLM’s proposed approach to the frequency of inspections, under which the frequency would initially be semi-annual, but then could increase or decrease depending on the number of leaks found. Commenters stated that this approach: Is not consistent with Colorado and Wyoming leak detection programs; is confusing, overly complicated, and burdensome; inappropriately relies on past performance, which is not indicative of future performance due to the random nature of leaks; creates an incentive for operators not to find leaks; and incorrectly assumes that loss through leaks is homogeneously distributed, rather than heterogeneously distributed, which means that just one leak can be responsible for the majority of the waste.

While commenters generally supported fixed frequency inspections, different commenters supported different frequencies. Some called for quarterly inspections, while others preferred annual. Still others suggested an approach like Colorado’s, which requires different frequencies, from monthly to once, depending on the estimated uncontrolled VOC emissions from the highest emitting storage tank at a site.

Commenters supporting a requirement for quarterly inspections asserted that: The costs are reasonable (and lower than calculated by the BLM); Colorado, Wyoming, and other states already require quarterly inspections for many sites; and optical gas imaging is most effective when performed frequently, which can make up for its tendency to miss smaller leaks compared to other leak detection methods. Commenters who recommended annual inspections asserted that: The costs of LDAR programs outweigh the benefits (and are higher than calculated by the BLM); operators find far fewer leaks after the initial inspection, so repeated inspections produce diminishing

¹¹³ Carbon Limits AS report entitled, *Improving utilization of associated gas in US tight oil fields* by Anders Pederstad, April 2015 found on the internet at: http://www.catf.us/resources/publications/files/Flaring_Report.pdf.

returns; and even requiring annual inspections will likely cause operators to prematurely shut-in some wells. Commenters also objected to inspection frequencies that differ from EPA and State requirements.

Response: Upon review of the comments, the BLM agrees that requiring leak inspections at a fixed frequency will make the program easier to implement, less burdensome for operators, and more effective. The BLM has concluded that requiring semi-annual inspections is a reasonable approach that balances the leak-detection advantages of more frequent inspections against the associated costs. Further discussion of the cost-effectiveness of this approach is provided in the RIA.

Requiring semi-annual inspections also aligns the BLM and EPA requirements. The BLM notes that it is not possible to align the BLM program's inspection frequency with both EPA requirements and all State requirements because the EPA and States have different inspection frequencies, and frequencies differ even among the States and among different EPA leak detection programs for different sources. The BLM expects that States with comprehensive and effective LDAR requirements that differ from the requirements of this rule are likely to obtain variances under section 3179.401, which would eliminate conflict concerns. Also, as a legal matter, operators on a Federal or Indian lease, unit, or communitized area will be subject to EPA fugitive emissions requirements for their new, modified and reconstructed facilities and BLM LDAR requirements for their existing facilities. By aligning the timing of the BLM and EPA requirements, and separately allowing operators to comply with EPA requirements in lieu of BLM requirements, the rule provides operators with options for implementing a single leak inspection program across all of their facilities on a lease, unit, or communitized area.

d. Instruments/Methods for Leak Detection

Comments: Commenters generally supported allowing the use of optical gas imaging for leak detection, but differed on whether also to allow portable analyzers, or portable analyzers deployed according to Method 21, as an alternative instrument for leak detection. In addition, most commenters opposed the BLM's proposal to allow operators with less than 500 wells within the jurisdiction of a BLM field office to use portable analyzers in lieu of optical gas imaging. Some argued that Method 21 should be an option for all

operators, while others argued that the BLM should only allow the use of optical gas imaging, stating that portable analyzers are less effective. Some commenters urged the BLM also to allow use of AVO inspections as the method of leak detection.

Response: Upon reviewing the comments, the BLM has concluded that portable analyzers, if used appropriately and supplemented by AVO inspection, can be as effective as optical gas imaging for leak detection. Thus, the BLM has revised the proposed approach to allow operators to use optical gas imaging, or to use portable analyzers according to Method 21 and supplemented by AVO inspection. The BLM believes that concerns about the accuracy of portable analyzers are ameliorated by requiring the use of Method 21, Determination of Volatile Organic Compounds Leaks, which is a procedure established by the EPA for detecting VOC leaks from process equipment using a portable detecting instrument.¹¹⁴ Method 21 contains requirements for equipment specifications, performance, calibration, and use to ensure that the analyzers are used properly and will identify leaks that are occurring. The BLM agrees with commenters that allowing the use of portable analyzers according to Method 21 will reduce costs by aligning with existing EPA, State, and local requirements. The BLM did not receive information supporting some commenters' contention that AVO inspections can be as effective as a technology-based program, and thus the final rule does not allow operators to inspect for leaks only using AVO.

e. Approval of Alternative Leak Detection Instruments/Methods and Alternative Leak Detection Programs

Comments: Many commenters strongly supported the provisions allowing the BLM to approve additional technologies and methods for leak detection when they are found to be effective, and they urged the BLM to establish clear criteria for rapid approval of alternative monitoring devices and new technology. Some commenters included alternative monitoring programs in their comments on this topic. Commenters noted ongoing research and development investment in new monitoring technologies and methods, such as the DOE's ARPA-E MONITOR program and the Environmental Defense Fund's

Methane Detectors Challenge,¹¹⁵ and they stated that several new technologies for continuous or periodic monitoring may become commercially available within the next 2 years.

Many commenters urged the BLM to detail the information that must be included in an application for approval of alternative technologies, as well as the process and criteria that the BLM would use to respond to an application. Various commenters emphasized that the process should be rapid, efficient, transparent, predictable, consistent, and rigorous. In addition, commenters suggested that any person should be able to submit an application, and that any operator should be able to use an approved technology.

Response: The BLM agrees on the need for a clear, consistent, and rigorous process and criteria for approval of alternative leak instruments and methods, and we have modified the regulations accordingly. The final rule provides that any person may request approval of an alternative monitoring device and protocol for using that device by submitting a Sundry Notice to the BLM that contains information that the BLM would need to evaluate the effectiveness of the alternative device compared to the base program.

Once a device is approved for general use, any operator may use it without the need for additional notification or approval. Because an approved device could potentially be used by an operator on any Federal or Indian lease, unit, or communitized area, the BLM intends that the request will be evaluated by the BLM Director, Deputy Director, or Associate Director. The BLM may approve the device if the BLM finds that the device would achieve equal or greater reduction of gas lost through leaks compared to optical gas imaging used in a leak detection program that meets the rule requirements. The BLM believes that this is an appropriate criterion for approval because it ensures that the program will achieve its leak reduction goals regardless of the type of leak detection device used. The BLM understands that different types of devices may achieve equivalent results. For example, a device that monitors continuously, but is less sensitive than optical gas imaging, might achieve results equivalent to optical gas imaging due to the gas savings from early detection. The information submitted must be sufficient to support such a

¹¹⁴ U.S. EPA, *Leak Detection and Repair, A Best Practices Guide* (Oct. 2007) (<https://www.epa.gov/sites/production/files/2014-02/documents/ldarguide.pdf>). 40 CFR part 60, Appendix A-7.

¹¹⁵ American Petroleum Institute (API). Comments on the "Waste Prevention, Production Subject to Royalties, and Resource Conservation" Proposed Rule. Submitted April 22, 2016. Docket ID BLM-2016-0001-9073; Available at [regulations.gov](https://www.regulations.gov).

finding, however. Finally, the rule states that the BLM will post online each approved alternative monitoring device and protocol, along with any limitations on its use.

The BLM also clarified the distinction between alternative leak detection devices or methods and alternative leak detection programs, which are both included in the proposed and final rules. Separate from the provisions for approval of an alternative device, the final rule allows an operator to request BLM approval of an alternative leak detection program that uses optical gas imaging, a portable analyzer or another approved device according to approved specifications. As with an alternative device, the final rule spells out the information that an operator would need to submit to request approval of an alternative program. The BLM intends that the request would be reviewed and potentially approved by the BLM State Director (or Director, if the request covers operations in more than one State). The BLM could approve an alternative leak detection program if the BLM finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared to the leak detection program required under the rule. The rule does not allow other operators to use an alternative leak detection program requested by and approved for a specific operator, as the results may not be transferable. The BLM expects each operator to make a detailed showing, specific to their particular circumstances, that an alternative program would be equally or more effective. For example, an operator might propose a program that included more frequent inspections for some sites and less frequent for others, compared to the final rule requirements, or an operator may be able to deploy an alternative leak detection device or system, approved by the BLM, on a continuous basis and achieve results that would allow for less frequent inspections using optical gas imaging.

f. Timing

Comments: Several commenters recommended that the BLM extend the phase-in period for the proposed LDAR program. They stated that operators or contractors will need time to ramp up LDAR efforts, including acquiring the necessary equipment and hiring and training inspectors. Commenters variously recommended phase-in periods of one year or three years.

Response: The BLM agrees and has modified the final rule to allow for a one year phase-in period. Thus, the first round of leak detection inspections

must be completed by January 17, 2018. The BLM notes that equipment manufacturers, service providers, and operators are already taking action to produce and procure leak detection equipment and establish programs in response to EPA's OOOOa requirements published on June 3, 2016. Under those requirements, all operators with new, modified or reconstructed facilities will already be conducting leak detection inspections as of June 3, 2017. Expanding such programs to cover additional well sites should take less time than the initial development and deployment. The BLM also believes that one year from the effective date of the rule will provide ample time to manufacture the needed equipment, given the number of additional sources that will be covered by this rule.

g. Repair Requirements

Comments: Commenters raised several primary concerns. First, many commenters opposed the BLM's proposal to require that an operator verify a repair using the same method used to detect the leak. They noted that it may be more efficient to allow the operator to test a repair using, for example, a soap bubble test than to bring the leak surveyor back to the site to check the repair.

Second, some commenters urged the BLM to allow 30 rather than 15 days for leak repair. Commenters stated that some leaks require more time to repair due to safety issues, availability of personnel or replacement parts, hostile weather conditions, or other logistical issues related to sites being remote, dispersed, unmanned, and un-electrified. One commenter argued that if an operator contracts with a consultant to perform the monitoring, the consultant will not be able to make the repair at the time the leak is detected, thus requiring more time to complete the repairs.

Third, commenters requested more clarification on what would constitute "good cause" for delay of repair, noting that where the operator must blowdown (depressurize) the equipment before making the repair, this could release more gas than would be released by the leak prior to the next scheduled equipment blowdown.

Response: The BLM modified the final rule to address each of these concerns, as well as align the rule with the final subpart OOOOa. The BLM agrees that optical gas imaging, portable analyzers using Method 21, and the soap bubble test are all effective means to identify whether a leak has been repaired, and providing operators the

flexibility to select a verification method should minimize costs.

The BLM also has modified the final rule to provide operators up to 30 days to make a repair, although the rule still requires operators to repair leaks as soon as practicable. We recognize that some State LDAR programs require repairs to be made sooner—within 5 to 15 days of finding a leak. The requirement to repair leaks as soon as practicable means that many leaks will be repaired upon discovery or within a shorter timeframe than 30 days, as many leaks can be repaired on the spot or as soon as a maintenance technician can get out to the site. However, according to industry commenters, allowing up to 30 days will meaningfully reduce the time and costs involved in filing Sundry Notices for leaks that could not be fixed in 15 days but could be fixed in 30.

The final rule also provides additional detail regarding what constitutes "good cause" for delay of repair beyond 30 days. Good cause for delay exists if repair within 30 days is technically infeasible; would require a pipeline blowdown, a compressor station shutdown, or a well shut-in; or would be unsafe to conduct during operation of the unit. In addition, the operator must complete the repair at the earliest opportunity, and in no case may the repair be delayed beyond two years. Technical infeasibility includes a need to order parts, in which case the operator must complete the repair as soon as the parts are available. Where the cause for delay is the need to blowdown or shut-down equipment, the operator must complete the repair during the next equipment blowdown or shutdown that occurs after the leak is found.

h. Interaction With EPA Fugitive Emission Requirements and State LDAR Requirements

Comments: Many commenters argued that the proposed BLM LDAR program overlaps and in some ways conflicts with the EPA fugitive emissions requirements under OOOOa and various State LDAR requirements. These commenters urged the BLM to drop the LDAR program altogether or, at minimum, align the BLM requirements with the EPA and State requirements and/or allow operators to comply with EPA or State requirements in lieu of the BLM requirements.

Response: While the BLM cannot abdicate its statutory responsibility to ensure safe, responsible, and nonwasteful production of public oil and gas resources, the BLM has worked closely with the EPA and consulted with States to align the regulations as

much as possible, consistent with the agencies' separate statutory authorities. In final form, the EPA and BLM programs use the same criteria to identify what constitutes a leak that must be repaired, and they require operators to use the same types of leak detection equipment, inspect the same types of sources at the same frequencies, and repair leaks within the same timeframes. In addition, the final rule provides that operators complying with EPA requirements for new, modified and reconstructed equipment are deemed in compliance with the BLM requirements for such equipment, eliminating the possibility of overlap where both regulations apply. Also, the final rule gives operators the option to comply only with the EPA requirements at existing facilities as well.

The BLM notes that there are a few small differences between the BLM and EPA programs, but these should not increase compliance burdens for operators. First, while the programs both cover largely the same sources, the programs differ somewhat in their coverage. The BLM LDAR provisions apply to all covers, closed vent systems, and storage vessels, while the EPA fugitive emissions requirements only apply to covers and closed vent systems not subject to § 60.5411a, and thief hatches or other openings on a controlled storage vessel not subject to § 60.5395a. Subpart OOOOa has a separate, detailed set of requirements in § 60.5411a for sources covered by that section, and another set of requirements in § 60.5395a for storage vessel affected facilities, and section 60.5416a prescribes a separate and different leak inspection regime for these sources.

For waste reduction purposes, the BLM did not believe it was necessary to adopt separate requirements for storage vessels, covers and closed vent systems. Instead, the BLM elected to require controls for storage vessels with high levels of gas loss and to include storage vessels, covers, and closed vent systems under the LDAR program. Thus, the final rule provides that operators that choose to comply with the EPA fugitive emissions program in lieu of the BLM leak detection program for both new and existing equipment on a lease must apply the EPA fugitive emissions requirements to all equipment covered by the BLM requirements, including storage vessels, covers and closed vent systems, to ensure that these types of equipment are covered by at least one of the agencies' leak detection requirements.

Second, a few elements of the BLM LDAR requirements are less prescriptive than the EPA requirements, but again,

the BLM does not believe that these differences would impose any additional burdens on operators. The BLM regulations do not require operators to develop a monitoring plan or specify their walking path for inspections, nor do they include requirements for scheduling inspection of components that are difficult-to-monitor or unsafe-to-monitor. The BLM record-keeping requirements are also less specific than the EPA requirements. The BLM regulations do not provide specific direction to operators on the proper calibration and use of leak detection instruments, instead simply requiring operators to operate the instruments according to the manufacturer's specifications. Also, the BLM requirements define "leak component" slightly more broadly than the EPA definition of "fugitive emissions component." For existing equipment that is not also subject to the EPA requirements, the final rule provides operators the choice of complying with the EPA or the BLM requirements, allowing operators to comply with a single set of requirements for all of their sources if they so choose, or to comply with the somewhat less prescriptive BLM requirements with respect to their existing sources.

With respect to State leak detection requirements, the BLM notes that because requirements differ both among the individual States and between the EPA and the individual State rules, it is not possible to align the BLM requirements with all of the other potentially applicable requirements. In addition, the BLM does not believe it is appropriate to exempt operators from the BLM requirements if they are subject to any State requirement relating to leak detection, as some commenters suggested. That approach would not ensure achievement of an equivalent reduction in gas losses. Instead, the final rule has a variance provision that allows State or local requirements to substitute for any of the BLM requirements under these rules, upon a showing that the State or local requirement at issue would perform at least equally well in terms of reducing the 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.

C. Liquids Unloading at New Wells

1. Requirements of Final Rule and Changes From Proposed Rule

The requirements to reduce venting from liquids unloading activities at natural gas wells are generally discussed in Section VII. Section by Section. This

section highlights one significant change to those provisions from the proposed rule. In the final rule, liquids unloading activities at new wells are subject to the same best practices and reporting requirements as those at existing wells. The BLM had proposed to prohibit liquids unloading through manual well purging at new wells drilled after the effective date of the rule, but we are not carrying this proposal forward into the final rule.

2. Significant Comments

Comments: Many commenters opposed the proposed well purging prohibition for wells drilled after the effective date of the rule. These commenters stated that even with optimized liquids unloading management and a highly sophisticated automated system, some purging would still be necessary. One commenter asserted that there are a large number of different technologies, tools, and practices for liquids unloading that are matched to an individual well's characteristics at each stage of its lifecycle (e.g., wellbore design, tubular design and condition, use of packers, and the frequency of unloading needed to maintain or increase production), and that no single technique will be adequate or appropriate across the full lifecycle of a well. Others argued that it is inappropriate to have different standards apply to similar wells depending on the date on which they are drilled.

Several commenters apparently assumed that the prohibition on well purging would effectively require operators to install a plunger lift system during initial well construction, and these commenters provided multiple reasons that would not be appropriate. First, they asserted that new wells are not likely to require liquids unloading until later in the life of the well. Second, they argued that the characteristics of the well at the time that deliquification is needed impact the technical feasibility and cost of using methods other than purging for liquids unloading, and that operators are not likely to know during initial construction which option is optimal. Third, commenters contended that installing plunger lift systems at initial construction would also "lock in" technology choices that may preclude the use of more appropriate or improved technology when deliquification is needed. Lastly, commenters asserted that even if equipment was installed on new wells to accommodate plunger lifts, by the time liquids unloading is required, the equipment may need to be fixed or replaced.

Other comments supported BLM's proposal to prohibit purging during liquids unloading activities at new wells. They stated that operators could effectively design wells and deploy mitigation technologies in a way that would eliminate emissions, and that these technologies are cost effective. Citing datasets showing that a small minority of wells are responsible for a large amount of venting during liquids unloading events, these commenters also argued that the BLM should address this issue by applying the purging prohibition to these high-emitting existing wells as well.¹¹⁶

Response: Upon reviewing the information provided by the commenters, the BLM has determined that it is not appropriate to prohibit manual well purging at new wells. It is often less expensive to design in performance specifications (such as no purging) than to retrofit an existing source. However, in this case, the BLM agrees with commenters that there is no single technology or set of technologies that could appropriately be deployed at all new gas wells to avoid manual purging later in the well's life. The BLM did not intend the proposed purging prohibition to force all new wells to install plunger lift systems, and we do not believe that would be a cost-effective way to minimize venting from liquids unloading activities.

D. Variances Related to State and Tribal Regulations

1. Requirements of Final Rule

Like the proposed rule, the final rule provides a variance procedure to allow an equally or more effective State, local government, or tribal requirement to substitute for the comparable BLM requirement under this subpart. The BLM may grant a variance request submitted by a State or tribe if the BLM State Director finds that the State, local government, or tribal rule or regulation would perform at least as well as the relevant provision of the BLM rule 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.

The rule identifies what a State or tribe would need to include in a request for a variance. The request must identify the provision or provisions of the BLM requirements from which the State or

tribe is requesting a variance, and must identify the State, local, or tribal provisions that would substitute for the BLM provision or provisions. The variance request must also explain why the variance is needed, and demonstrate how the State, local or tribal rules would perform at least as well as the BLM provisions they would replace.

2. Changes From Proposed Rule

The variance provisions in the final rule largely track the proposed rule, with a few additions and clarifications. The criterion for approval of a variance request in the proposed rule was a determination that the State or tribal regulation "meets or exceeds the requirements of the provision(s) from which the State or tribe is requesting the variance." The final rule requires instead a finding that the State or tribal rule "would perform at least equally well 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, compared to the particular provision(s) from which the State or tribe is requesting the variance." The final rule changes the phrase "any individual provision of this subpart" to "any provision(s) of this subpart," to make clear that a variance request can apply to a specific provision or a group of provisions.

The final rule also: Allows local government requirements, in addition to State and tribal requirements, to support a variance request and substitute for BLM requirements; adds a requirement that the State or tribe must notify the BLM of any substantive changes to the State, local government, or tribal rules to be applied under the variance; and clarifies that a variance allows State, local government, or tribal rules to apply in place of the BLM requirements, but does not eliminate Federal enforcement of waste prevention requirements on Federal or Indian leases, units, or communitized areas. Rather, under a variance, the BLM has the authority to enforce the rules identified by the State, locality, or tribe as if the requirements were BLM regulations. The final rule further clarifies that State, local, and tribal enforcement of their own regulations would not be affected by the BLM's approval of a variance.

3. Significant Comments

a. Criteria for Variance Approval and Scope of Variance

Comments: Several commenters expressed concerns with the proposed

criteria for BLM approval of a variance request. Many commenters stated that a patchwork of State, Federal, and tribal regulations could cause compliance difficulties and confusion for both the regulators and the regulated entities. These commenters requested that the variance approval criterion be less restrictive, and opposed the proposed language stating that the State or tribal regulation must "meet or exceed" the requirements of this rule. Stating that many of the State and tribal regulations that limit venting and flaring are qualitative, not quantitative, commenters asserted that determining what "meets or exceeds" the BLM's requirements would be arbitrary. Instead, some commenters suggested that the BLM change the language to "is consistent with the intent of," stating that this would allow State regulations that meet the intent of the proposed rule, and are adequate and complete in achieving similar goals, to meet the variance criterion.

Other commenters suggested changes to make the variance application and approval process more restrictive, or opposed allowing variances altogether. One commenter supported the proposed criteria for approval but suggested strengthening this requirement by specifying how the BLM would evaluate the relative effectiveness of the State program, for example by requiring additional data or modeling to support a variance request. Commenters also requested that variance requests be made publicly available, and that there be an opportunity for the public to comment on the requests.

Several commenters suggested that variances should be allowed for all provisions and for entire State programs, stating that this approach would eliminate an involved process requiring variance requests for specific provisions. Others raised concerns about allowing a programmatic variance, and urged the BLM to limit variances to specific provisions of the rule or allow for a variance only when the State and BLM requirements are duplicative. They noted that in many cases State regulations do not address all of the areas covered by the BLM rule—i.e., venting, flaring, and leaks—and State and tribal regulations may also not cover the same specific sources of these losses as the BLM rule.

Response: The BLM agrees that it could be helpful to add further detail to the proposed criteria for approving a variance. In addition, the BLM agrees that it could be helpful to clarify whether several provisions could be considered together and be found, in combination, to meet the criteria for

¹¹⁶ See EDF, *Comments on Proposed Regulation Order Article 3: Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities: Part II of Comments* 8 (May 22, 2015), available at http://www.arb.ca.gov/cc/oil-gas/meetings/EDF_5-22-15.pdf.

approving a variance. The BLM has revised the variance provisions to address both of these issues.

First, the goal of the variance provision is to allow State, local, or tribal regulations to substitute for the BLM requirements where they will produce benefits at least equivalent to the expected benefits of the BLM regulations. The final rule spells out this criterion by identifying three key benefits of the BLM rules: (1) Reducing waste of oil and gas; (2) reducing environmental impacts from venting and/or flaring of gas; and (3) ensuring the safe and responsible production of oil and gas. To replace provisions of the BLM rule with a State or tribal requirement, the State or tribe must demonstrate that their rules would perform at least as well in achieving these benefits.

The final rule would allow States and tribes to request variances for specific sets of provisions, as well as individual provisions. For example, a State that had a leak detection program similar to the BLM program, but with a different required inspection frequency, might request a variance for the frequency provisions or for the whole leak detection program. The State would need to demonstrate that even if the State or local program would identify a different set of leaks compared to the BLM program, overall the State or local program would be at least as effective as the BLM program in reducing an equivalent quantity of gas losses—which would, in turn, reduce waste, reduce the environmental impacts of venting, and enhance safe and responsible production.

The final rule provisions are not, however, structured to support a broad approval of a variance for an entire State, local, or tribal oil and gas production oversight program, and the BLM agrees with the commenters who raised concerns about such an approach. The BLM recognizes that all States and many tribes regulate various aspects of oil and gas production, but different States and tribes focus on different aspects of the production process and aim for different goals. For example, one State may primarily regulate flaring, while another aims primarily to reduce methane emissions from tanks. The focus on at least equivalent performance requires a specific look at the results achieved from a particular provision or set of provisions, and it would not allow approval of, for example, a stringent flaring regime to substitute for leak prevention requirements.

The final rule does not require that variance requests be made publicly available or that there be an opportunity

for the public to comment on the requests. In the past, the BLM has not made individual variance requests publicly available or provided an opportunity for public comment.

b. Enforcement Under an Approved Variance

Comments: Commenters requested clarification on who would be responsible for enforcement if a variance were approved. Commenters stated variously that: The State or tribe should enforce the applicable State, local or tribal requirements; States and the BLM should establish memoranda of understanding for enforcement; or the BLM should retain authority to enforce any State, local, or tribal provision for which a variance is granted (noting that States or tribes might lack resources to operate effective enforcement programs).

Response: The final rule clarifies that the variance provisions allow operators to comply with State, local, or tribal requirements in lieu of BLM provisions where a variance has been approved, but the BLM is still responsible for enforcing those requirements insofar as they would replace the BLM requirements. As a practical matter, the BLM and States, localities, or tribes will likely enter into memoranda of understanding to coordinate enforcement activities and efficiently deploy enforcement resources, avoiding overlap or redundancy. Ultimately, however, the BLM remains responsible for ensuring that operators comply with Federal requirements, or in this case, State, local, or tribal requirements that the BLM deems to be an acceptable substitute for the Federal requirements.

This is in contrast to situations in which a Federal agency is authorized by law to formally delegate administration and enforcement of a regulatory program to a State agency. Here, the BLM is not delegating its regulatory or enforcement authority to the State, locality, or tribe. Rather, the BLM is recognizing that, in the absence of a variance, an operator would be required to comply with overlapping requirements. Where States, localities, or tribes have regulations in place that are different from, but at least as effective as, the BLM requirements, applying two sets of requirements is burdensome for operators and would not generate additional benefits. The variance process avoids the potential duplication and inefficiencies that could otherwise occur in this situation, while still holding the BLM responsible for ensuring that operators meet the requirements and produce the benefits

for the public that would have been provided under the BLM regulations.

VI. Additional Significant Comments and Responses

This section summarizes and responds to some additional comments on the proposed rule, that, while significant, did not lead to major changes in the final rule, and that are more cross-cutting in nature than the provision-specific comments addressed in the Section VI. Section-by-Section. These include comments on: The interaction between the BLM rule and EPA regulations; the BLM's authority to require flaring of vented gas; when gas should be considered "avoidably lost"; application of these requirements to units and communitized areas; delays in permitting for natural gas pipeline rights of way; and the interplay between this rule and the BLM's land use planning activities.

A. Interaction With EPA Regulations

Comment: Many commenters raised concerns about how the proposed BLM regulations would interact with EPA regulations on oil and gas production. Some commenters urged the BLM not to finalize some or all of the provisions of this rule, arguing that its provisions regulate air pollution, and that task should be left to EPA. Some of these commenters further suggested that if the BLM does regulate waste from oil and gas production, the BLM should exempt sources covered by the EPA regulations, and align its requirements with the EPA requirements where they overlap, to avoid duplication and inconsistencies. Some commenters highlighted specific provisions that could potentially overlap with EPA's requirements, and expressed concern about differences or conflicts between the two agencies' regulatory regimes.

Response: We discuss the necessity for BLM regulations to reduce waste from oil and gas production in section III.B.3.a of this preamble, and the BLM's legal authority for the rule in section III.C. The BLM agrees with commenters, however, that in those areas covered by both this rule and EPA requirements, the two sets of regulations should align to the maximum extent possible. We have addressed comments raising potential inconsistencies between the proposed BLM text in specific provisions and corresponding EPA text in sections VI.A of this preamble, and in the Section by Section discussion in section VII, where those specific provisions are discussed. The remainder of this section addresses comments on the generalized potential for duplication and overlap.

We do not believe that the final BLM and EPA rules impose conflicting requirements on operators, and we further believe that we have addressed issues of regulatory overlap. First, much of this rule regulates activities or areas that are not regulated by EPA. This includes the rule's provisions on routine flaring during the oil and gas production process, well maintenance and liquids unloading, well drilling, well testing, emergencies, royalties due on lost gas, royalty rates, measurement and reporting of lost gas, and operators' royalty-free use of gas. Second, where both EPA and the BLM regulate an activity, the rules largely apply to different sources. In particular, the BLM requirements on venting from pneumatic controllers, pneumatic pumps, and storage vessels all explicitly apply to existing sources that are *not* subject to EPA's subpart OOOOa, but would be subject to that rule if they were new, modified, or reconstructed sources. In addition, even where the BLM and EPA requirements address the same type of activity, but apply to different sources (existing (BLM) versus new, modified, or reconstructed (EPA)), the agencies have worked together to align the text and substance of the requirements as closely as practicable.

Third, in those few instances in which both agencies regulate an activity and could potentially cover the same source—specifically well completions and leak detection—the BLM final rule provides that an operator can comply with just one set of requirements. Specifically, the rule aligns the BLM's requirements with the corresponding EPA requirements to a substantial degree, and also provides that an operator will be deemed to be in compliance with the BLM rules if the operator complies with the applicable requirements of subpart OOOOa.

Comment: Commenters noted that in addition to the existing EPA regulations of new, modified, and reconstructed air pollution sources at oil and gas facilities, EPA announced in March 2016 its intention to regulate *existing* oil and gas sources under CAA section 111(d), and EPA is currently developing an information collection request (ICR) as the first step in that process. Commenters argued that this EPA action negates any argument that the BLM rule is necessary to address emissions from the existing sources that subpart OOOO and subpart OOOOa do not cover.

Response: The ICR and EPA's intention to conduct a rulemaking under CAA section 111(d) are discussed in detail in section III.B.3.a of this preamble. In summary, establishing emission reduction requirements for

existing sources under the CAA would entail the following steps:

- EPA issues a final ICR;
- Industry submits the required information;
- EPA develops and proposes a rule under CAA section 111(d);
- EPA reviews public comment on that proposal and finalizes the CAA section 111(d) rule;
- Because rules under section 111(d) do not have independent effect but are implemented by States, States then develop and submit to EPA State plans to implement the 111(d) rule (a process that generally requires State rulemaking and may require State legislation);
- EPA approves the State Plan (or prescribes a Federal implementation plan where the State fails to submit a satisfactory plan); and
- Industry implements the requirements in time to meet compliance deadlines established in the State plans.

Clearly, it will be many years before existing sources in this sector are subject to binding requirements under CAA section 111(d), and it is not yet evident what shape those requirements will take. Given the substantial uncertainty surrounding the timing and content of any EPA regulation of existing oil and gas sources, the BLM has both the authority and the obligation to act now to rein in the ongoing waste of large quantities of public and Indian natural gas.

B. Authority To Require Flaring of Gas

Citing several specific provisions of the proposed rule that would require operators to flare rather than vent gas that is not captured for sale or use, including the venting prohibition and provisions on storage tanks, several industry commenters asserted that the BLM lacks the authority to require flaring instead of venting of Federal and tribal gas. These commenters argued that the BLM's sole authority is to prevent waste, and a provision that requires flaring rather than venting does not aim at waste prevention because shifting from venting to flaring does not conserve the gas. The sole purpose of such provisions, these commenters asserted, is to regulate air pollution and GHG emissions. Commenters further asserted that regulation of air pollution and GHG emissions is the exclusive province of the EPA, and by extension, the BLM may not regulate in this arena.

For several reasons, the provisions of the rule that require flaring instead of venting are within the BLM's statutory authority. First, as noted above, the MLA grants the BLM the authority to promulgate rules for the prevention of

undue waste or for safety purposes.¹¹⁷ As explained further in the Section by Section analysis in Preamble Section VII, each provision of this rule that requires flaring rather than venting is a waste prevention and/or a safety measure. For instance, the requirement to flare and not vent high-pressure associated gas constitutes waste prevention because any flaring at a given well will likely cause the operator to capture more gas at its other wells in order to stay within the capture percentage under § 3179.7. These provisions therefore fall comfortably within the BLM's waste prevention and safety authority under the MLA, irrespective of the BLM's environmental mandate.

Second, as discussed above, the MLA and FLPMA grant BLM the authority to regulate oil and gas development on the public lands, including to protect the public's interest in other natural resources and the quality of the environment.¹¹⁸ In its traditional role as manager of the public lands and steward of publically owned resources, BLM must regulate the development of federally owned oil and gas deposits pursuant to principles of multiple use and sustained yield.¹¹⁹ Under those principles, BLM may consider air quality and GHG emissions when deciding how to regulate mineral-development operations. FLPMA expressly declares that BLM should balance the need for domestic sources of minerals against the need to protect the quality of "air and atmospheric" resources.¹²⁰ Furthermore, as part of its resource management plans, the BLM has recently exercised its authority under FLPMA to include emission mitigation standards for oil and gas operations.¹²¹

¹¹⁷ The BLM has acted on the latter authority since DATE: longstanding rules promulgated under the MLA require the operator to "perform operations and maintain equipment in a safe and workmanlike manner" and "take all precautions necessary to provide adequate protection for the health and safety of life and the protection of property." 43 CFR 3162.5–3.

¹¹⁸ See 30 U.S.C. 187, 189; 43 U.S.C. 1732(b), 1740.

¹¹⁹ 43 U.S.C. 1732(a).

¹²⁰ 43 U.S.C. 1701(a)(8), (a)(12).

¹²¹ See, e.g., BLM Tres Rios Field Office, *Resource Management Plan and Record of Decision* at II–63 (Feb. 27, 2015), available at http://www.blm.gov/style/medialib/blm/co/field_offices/san_juan_public_land/land_use_planning/approved_lmp.Par.66402.File.dat/Part%20II%20-%20RMP%20Chapter%202.pdf (setting forth specific standards to mitigate oil and gas emissions that will apply to all approved site-specific projects, including NOx limits for engines, use of "green completions technology," storage tank controls designed to achieve 95% emission reduction, and use of low or no-bleed pneumatics).

Third, the rule's provisions requiring flaring rather than venting further the BLM's trust responsibilities with respect to Indian oil and gas development because they will prevent the waste of gas and will reduce the environmental impacts to Indian lands from oil and gas development. The BLM believes that these provisions, like all the provisions in this rule, are in the best interest of Indian mineral owners and that the extension of these provisions to oil and gas production from Indian lands is therefore justified.

Finally, while the CAA indeed delegates responsibility for implementing its air pollution and GHG emissions control program to EPA, nothing in the Act bars the BLM from considering air pollution and GHG emissions when deciding how to regulate the development of federally owned oil and gas deposits. The EPA and the Department of the Interior have distinct statutory authorities and missions that may, in some cases, result in overlapping policy goals. This rule does not infringe on EPA's prerogative to regulate air quality through source-specific performance standards and cooperation with State partners. Nor does EPA's authority infringe on or otherwise restrict the BLM's mandate to prevent waste from and manage the environmental impacts of activities on public lands and using public resources. The CAA does not displace other Federal agencies' Congressionally-granted authority to address environmental and climate change concerns.¹²² Congress may grant agencies overlapping spheres of authority, and such agencies merely have a responsibility to coordinate with each other.¹²³ The BLM has worked closely with EPA to ensure that this rule and EPA's subpart OOOO and subpart

OOOOa regulations harmonize to the maximum extent practicable.

C. "Avoidably Lost" Oil or Gas

As noted above, the MLA requires royalties on oil and gas to be paid as a "percent in amount or value of the production removed or sold from the lease."¹²⁴ As interpreted in a judicial decision addressing waste prevention regulations issued by the Department in the 1970's,¹²⁵ production "removed or sold from the lease" does not include oil or gas that is "unavoidably lost" during production. "Avoidably lost" oil or gas, on the other hand, constitutes waste and is subject to royalties. As explained in the preamble to the proposed rule, NTL-4A distinguished between "avoidably lost" and "unavoidably lost" oil and gas, though it defined those terms in a general way that was subject to inconsistent application.¹²⁶ In § 3179.4, this rule clarifies the distinction between "avoidable" and "unavoidable" losses by limiting "unavoidable" losses to specific circumstances in which the operator has not been negligent and has complied fully with applicable laws, lease terms, and regulations. Industry commenters objected to this approach on the ground that whether a loss of oil or gas is "avoidable," and therefore royalty-bearing under the MLA, requires a case-by-case evaluation of a lessee's reasonableness in light of the economic circumstances. That is, they argued that a loss of oil or gas should be deemed "unavoidable" if taking measures to avoid the loss would have been "uneconomic" from the operator's perspective.

For several reasons, the BLM did not change the final rule based on these comments. As an initial matter, there is no statutory or jurisprudential basis for the commenters' position that the BLM must conduct an inquiry into a lessee's economic circumstances before determining a loss of oil or gas to be "avoidable." Although the BLM's practice under NTL-4A has generally been to engage in case-by-case economic assessments before making avoidable/unavoidable loss determinations, the BLM has not always done so¹²⁷ and is not legally required to do so.

Furthermore, in the absence of clear statutory language or legislative history delineating what should be considered "avoidably lost" oil or gas under the MLA, the BLM's past practice does not prohibit it from revising its interpretation of that term. Finally, FOGRMA provides BLM with an independent statutory authorization to impose royalties on oil or gas lost as a result of an operator's negligence or failure to comply with any rule or regulation issued under the mineral leasing laws, without further economic analysis. Specifically, section 308 of FOGRMA, provides that "[a]ny lessee is liable for royalty payments on oil or gas lost or wasted from a lease site 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 this Act or any mineral leasing law."¹²⁸

Some commenters argued that the BLM's existing interpretation of what constitutes an "avoidable loss" has become a "fundamental term" of the BLM's existing oil and gas lease contracts upon which lessees relied in entering into the contracts and making subsequent business decisions. Citing *Mobil Oil Exploration & Producing Southeast, Inc. v. United States*, 530 U.S. 604 (2000), commenters argued that the proposed rule would substantially impair the value of their lease contracts and therefore subject the BLM to contract damages or takings claims.

On the contrary, in promulgating this final rule the BLM is acting within its authority under the MLA and thus within the terms of existing leases. First, the MLA requires lessees to "use all reasonable precautions to prevent waste of oil or gas,"¹²⁹ and provides the Secretary with the continuing authority to "prescribe necessary and proper rules and regulations" in order to carry out the purposes of the MLA.¹³⁰ The MLA further requires that each lease contain a provision "that such rules . . . for the prevention of undue waste as prescribed by [the] Secretary shall be observed."¹³¹ The BLM's standard form lease makes clear that the rights granted to the lessee are "subject to . . . the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with the lease rights granted or specific provisions of [the] lease."¹³² Both the

¹²² See, e.g., 42 U.S.C. 7610 ("Except as provided in subsection (b) of this section, this chapter shall not be construed as superseding or limiting the authorities and responsibilities, under any other provision of law, of the Administrator or any other Federal officer, department, or agency.").

¹²³ See, e.g., *Massachusetts v. EPA*, 549 U.S. 497, 531–32 (2007) (finding overlap but no conflict between EPA's authority to regulate greenhouse gases from new motor vehicles under the CAA section 202(a) and the authority of the National Highway Transportation Safety Administration (NHTSA) under the Energy Policy and Conservation Act (EPCA) to promote energy efficiency by setting mileage standards); see also *Green Mt. Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 350 (D. Vt. 2007) (concluding that "the preemption doctrines do not apply to the interplay between" EPA's responsibilities under the Clean Air Act and NHTSA's duties under the EPCA, and noting that "[s]hould a conflict between [the two agencies' processes] become apparent, the federal agencies involved—EPA and NHTSA—are capable of and even encouraged to cooperate in a joint accommodation or resolution").

¹²⁴ 30 U.S.C. 226(b)(1)(A), 226(c)(1) (emphasis added).

¹²⁵ See *Marathon Oil Co. v. Andrus*, 452 F. Supp. 548, 552–53 (D. Wyo. 1978).

¹²⁶ 81 FR at 6665.

¹²⁷ Compare *Ladd Petroleum Corp.*, 107 IBLA 5, 7 (1989) (requiring opportunity for operator to show that gas capture would be "uneconomic" before flaring is deemed avoidable), with *Lomax Exploration Co.*, 105 IBLA 1, 7 (1988) (flaring without prior approval constitutes per se avoidable loss under NTL-4A).

¹²⁸ 30 U.S.C. 1756.

¹²⁹ 30 U.S.C. 225.

¹³⁰ 30 U.S.C. 189.

¹³¹ 30 U.S.C. 187.

¹³² BLM Form 3100–11 (emphasis added).

plain meaning of this language and the BLM's longstanding interpretation of it extend to "incorporat[ing] future regulations, even though inconsistent with those in effect at the time of lease execution, and even though to do so creates additional obligations or burdens for the lessee."¹³³ The BLM's legal and contractual authority to update its regulations governing oil and gas leases should thus foreclose successful breach of contract claims based on this rule.

The *Mobil Oil* decision cited by commenters is not pertinent. In that case, a permitting delay mandated by a subsequently enacted statute constituted a breach of the lease because the terms of the lease did not subject it to the burdens of such later-enacted statutes.¹³⁴ Today's rule constitutes a "hereafter promulgated" regulation to which Federal oil and gas leases are expressly subject. The application of this rule to existing lessees, therefore, does not breach their contract rights because their existing leases incorporate the rule by reference.

That said, the BLM is cognizant that some of the requirements of this rule may pose more substantial burdens for existing lessees than for future lessees, because future lessees can take account of the requirements of the rule in making their leasing decisions. Accordingly, certain sections of the rule, including sections 3179.8 and 3179.201, are structured to reduce the burden on existing lessees. For further discussion of these provisions, see Section VII, Section by Section.

D. Application to Units and Communitized Areas

Some commenters objected to the application of this rule to operations on State and private tracts that are committed to a Federally-approved unit or communitized area. These commenters admit that the BLM has the authority under FOGSMA to regulate oil and gas activities on such tracts for the purposes of royalty accountability, but fail to recognize the various royalty-accountability purposes of this rule, including identifying and imposing royalties on wasteful losses of oil and gas, clarifying the circumstances under which production may be used royalty free, and setting measurement standards for venting and flaring (some of which is royalty bearing). More to the point, though, these commenters did not explain why the BLM's waste

prevention authority under the MLA does not extend to the waste of Federal oil and gas that occurs on non-Federal tracts in a Federally-approved unit or communitized area. Commenters cited the BLM's decision not to apply Onshore Oil and Gas Order No. 1 ("Order 1") to operations on non-Federal lands in units and communitized areas¹³⁵ as evidence that the BLM lacks authority to apply this rule to such lands. However, the cited passage from the preamble to Order 1 did not address the scope of the BLM's regulatory authority with respect to non-Federal tracts in Federally-approved units and communitized areas; rather, the passage addressed what was "appropriate" in light of the jurisdictional limitations contained in 43 CFR. § 3161.1.

Commenters also asserted that because the regulation of State and private minerals is under the jurisdiction of the States, the BLM lacks the authority to apply its waste prevention regulations to units and communitized areas in a manner that would affect the production of State and private minerals unitized or communitized with Federal minerals. While the BLM agrees that the regulation of State and private minerals is under the jurisdiction of the States, the BLM does not agree that States' jurisdiction over State and private minerals precludes the BLM from promulgating a waste prevention regulation that has incidental impacts on State and private minerals unitized or communitized with Federal or Indian minerals. The purpose of this rule is to ensure that operators take reasonable precautions to prevent the waste of Federal and Indian oil and gas, a matter that BLM has the authority to regulate pursuant to its statutory and trust responsibilities described in Section III.C.

The fact that States and private parties have chosen to enter into unitization or communitization agreements whereby State or private oil or gas is commingled with Federal or Indian oil or gas, and produced concurrently with Federal or Indian oil or gas, does not deprive the BLM of its authority to impose reasonable waste prevention requirements on operators producing Federal or Indian oil or gas.

E. ROW Permitting

Under section 28 of the MLA, the BLM is responsible for granting most of the ROWs for oil and natural gas gathering, distribution, and transportation pipelines and related

facilities on public lands. Specifically, the BLM has ROW approval authority for ROWs that cross lands administered by the BLM, or lands administered by two or more Federal agencies,¹³⁶ except lands in the National Park System or lands held in trust for Indians or Indian tribes.¹³⁷

Several commenters expressed concern that they have experienced significant delays in obtaining ROW approvals for gathering lines, and that these delays impede producers' ability to capture and sell gas. These commenters stated that the BLM should streamline the ROW approval process. They asserted that accelerating the permitting process for pipeline ROWs would allow energy producers to more easily capture and market gas that might otherwise be flared due to a lack of infrastructure. Some commenters further asserted that the BLM could quickly and easily reduce flaring by processing ROWs in a timely manner, and that streamlining ROW permitting would provide a more cost-effective solution to the problem of gas waste than imposing the requirements in the proposed rule.

Commenters suggested several ways in which the BLM could increase permitting speed for gas gathering lines on Federal land. One commenter stated, for example, that the BLM should expand the use of categorical exclusions under the National Environmental Policy Act (NEPA) when permitting gas gathering lines, and another suggested using a ROW "corridor" approval approach, so that small adjustments in a project footprint would not delay the full approval process.

The BLM's experience is that while processing time for ROW applications can sometimes be an issue, particularly in a handful of offices where staff retention has been difficult over the past few years, processing time is not the primary cause of the large volume of current flaring. For example, BLM data indicate that many applications to flare gas come from wells that are already connected to pipeline infrastructure, or for which operators are not seeking ROWs to build new pipelines. For instance, in Dickinson, North Dakota, large volumes of gas are being flared from over 1,700 Federal and Indian oil wells,¹³⁸ yet the local BLM field office

¹³³ *Coastal Oil & Gas Corp., et al.*, 108 IBLA 62, 66 (1989).

¹³⁴ *Mobil Oil Exploration & Producing Southeast v. United States*, 530 U.S. 604, 613–20 (2000).

¹³⁵ 72 FR 10308, 10313 (March 7, 2007).

¹³⁶ 43 CFR 2881.11.

¹³⁷ Mineral Leasing Act section 28(b)(1) (definition of "Federal lands" excluding lands in the National Park system or lands held in trust for Indians or Indian tribes).

¹³⁸ Based on internal BLM analysis of North Dakota activity from AFMSS queried on April 16, 2015.

currently has just four ROW applications pending.

While the BLM data indicate that the current speed of the BLM's ROW processing is not a significant factor in the rate of flaring at most wells, the BLM recognizes the importance of timely ROW approvals and continues to make improvements aimed at increasing the efficiency of the ROW permitting process. A variety of factors, some in the BLM's control but some beyond the BLM's control, can impact the timely approval of ROWs and other actions that may be needed to construct a pipeline or gas processing facility. For example, fee land owners may delay or block a pipeline project that crosses both public and private lands, even when the Federal portion of the ROW is permitted. The time period for permitting ROWs may also be extended if, for example: The ROW grant is pending consultation or concurrence from another agency, *e.g.*, pursuant to the Endangered Species Act or Section 106 of the National Historic Preservation Act; the ROW application is incomplete; the corresponding APD has not yet been processed; or a high volume of applications is submitted in a short period of time.

Last year, the BLM instituted key program changes to more quickly process pending oil- and gas-related ROW applications, and we have seen progress as a result of these efforts. These steps included using strike teams to add additional permit-processing resources at high-volume offices, working with the Office of Personnel Management to identify pay strategies to address staff shortages in key offices, and increasing formal training for critical staff. Additionally, particular field offices are actively pursuing other actions to decrease permitting times, including: (1) Coordinating aspects of the pipeline ROW and corresponding APD reviews, so that they occur concurrently rather than consecutively; (2) working with project proponents to minimize surface disturbance to help expedite environmental reviews; (3) fully and consistently utilizing applicable Categorical Exclusions to NEPA to streamline reviews; (4) encouraging project proponents to develop oil and gas Master Development Plans and Master Leasing Plans as well as right-of-way Master Agreements, which are negotiated with a single applicant for processing and monitoring multiple applications covering facilities within a specific geographic area; (5) encouraging unitization to help streamline permitting by avoiding the need for multiple ROWs (or potentially for any ROW at all, if the gas can be

gathered and transmitted without crossing Federal or Indian land); and (6) working closely with proponents to determine which projects are priorities.

F. Planning

Finally, many stakeholders requested that the BLM address waste reduction through requirements under the MLA relating to the BLM's land use planning and environmental review processes. Commenters stated that the BLM should use its authority to reduce waste by proactively using all available planning, analysis and permitting tools including Applications for a Permit to Drill (APDs); lease stipulation decisions in resource management plans (RMP); master leasing plans (MLPs); waste minimization plans (WMPs); and unitization agreements. Commenters also stated that the proposed rule fails to exercise the BLM's full authority at the planning and leasing stages, and further, that land-use planning should be used to support well-planned fossil fuel development that would, for example, limit the leasing of lands where infrastructure constraints are expected to be significant, so as to minimize the need for venting or flaring of associated gas.

Commenters asserted that if the BLM conducted more robust NEPA reviews prior to oil and gas development, the reviews would identify additional waste reduction opportunities. Commenters further requested that the rules governing development of RMPs be modified to support the intended purpose of the rule to capture gas and prevent venting or flaring. These commenters also asserted that detailed, site-specific MLPs can support methane capture and waste minimization once an RMP is in place.

Commenters disagreed with the BLM's decision not to propose changes to the BLM land use planning regulations as part of this rulemaking. They suggested that the BLM's failure to link the proposed rule to the BLM's foundational planning and management framework misses opportunities to foster orderly and efficient development of oil and gas that would prevent methane pollution and waste. Some commenters suggested that although changes to the BLM's land use planning rules are not required to enhance the use of planning mechanisms available to the BLM when developing RMPs and MLPs, referencing these tools in the final rule would emphasize their importance.

While the BLM is not making changes to the BLM land use planning regulations or NEPA review processes as part of this rulemaking, as stated in the

preamble to the proposed rule, the BLM agrees that the land use planning and NEPA processes are critical to achieving our simultaneous goals of responsible oil and gas development, land stewardship and resource conservation, and protection of air quality on (and reduction of air emissions from) Federal lands.

The BLM already has land use planning and NEPA tools and processes in place that can be used to help achieve the specific goals of this rulemaking—to reduce the wasteful and environmentally harmful loss of gas through venting, flaring, and leaks. The BLM conducts NEPA analyses for both regional planning decisions and project level decisions. These analyses take a hard look at the direct effects, indirect effects, and cumulative effects of the proposed federal action on various resources during the land use planning or project approval process, such as the effects on wildlife, air quality, or recreation opportunities. The BLM's NEPA analyses also quantify GHG emissions associated with the proposed planning decision alternatives under consideration. In particular, the land use planning and NEPA processes for new RMPs and MLPs provide important opportunities to consider the effects of oil and gas development over a larger area and to optimize planned development to minimize impacts from venting and flaring, among other activities. The planning process gives the BLM the opportunity to consider how a specific land management plan could address the timing and location of development of oil and gas and related infrastructure, such as pipelines, and the projected consequences of such decisions in terms of the quantities of vented and flared gas and the impacts associated with those emissions.

Thus, the BLM already has the NEPA processes and tools in place to evaluate the effects of the gas that would be flared, vented, and leaked from proposed oil and gas production, including impacts to wildlife and air quality, as well as GHG emissions, which contribute to climate change. The NEPA analyses can also identify ways to minimize such effects, such as evaluating alternative options for siting and timing of development that would maximize the opportunities for gas capture in lieu of flaring.

In addition, the BLM is in the process of completing a comprehensive update to its land use planning regulations, which should further enhance the opportunities to address gas waste in new oil and gas production approvals. The BLM proposed its new planning regulations in February 2016. The

proposed changes would boost public participation and facilitate earlier stakeholder engagement in the planning process. For example, the new planning regulations would provide for a planning assessment at the initiation of an RMP, which would involve stakeholders and other agencies in identifying key issues and obtaining better data early in the process. These new regulations would also enhance the existing opportunities for stakeholders to highlight options to reduce waste from proposed oil and gas production in BLM land use planning.

G. Exemptions Through Sundry Notices

Some commenters expressed concerns that because the rule provides for operators to request various exemptions through submission of Sundry Notices to the BLM, these provisions could impose a paperwork burden on operators and the requests could be difficult for the BLM staff to process in a timely manner. The BLM believes that the number of requests for exemptions will be fairly limited, as the BLM's analysis does not indicate that the costs of these provisions will be substantial for the vast majority of operators. Nevertheless, the BLM recognizes that these are valid concerns, and is committed to minimizing unnecessary paperwork burdens on operators and continuing to streamline its own operations.

Thus, the BLM is providing here some additional information regarding how we expect operators to submit requests and how we may process them, and we will provide additional guidance as we move forward to implement the final rule. Concerns have been raised in this regard with respect to requests for exemption from multiple requirements of the rule for a lease. Specifically, operators have asked whether they could submit a single request for an exemption from multiple provisions of the rule, and how the BLM would evaluate it. The final rule requires an operator to make a demonstration that each requirement for which the operator is requesting an exemption would itself cause the operator to cease production and abandon significant recoverable reserves on the lease. An operator could not simply add up the costs of compliance with multiple requirements of the rule to show that the cumulative costs of the requirements would cause the operator to cease production and abandon significant recoverable reserves under the lease, and thereby obtain an exemption from all of those requirements. In making the showing for a specific requirement, however, the operator could take into account as part

of the baseline costs any requirements of the rule for which an exemption is not being requested. In addition, to the extent that there is common data supporting multiple exemption requests, such as the data on production and revenues from a given lease, the BLM intends that an operator would be able to provide that data once on a single submission containing a separate showing for each of the specific requests, rather than providing multiple separate submissions.

VII. Section by Section

This section discusses the final rule provisions, substantial changes from the proposed rule, and some of the most significant comments received. Public comments not addressed in this section or elsewhere in this preamble are addressed in the separate Response to Comments document, which is available on the BLM Web site and is part of the rule-making record.

Part 3100

Section 3103.3–1 Royalty on Production

The final rule's amendments to existing 43 CFR 3103.3–1 focus on existing § 3103.3–1(a)(1), and do five things: (1) Remove two provisions of the existing regulations that are no longer necessary (§ 3103.3–1(a)(1)(i) and (ii)); (2) add a new § 3103–1(a)(2); (3) specify that the royalty rate on all leases existing at the time the rule becomes effective will remain at the rate “prescribed in the lease or in applicable regulations at the time of lease issuance”; (4) specify the statutory rate of 12.5 percent for all noncompetitive leases issued after the effective date of the final rule; and (5) conform the regulatory regime for competitive leases issued after the effective date of the rule to the regime envisioned by the MLA, which specifies that the royalty rate for all new competitively issued leases be set “at a rate of not less than 12.5 percent.”¹³⁹ All of these changes were in the proposed rule.

The final rule also renumbers existing § 3103–1(a)(2) and (a)(3) as § 3103–1(a)(3) and (a)(4) and makes minor changes to existing § 3103–1(a)(3) (final § 3103–1(a)(4)) for clarity.

Additionally, the final rule reprints existing §§ 3103–1(b) and (c), for clarity. Finally, the BLM made a minor revision to § 3103.3–1(d) from the proposed rule.

¹³⁹ Note that the rule renumbers current 43 CFR 3103.3–1(a)(2) and (3) but does not otherwise change the content of those provisions. Further, the rule does not alter 43 CFR 3103.3–1(b), (c), or (d). Those provisions are reprinted in this rule solely to clarify the numbering of the revised § 3103.3–1, and for ease of reference.

To improve the clarity of this provision, final § 3103–1(d) adds the language “from the gas stream” in two places that address any helium component that is not conveyed with the mineral estate in a Federal oil and gas lease.

Several commenters stated that a new royalty rate above the current rate of 12.5 percent would create uncertainty in the leasing process, and would disadvantage Federal leases compared with State and private leases and disincentivize investments on Federal lands. One commenter objected to the proposed rule's use of the term “base rate,” because the BLM did not provide a definition of that term. The commenter also noted that the proposed rule does not describe the process by which the rate will be determined, to whom it will apply, or how and when it will be reevaluated and reset. One commenter noted that under the BLM's recent regulatory revision of Onshore Oil and Gas Order Number 3, the BLM proposes to authorize commingling allocations and approvals (CAAs) for properties with identical fixed royalty rates. The commenter suggested that a variable royalty rate would have the unintended consequence that most CAAs would not be approved.

Other commenters supported the BLM's proposal to ensure that the royalty rate of 12.5 percent represents a floor and not a ceiling. The commenters contended that this would allow the American public to receive a fair market return on their resources. Some commenters suggested that the royalty rate be raised to 18.75 percent to be in line with the royalty rate assessed on Federal offshore leases. Commenters also noted that the current rate is far below several state rates. One commenter suggested that the increase in royalty rate should be informed by the social and environmental costs of oil and gas production, including the social cost of methane emissions. Another commenter stated that if the BLM were to increase the royalty rate, it should be a constant rate, rather than a sliding scale, as this would reduce administrative and reporting burdens. Some commenters requested that the BLM set the royalty rate at least 60–90 days prior to any lease sale and publish notice in the **Federal Register** and the BLM Web site for public comment.

The BLM did not revise the rule in response to these comments. As stated in the proposed rule preamble, the BLM is not currently proposing to raise the base royalty rate for new competitively issued leases above 12.5 percent; rather, we are conforming the regulatory provisions governing royalty rates for new competitive leases to the

corresponding rate provisions in the MLA. The BLM would engage in additional process before raising the rate.

Section 3160.0–5 Definitions

This amendment to § 3160.0–5 deletes the definition of “avoidably lost” that by its terms applies to part 3160. A definition of “avoidably lost” is no longer needed for part 3160, and this definition is superseded by the provisions in new subpart 3179, particularly § 3179.4, governing when the loss of oil or gas is deemed avoidable or unavoidable. The BLM did not receive comments on removing this definition and is finalizing this deletion as proposed.

Section 3162.3–1 Drilling Applications and Plans

This section describes the requirements for drilling applications and plans, including the information that an operator must provide with an APD. The BLM is amending this section to add paragraph 3162.3–1(j), which requires that when submitting an APD for an oil well, an operator must also submit a waste minimization plan. Submission of the plan is required for approval of the APD, but the plan will not itself become part of the APD, and the terms of the plan will not be enforceable against the operator.

The purpose of the waste minimization plan is for the operator to set forth a strategy for how the operator will comply with the requirements of subpart 3179 regarding the control of waste from venting and flaring. The waste minimization plan must include information regarding: The anticipated completion date(s) of the proposed 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.

Based on comments received requesting that the information required in the plans be streamlined, the final rule provides that certain kinds of information are only required if an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well(s). This conditionally-required information includes: 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.

Some commenters requested that waste minimization plans required by other states, such as North Dakota and New Mexico, should be allowed to satisfy the requirements set forth in this section. The BLM recognizes that some States have similar waste minimization plan requirements under State law. To the extent that an operator is already preparing, under State requirements, a waste minimization plan that meets all or most of the requirements for a waste minimization plan under section 3162.3–1, the BLM requirements should impose little additional burden on the operator. The operator would be able to submit the same plan to the BLM, supplemented as necessary to meet each of the requirements of section 3162.3–1.

Other commenters stated that the preparation and review of the waste minimization plans would be a burden both on applicants and the BLM, because in the commenters’ view, the proposed rule significantly underestimated the number of plans that would be required and the time required to prepare them. The commenters asserted that the BLM can be slow in approving APDs, and argued that the review of the additional waste minimization plans could slow the process further. Other commenters suggested that the requirement to prepare a waste minimization plan be limited only to wells that anticipate flaring a high volume of associated gas after completion. The BLM disagrees with these comments and believes that requiring operators to prepare a waste minimization plan for all wells is a reasonable, low cost, and effective way to encourage operators to consider and plan for capturing gas before the development of every new well. As stated previously, however, the final rule streamlines some of the elements required in the plan. Further, the BLM presently plans to review the effectiveness of the plan requirement within 3 years after the final rule’s effective date, to assess the costs to operators of preparing the plans, the costs to the BLM of reviewing the plans, and the effectiveness of the plans in driving flaring reductions at new wells.

Commenters also expressed concern that the waste minimization plan requirement could trigger the need for additional analysis under NEPA for non-federal/non-Indian wells within a unit or communitized area. Under existing regulations, wells that are not located on federal or Indian surface and do not pierce federal or Indian minerals are not required to obtain BLM’s approval of an APD, even if those wells are within a unit or communitized area from which federal or Indian minerals are produced. Commenters were concerned that the requirement for a waste minimization plan would somehow require those wells to file APDs or subject them to NEPA.

The BLM believes these concerns are unfounded. Operators would be required to submit waste minimization plans only for wells that already require an APD under part 3160—*i.e.*, for wells that are located on federal or Indian surface or pierce federal or Indian minerals. Operators may need to incorporate information in their waste minimization plans regarding wells on a unit or communitized area that do not require APDs (*see, e.g.*, § 3162.3–1(j)(2)(ii), requiring anticipated production information for all wells on a multi-well pad). Also, to the extent that gas from a nonfederal mineral estate is mixed with federal or Indian gas, the waste minimization plan may effectively minimize waste of both federal or Indian and non-federal or non-Indian gas. However, nothing under this provision requires operators to file an APD for any well, much less extends the APD requirements under part 3160 to wells that are not located on federal or Indian surface and do not pierce federal or Indian minerals. Moreover, waste minimization plans are not enforceable, and BLM will only review and approve them in the course of acting on an APD. While the BLM will analyze potential indirect impacts of execution of the waste minimization plan as part of its NEPA analyses for APDs submitted after the rule takes effect, there is no independent federal action here that would trigger NEPA for a waste minimization plan separate from an APD. Other commenters stated that the BLM should strengthen the requirements of the waste minimization plans and make them enforceable. The BLM declined to do so. The BLM believes that waste minimization plans, like the environmental analyses performed under the National Environmental Policy Act, can drive significantly better outcomes by ensuring that the operator and midstream companies have more

information at an earlier stage, to allow for better planning and coordination. To achieve that result, however, the plans must be quite detailed and contain all relevant information. The BLM believes that the plan's unenforceability helps achieve that outcome: Because the terms of the plans cannot be enforced against the operator, the BLM avoids creating an incentive for operators to develop very general plans with few specific details. Additionally, the BLM is concerned that circumstances could change between when the plan is developed and when well production begins, making strict adherence to the plan difficult. In such a circumstance, the existence of the plan would still be useful, because operators would have information at their fingertips that would enable them respond nimbly to the changed circumstance, but operators would not be held to the specific terms of the now outdated plan.

Commenters also requested that the BLM make the waste minimization plans publicly available. The BLM already publicly posts APDs for a period prior to approval, and we plan to post the waste minimization plans accompanying the APDs in the same manner, subject to any protections for confidential business information.

Subpart 3178—Royalty-Free Use of Lease Production

Section 3178.1 Purpose

This section states that the purpose of the subpart is to address circumstances in which oil and gas produced from Federal and Indian leases may be used royalty-free. This subpart supersedes those parts of NTL-4A pertaining to oil or gas used for "beneficial purposes."

The BLM received a comment on this section requesting that the BLM clarify whether the rule will replace all of NTL-4A, or just those parts "pertaining to use of oil or gas for beneficial purposes." The BLM notes that Subpart 3178 replaces the portion of NTL-4A pertaining to the use of oil or gas for beneficial purposes and Subpart 3179 replaces the portion of NTL-4A pertaining to venting and flaring of produced gas, unavoidably and avoidably lost gas, and waste prevention. Together, the combined revisions to Subparts 3178 and 3179 supersede NTL-4A in its entirety. The BLM disagrees that the regulatory text requires clarification beyond what is stated here, and did not revise this section in response to this comment.

Section 3178.2 Scope of This Subpart

This section specifies which leases, agreements, wells, and equipment are

covered by this subpart. The section also states that the term "lease" in this subpart includes IMDA agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement. In the final rule, in response to comments, the BLM edited proposed paragraph (a)(5) to clarify the list of items to which this subpart applies. Paragraph (a)(5) in the final rule provides that this subpart applies to wells and production equipment, and also, under specified circumstances, compressors. Additionally, the final rule omits proposed paragraph (a)(6) relating to coverage of gas lines, as the BLM has determined that gas lines do not "use" production for purposes of this subpart.

One commenter suggested replacing "other facilities" with "production equipment," and suggested distinguishing compressors that promote production at the wellhead from those that promote pipeline flow. The BLM agrees that these suggested changes improve the clarity of the rule, and we have revised the text accordingly. The text now refers to "production equipment" and limits coverage to compressors that both are located on a lease, unit or communitized area and compress production from the same lease, unit or communitized area.

Commenters also suggested distinguishing among flow lines, gathering lines and transmission lines, and requested revisions to highlight the limits of the BLM's authority over gas lines. We believe that these comments are no longer applicable with the elimination of proposed paragraph (a)(6).

Section 3178.3 Production on Which Royalty Is Not Due

This section sets forth the general rule that royalty is not due on oil or gas that is produced from a lease or communitized area and used for operations and production purposes (including placing oil or gas in marketable condition) on the same lease or communitized area without being removed from the lease or communitized area. This section also treats oil and gas produced from unit PAs—that is, the productive areas on a unit—and used for operating and production purposes on the unit, for the same PA, in the same way. Units often include different PAs composed of multiple leases with varied ownership. This section therefore limits royalty-free use of gas from a particular PA to uses that are made on the same unit, to support production from the same unit

PA. The reason for this limitation is to prevent excessive use of royalty-free gas by prohibiting a unit operator from using royalty-free production from one PA to power operations on, or treat production from, another PA on the same unit, to the benefit of different owners and to the detriment of the public interest.

As discussed below, § 3178.5 qualifies the general provisions of § 3178.3 by listing specific operations for which prior written BLM approval will be required for royalty-free use.

The BLM received a few relatively technical comments on § 3178.3, which are addressed in the Response to Comments document. The BLM did not make any changes to this section from the proposed rule.

Section 3178.4 Uses of Oil or Gas on a Lease, Unit, or Communitized Area That Do Not Require Prior Written BLM Approval for Royalty-Free Treatment of Volumes Used

This section identifies uses of produced oil or gas that will not require prior written BLM approval for royalty-free treatment. The uses listed in this section involve routine production and related operations. In addition, paragraph (b) clarifies that even when a use is authorized, the royalty-free volume is limited to the amount of fuel reasonably necessary to perform the operation on the lease using appropriately sized equipment. This ensures that royalty-free on-site use remains subject to the requirement to avoid waste of the resource.

While the royalty-free uses described here are generally similar to the uses identified as "beneficial purposes" in NTL-4A, this rulemaking further clarifies which uses warrant royalty-free treatment.

In addition, this section clarifies that hot oil treatment is an accepted on-lease use of produced crude oil that does not require prior approval to be royalty-free. In this treatment, oil is not consumed as fuel. Rather, after the oil is pumped back into the well to stimulate production, it is produced again. Although the use of produced crude oil for hot oil treatments on the producing lease, unit, or communitized area has historically been understood by the BLM and by operators as a royalty-free use, it is not specifically addressed in NTL-4A but is now included in this final rule.

As mentioned above, the BLM received comments requesting that other uses of oil or gas be identified as royalty-free, including fuel for power generation, pilot and assist gas, fuel for heating, fuel for ancillary equipment,

fuel to treat gas to remove impurities, fuel to run completion and work over equipment, and gas used for gas lift. The BLM agrees that these uses are routine, and therefore should not require prior approval to be royalty-free.

Regarding using oil as a circulating medium in drilling operations, or injecting gas produced from a lease, unit PA, or communitized area into the same lease, unit, PA, or communitized area to increase the recovery of oil or gas, the BLM had proposed to include these uses in the list in § 3178.5 of uses requiring prior approval. As operators are already required to report the use of oil as a circulating medium in drilling operations under Onshore Order Number 1, and the use of gas for injection under applicable regulations in parts 3100, 3160 and 3180 of this title, however, the BLM has decided not to require prior approval for these uses. In addition to the injection of gas for the purpose of increasing the recovery of oil or gas, the BLM has added the injection of gas “for the purpose of conserving gas” as a royalty-free use that does not require prior written BLM approval under the final rule. Often, gas injection is used to enhance resource recovery by maintaining or slowing the reservoir pressure decline which leads to higher oil recovery. The BLM also understands that, in some circumstances, excess gas that cannot be captured and sold or used on lease may be injected in order to conserve the gas. This practice occurs in Canada’s Bakken field. While not all reservoirs are conducive to gas injection, the BLM believes it important to provide that as an option to conserve any gas that can’t be sold immediately.

Finally, this rule does not address some uses that are already defined as royalty-free under ONRR provisions, such as the royalty-free use of residue gas to fuel gas plant operations, as provided in 30 CFR 1202.151(b).

Overall, in response to comments received, the BLM made the following changes in the final rule:

- Modified paragraph (a)(1) to more broadly address the use of fuel to generate power, including the use of fuel to operate “combined heat and power,” which is a particularly efficient means of generating power from gas;
- Combined and modified proposed paragraphs (a)(2) and (a)(3) to include artificial lift equipment and completion and workover equipment;
- Renumbered the remaining paragraphs accordingly;
- Added use of gas as a pilot fuel or as assist gas for a flare, combustor, thermal oxidizer, or other control device, as paragraph (a)(5);

- Added treatment of gas to paragraph (a)(6); and
- Added two uses that will not require prior written BLM approval for royalty-free treatment, which were identified in § 3178.5 in the proposed rule as requiring prior approval: (1) Using oil as a circulating medium in drilling operations (paragraph (a)(8)), and (2) injecting gas produced from a lease, unit PA, or communitized area into the same lease, unit PA, or communitized area to for the purposes of conserving gas or increasing the recovery of oil or gas (paragraph (a)(9)).
- Added injection of gas that is cycled in a contained gas-lift system, as paragraph (a)(10).

Section 3178.5 Uses of Oil or Gas on a Lease, Unit, or Communitized Area That Require Prior Written BLM Approval for Royalty-Free Treatment of Volumes Used

This section identifies uses of oil or gas that will require prior written BLM approval to be deemed royalty-free. The aim of this section is three-fold: (1) To ensure that the BLM retains discretion to grant royalty-free use where the BLM deems the use to be consistent with the MLA’s royalty requirement for oil or gas that is produced and then removed from the lease and sold; (2) to increase uniformity in the administration of the royalty provisions by specifying circumstances that warrant particular BLM attention; and (3) to ensure the BLM’s awareness of unusual uses that risk the loss or waste of oil and gas.

For all of the identified uses, operators will be required to submit a Sundry Notice requesting BLM approval to conduct royalty-free activities.

The potentially royalty-free uses identified in this section are as follows:

- *Using oil or gas that was removed from the pipeline at a location downstream of the approved facility measurement point (FMP).* The BLM anticipates that these situations will be quite rare because the tap that operators use to extract and measure gas is generally upstream of the FMP.
- *Using produced gas for operations on the lease, unit PA, or communitized area, after it is returned from off-site treatment or processing to address a particular physical characteristic of the gas.* Physical characteristics that might preclude initial use of gas in lease operations and necessitate off-lease treatment or processing include an unusually high concentration of hydrogen sulfide, or the presence of inert gases or liquid fractions that limit the gas’s utility as a fuel. The operator will bear the burden of establishing the necessity of off-lease treatment.

- *Any other types of use for operations and production purposes which are not identified in § 3178.4.* This provision clarifies that the BLM retains discretion to consider approving royalty-free use under circumstances that are not now anticipated.

In response to comments described below, the BLM made the following three changes to the proposed rule requirements: (1) Removed proposed paragraphs (a)(1) and (a)(2) from this section and moved them to § 3178.4 (royalty-free without prior approval); (2) Added language to paragraph (2) (paragraph (4) in the proposed rule) to clarify that the provision applies to the physical characteristics of the gas “that require the gas to be treated or processed prior to use”; and (3) Removed proposed paragraph (c) and added language to paragraph (b)(1) that indicates that royalties must be paid on volumes when the BLM disapproves a request for royalty-free treatment under this section, and that any approvals for royalty-free treatment will be effective from the date the request was filed. Each change is discussed below along with a summary of the comments that lead to the change.

Several commenters indicated that some of the activities in proposed § 3178.5 should not require prior approval. The BLM agrees and, in response to this and other comments on § 3178.4, moved some provisions to § 3178.4, as described previously.

Additionally, some commenters stated that operators should not be required to seek prior approval for the following two royalty-free uses: Gas removed from a pipeline at a location downstream of the FMP and gas initially removed from a lease, unit participating area, or communitized area for treatment or processing where the gas is returned to the lease, unit, or communitized area for lease operation. The BLM disagrees with these comments and retained these paragraphs in paragraphs (a)(1) and (a)(2) of this section. Gas that is removed from a lease, unit participating area, or communitized area would normally be royalty-bearing. Inclusion of these uses in this section allows the BLM the discretion to approve royalty-free uses under the unique circumstances in which gas is removed and returned to the same lease, unit participating area, or communitized area.

Several commenters also stated that the BLM did not adequately explain why operators must ever receive agency approval for royalty-free use of production. Commenters stated that the BLM must specify the standard or

criteria used to evaluate requests for approval. The BLM has determined that royalty-free uses requiring prior approval are uses that do not typically occur, that are not likely to apply to a large number of operators, and that have a higher risk of loss of gas depending on the individual circumstances surrounding the use. These factors warrant individual approval by the BLM on a case-by-case basis, and are not situations in which development of standard approval criteria is appropriate.

Some commenters argued that the BLM should remove the limitation, included in the proposed rule, that gas removed from the lease may only be used on the lease royalty-free if it was removed for treatment or processing “to address a particular characteristic of the gas.” The commenters stated that the operator should not have the burden of establishing the necessity of off-lease treatment. In response to this comment, the BLM revised paragraph (a)(2) (paragraph (a)(4) in the proposed rule) to clarify that the provision applies to particular physical characteristics of the gas “that require the gas to be treated or processed prior to use.”

Some commenters suggested that an identified use should be royalty-free until the BLM denies it, rather than having to wait for the BLM to approve it. In addition, one commenter suggested that if the BLM does not, within 30 days, respond to a Sundry Notice requesting approval, the Notice should be deemed approved. Another commenter requested that approvals should go into effect when the request is filed. In response to these comments, the BLM revised § 3178.5(b)(1) to indicate that approvals will be effective from the date the request was filed. However, if the BLM disapproves a request, the operator must pay royalties on all volumes used, including those used while the request was pending.

Several commenters stated that exceptions for royalty-free use should not be considered, that the rule allows too much royalty-free venting and flaring, or that the rule does not sufficiently restrict royalty-free use that results in emissions to the environment. As stated in the proposed rule preamble, however, royalty-free on-site use is limited to reasonable uses that are not wasteful. The BLM does not intend to grant prior approval of royalty-free uses under § 3178.5 unless it determines, in light of available technology, that the requested use is reasonable and not wasteful. As a result, the BLM did not revise this section in response to these comments.

Section 3178.6 Uses of Oil or Gas Moved Off the Lease, Unit, or Communitized Area That Do Not Require Prior Written Approval for Royalty-Free Treatment of Volumes Used

This section identifies two circumstances in which royalty-free use of oil or gas that has been moved off the lease, unit, or communitized area would be permitted without prior BLM approval. The first situation is where an individual lease, unit, or communitized area includes non-contiguous areas, and oil or gas is piped directly from one area of the lease, unit, or communitized area to another area where it is used, and no oil or gas is added to or removed from the pipeline, even though the oil or gas crosses lands that are not part of the lease, unit, or communitized area. Under this section, the BLM will consider such production as not having been “removed from the lease.” This will provide the lessee or operator the same opportunity for royalty-free use as if the lease, unit, or communitized area were one contiguous parcel.

The second situation is where a well is directionally drilled, and the wellhead is not located on the producing lease, unit, or communitized area, but produced oil or gas is used on the same well pad for operations and production purposes for that well. In such situations, the rule allows for royalty-free use at the well pad, without prior approval. Use at off-lease well heads is an established royalty-free use.¹⁴⁰

Commenters asserted that the language in proposed paragraph (a) that described reasons why oil or gas would be moved off the lease, unit, or communitized area was ambiguous. In response to this comment, the BLM simplified the language in this paragraph to clarify the original intent discussed above. Paragraph (a) of the final rule now states: “The oil or gas is transported from one area of the lease, unit, or communitized area to another area of the same lease, unit, or communitized area where it is used, and no oil or gas is added to or removed from the pipeline while crossing lands that are not part of the lease, unit, or communitized area;”

Section 3178.7 Uses of Oil or Gas Moved Off the Lease, Unit, or Communitized Area That Require Prior Written Approval for Royalty-Free Treatment of Volumes Used

This section addresses the royalty treatment of oil or gas used in

operations conducted off the lease, unit, or communitized area. When production is removed from the lease, unit, or communitized area, it becomes royalty-bearing unless otherwise provided. This principle is reflected in paragraph (a) of this section, which provides that with only limited exceptions, royalty is owed on all oil or gas used in operations conducted off the lease, unit, or communitized area.

Existing NTL-4A does not include a provision that specifically addresses approving off-lease royalty-free use. Such approval is required, however, under ONRR regulations, which provide, “All gas (except gas unavoidably lost or used on, or for the benefit of, the lease, including that gas used off-lease for the benefit of the lease when such off-lease use is permitted by the BOEMRE or BLM, as appropriate) produced from a Federal lease to which this subpart applies is subject to royalty.”¹⁴¹ New § 3178.6 will add clarity and consistency in implementation of that ONRR regulation.

Paragraph (b) of this section identifies circumstances in which, despite the general rule articulated in paragraph (a), the BLM will consider approving off-lease royalty-free use (referred to here as “off-lease royalty-free uses”). These include situations in which the operation is conducted using equipment or at a facility that is located off the lease, unit, or communitized area (under an approved permit or plan of operations, or at the agency’s request) because of engineering, economic, resource protection, or physical accessibility considerations. For example, a compressor that otherwise would have been located on a lease may be sited off the lease because the topography of the lease is not conducive to equipment siting. To be approved for off-lease royalty-free use, the operation would also have to be conducted upstream of the approved FMP. This paragraph reflects the BLM’s policy to encourage operators to reduce the amount of surface disturbance associated with oil and gas exploration and development projects. In some cases, centralizing production facilities at a location off the lease may serve that objective.

Paragraph (c) requires the operator to obtain BLM approval for off-lease royalty-free use via a Sundry Notice containing the information required under proposed § 3178.9 of this subpart. In response to a comment described below, in the final rule the BLM added the following provision to paragraph (c)

¹⁴⁰ *Plains Exploration & Production Co.*, 178 IBLA 327, 341 n.16 (2010).

¹⁴¹ 30 CFR 1202.150(b).

of this section: "If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on the volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed."

Paragraph (d) of this section clarifies that approval of off-lease measurement or commingling under other regulatory provisions does not constitute approval of off-lease royalty-free use. An operator or lessee must expressly request, and submit its justification for, approval of off-lease royalty-free use. The BLM anticipates that generally such approval would be appropriate only in some of the situations in which the BLM has approved measurement at a location off the lease, unit, or communitized area, or has approved commingling production off the lease, unit, or communitized area and allocating production back to the producing properties.

Paragraph (e) of this section addresses circumstances in which equipment located on a lease, unit, or communitized area also treats production from other properties that are not unitized or communitized with the property on which the equipment is located. An operator is allowed to report as royalty-free only that portion of the oil or gas used that is properly allocable to the share of production contributed by the lease, unit or communitized area on which the equipment is located, unless otherwise authorized by the BLM.

A commenter proposed that an identified use should be royalty-free until the BLM denies an application for prior approval, rather than requiring an operator to wait for the BLM to approve the use. As stated above, in response to these comments, the BLM revised § 3178.7(c) to indicate that approvals will be effective from the date the request was filed. However, if the BLM disapproves a request, the operator must pay royalties on all volumes used, including those volumes used during pendency of the request.

Commenters also suggested that the proposed language in paragraph (e) was inconsistent with the BLM's goal of encouraging operators to reduce the amount of surface disturbance because this provision would discourage production from multiple leases. The BLM disagrees. This section indicates that only the portion of the oil or gas used as fuel that is properly allocable to the lease, unit, or communitized area on which the equipment is located (on-lease) is royalty-free; however, the proportion of the oil or gas used from

off-lease production may be approved by the BLM for off-lease royalty-free use. The BLM recognizes both the operating efficiency and resource conservation advantages of locating production equipment from multiple wells on a common site. The BLM did not revise this paragraph in response to these comments.

Another commenter suggested that the BLM should approve all requests unless it can demonstrate that particular circumstances related to lease operations justify disallowing royalty-free use. The BLM disagrees with this comment and did not modify the rule in response to this comment. The MLA exempts from royalties production that is used on the lease for lease operations. This rule allows for royalty-free off-lease uses in some cases, including those specified in § 3178.6 as not requiring prior approval. The circumstances described in § 3178.7 give the BLM the flexibility to approve additional off-lease royalty-free uses where the BLM believes those uses are reasonable and not wasteful.

Section 3178.8 Measurement or Estimation of Volumes of Oil or Gas That Are Used Royalty-Free

This section specifies that an operator must 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: (1) Royalty-free gas removed downstream of the FMP and used pursuant to sections 3178.4 through 3178.7; and (2) royalty-free oil used pursuant to sections 3178.4 through 3178.7. When royalty-free oil or gas is removed downstream of the FMP and used pursuant to sections 3178.4 through 3178.7, the operator must apply for a new FMP under section 3173.12 to measure the gas that is removed for use.

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, paragraph (c) also requires the operator to document the removal of the oil from the tank or pipeline.

Paragraph (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. The BLM received few, highly technical comments on this section, which are addressed in the Response to Comments document.

Section 3178.9 Requesting Approval of Royalty-Free Treatment When Approval Is Required

This section describes how to request BLM approval of royalty-free use when prior-approval is required under § 3178.5 or § 3178.7. The operator must submit a Sundry Notice containing specified information, which is necessary for the BLM to determine if approval is appropriate. The information includes a description of the operation to be conducted, the measurement or estimation method, the volume expected to be used, the basis for an estimate (if applicable), and the proposed use of the oil or gas. This section was finalized as proposed, with minor wording changes to improve clarity. The BLM received few, highly technical comments on this section, which are addressed in the Response to Comments document.

Section 3178.10 Facility and Equipment Ownership

This section clarifies that although the operator is not required to own or lease the equipment that uses oil or gas royalty-free, the operator is responsible for all authorizations, production measurements, production reporting, and other applicable requirements. The BLM did not receive significant comments on this section and did not revise this section from the proposed rule.

Subpart 3179—Waste Prevention and Resource Conservation

Section 3179.1 Purpose

As in the proposed rule, this section states that the purpose of subpart 3179 is to implement 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. The section also provides that subpart 3179 supersedes those parts of NTL-4A that pertain to venting and flaring of produced gas, unavoidably and avoidably lost gas, and waste prevention.

One commenter stated that BLM should clarify whether subpart 3179 replaces NTL-4A and that NTL-4A is no longer applicable, or if subpart 3179 only supersedes part of NTL-4A. As stated previously, subpart 3178 replaces the portion of NTL-4A pertaining to the

use of oil or gas for beneficial purposes, and subpart 3179 replaces the portion of NTL-4A pertaining to flaring and venting of produced gas, unavoidably and avoidably lost gas, and waste prevention. Together, the combined revisions to subparts 3178 and 3179 supersede NTL-4A in its entirety.

Section 3179.2 Scope

This section specifies which leases, agreements, tracts, facilities, and gas lines are covered by this subpart. The section also states that the term “lease” in this subpart includes IMDA agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement. The BLM did not revise this section from the proposed rule.

Some commenters stated that the scope of the rule is too broad. Some commenters suggested limiting its scope to leases with more than 51 percent Federal interest, while others suggested that the BLM clarify that this subpart does not apply to exploration, wildcat, or delineation wells. The BLM disagrees that the scope of the rule is too broad, and did not revise this section based on these comments. As discussed earlier in this Preamble, the BLM has both the authority to ensure that operators take reasonable precautions to prevent the waste of Federal and Indian oil and gas. The fact that this final rule may impact some leases with minority Federal or Indian interest does not deprive the BLM of its authority to impose reasonable waste prevention requirements on operators producing Federal or Indian oil or gas.

Finally, the BLM notes that the rule generally applies to all oil and gas wells, including exploratory, wildcat, and delineation wells. Provisions of the rule that apply more narrowly explicitly indicate the narrower scope; for example, the gas capture requirements in section 3179.7 apply only to “development oil wells.”

Section 3179.3 Definitions and Acronyms

This section contains definitions for terms that are used in subpart 3179: “accessible component”; “automatic ignition system”; “capture” and “capture infrastructure”; “compressor station”; “continuous bleed”; “development oil well” or “development gas well”; “gas-to-oil ratio”; “gas well”; “high pressure flare”; “leak”; “leak component”; “liquid hydrocarbon”; “liquids unloading”; “lost oil” or “lost gas”; “pneumatic controller”; “storage vessel”; and “volatile organic compounds.” Some

defined terms have a meaning particular to this rule. Other defined terms may be familiar to many readers, but are defined in the regulatory text to enhance the clarity of the rule.

In response to comments, the final rule adds several definitions that were not included in the proposed rule, including “automatic ignition system”; “continuous bleed”; “high pressure flare”; “leak” and “leak component” (which replaced the term “component” from the proposed rule); and “pneumatic controller.” The final rule also adds a definition of “compressor station” that is consistent with the definition in subpart OOOOa, as the final rule leak detection provisions and the subpart OOOOa leak detection provisions both refer to compressor stations. In addition, the definition of “storage vessel” has been expanded to clarify the types of vessels covered by section 3179.203. The definitions of “development oil well” and “development gas well” include minor wording changes for clarity.

Some commenters expressed concerns that the proposed definition of a storage vessel in § 3179.3 does not match the definition provided in subparts OOOO and OOOOa. Commenters asserted that the definition proposed by the BLM applies the 6 tpy VOC threshold for applicability to a whole tank battery, as well as to a single tank, making the proposed rule significantly more stringent than the EPA OOOOa rule, which only applies if an individual storage vessel exceeds the threshold. Commenters also noted that the EPA definition of storage vessel excludes portable tanks temporarily located at the well site, and they recommended that the BLM take the same approach as the EPA by aligning the BLM’s definition with the EPA definition. Other commenters supported the BLM’s proposed definition of storage vessel, as it could apply the requirements for storage vessels to a collection of low-emitting single tanks that would not otherwise meet the threshold.

Based on input from commenters, the BLM has revised its definition of storage vessel to be largely consistent with the EPA subpart OOOO and subpart OOOOa definitions. The BLM removed the reference to a “battery of tanks” and added provisions excluding temporary tanks from the definition of a storage vessel. The BLM believes that this is a reasonable approach. The 6 tpy threshold identifies a quantity of lost gas that is reasonably cost-effective to address at an individual tank, without regard to the type of vessel or fluid stored. Avoiding the same quantity of lost gas from a battery of tanks would

effectively lower the tank size threshold for coverage and would be considerably less cost-effective, as the same type of equipment would have to be installed on multiple tanks with smaller releases.

The BLM has also excluded from the definition of storage vessel tanks storing hydraulic fracturing fluid prior to implementation of an approved permanent disposal plan under Onshore Oil and Gas Order No. 7. This revision ensures that the final rule will not overlap with BLM rules governing hydraulic fracturing activities.

Commenters also suggested that the BLM adopt definitions for “pneumatic controllers” and “continuous bleed” that are consistent with the definitions in subpart OOOOa. The BLM agrees that aligning the definitions in the BLM and EPA rules to the extent possible will reduce the potential for confusion. Accordingly, § 3179.3 includes definitions for “pneumatic controllers” and “continuous bleed” that are consistent with the definitions of these terms in subpart OOOOa.

In order to provide clarity, BLM has included definitions of “automatic ignitor system” and “high pressure flare” in the final rule. The final rule defines an “automatic ignition system” as an automatic ignitor and, where needed to ensure continuous combustion, a continuous pilot flame. A “high pressure flare” is defined as an open-air flare stack or flare pit designed for the combustion of natural gas leaving a pressurized production vessel (such as a separator or heater-treater) that is not a storage vessel.

Section 3179.4 Determining When the Loss of Oil or Gas Is Avoidable or Unavoidable

This section describes the circumstances under which lost oil or gas is classified as “unavoidably lost.” “Avoidably lost” oil or gas is then defined as oil or gas that is not unavoidably lost. The descriptions in the rule enhance clarity and consistency by listing specific circumstances under which oil and gas may be “unavoidably lost” when the operator has not been negligent, has not violated laws, regulations, lease terms or orders, and has taken prudent and reasonable steps to avoid waste.

The rule also defines as “unavoidably lost” any produced gas that is vented or flared from a well that is not connected to gas capture infrastructure, if the BLM has not determined that the loss of gas through such venting or flaring is otherwise avoidable.

Finally, this section defines “avoidably lost” oil or gas as lost oil or gas that does not meet this section’s

definition of “unavoidably lost.” Also included in the “avoidably lost” category is any “excess flared gas,” which § 3179.7 defines as the quantity of flared gas by which the operator fell short of the applicable capture requirement specified in that section.

In response to comments received, the final rule added two new items to the list of operations and sources that are considered unavoidably lost: (1) Gas lost during facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance and repairs, which includes “pigging” of lines to remove liquids, and (2) flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market, if the operator has notified the BLM through a Sundry Notice that the operator is conducting such capture.

The final rule also makes the following four clarifications to items that were included on the proposed list of operations and sources that are considered unavoidably lost, and that remain on that list in the final rule: (1) Normal operating losses from a natural gas-activated pneumatic controller or pump are considered unavoidable, provided the controller or pump complies with §§ 3179.201 and 3179.202; (2) normal operating losses from storage vessels and other low pressure production vessels are considered unavoidable provided the vessels are in compliance with §§ 3179.203 and 3174.5; (3) losses from well venting in the course of downhole well maintenance and/or liquids unloading are considered unavoidable provided those operations are conducted in compliance with § 3179.204; and (4) leaks are considered unavoidable, provided the operator has complied with the leak detection and repair requirements of §§ 3179.301 through 3179.305.

The BLM also modified the proposed treatment of gas that is lost from a well that is not connected to a pipeline to align this provision with the revised approach in the final rule that addresses flaring through capture targets instead of flaring limits. The BLM had proposed that gas flared in excess of the applicable flaring limit would be considered avoidable. The final rule deems avoidable any gas that is “excess” relative to the capture target. The term “excess flared gas” is defined in § 3179.7.

The principle underlying both the proposed and final regulatory text with respect to excess flared gas is that a prudent and reasonable operator will not routinely flare an unlimited quantity

of natural gas from a development oil well. In this rulemaking, the BLM is modernizing and clarifying the criteria for determining when incidental and necessary disposal of gas accompanying oil production crosses the line into unreasonable waste of public gas resources, and the final rule expresses these criteria in the form of a gas capture target. When an operator is not meeting the applicable gas capture target, specified in § 3179.7 the BLM deems the excess flared gas volume—that is, the volume that caused the operator to fall short of the capture target—to be waste, avoidable, and subject to royalties.

Several commenters disagreed with BLM’s proposed definitions of “waste” and “avoidably lost.” Many commenters felt that the BLM should maintain the definitions used in NTL-4A, including applying an economic test to determine what degree of capture is economical for the operator. These comments are addressed in section V.C of this preamble.

Some commenters stated that the BLM should consider gas lost during force majeure events as unavoidably lost. The BLM does not agree that all losses during force majeure events should be considered unavoidable. Such events may be out of the control of operators, but they are often expected and operators can therefore plan for them. The final rule does include as justifications for unavoidable loss some specific events that are generally considered force majeure events, such as emergencies. However, the gas capture requirements in the final rule are structured to provide operators substantial flexibility to meet the capture targets without providing a blanket exemption for all events that the operator does not directly control. For example, scheduled maintenance of downstream pipeline or processing plants is neither unexpected nor unusual, and the BLM believes an operator should be able to plan ahead to address those events—for example, by identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.

Moreover, as described in Preamble Section V.A, Venting Prohibition and Capture Targets, the final rule allows operators to meet the capture target on average over a month at all of the wells on a lease, unit, or communitized area, or alternatively, on average over a month at all of the operator’s wells in a county or state. A prudent and reasonable operator will be able to take advantage of this flexibility to ensure that it has captured enough gas over the

month, somewhere in the averaging area, to provide itself a sufficient buffer in meeting the gas capture targets to accommodate force majeure events that may not be within its control, but are common and predictable.

Relatedly, some commenters requested that gas lost because of ROW delays should be considered unavoidably lost. This preamble addresses the issue of ROW delays in Section VI.E. For the reasons discussed there, the BLM declines to make this change, which goes to the central premise of the gas capture requirement. The BLM has determined that it is not reasonable for operators to develop oil wells and plan to use flaring as the primary and routine disposal method for the associated gas. Rather, these rules require oil well operators, over time, to plan to capture an increasing percentage of their associated gas. In the near-term, the BLM believes that the gas capture targets, combined with the quantities of allowable flaring and the ability to average, are sufficiently generous to allow operators to manage short-term delays in planned gas pipeline infrastructure with little difficulty, using production deferment and on-site capture at some wells where necessary. Over the longer term, a reasonable operator can continue to use those tools as well as working with the midstream companies to ensure that there is adequate pipeline capacity available to support transport of associated gas prior to building out large well developments.

Many commenters requested that the BLM grandfather all existing determinations of royalty-free flaring. Again, this change would undercut a key goal of this rulemaking: Gradually, over time, to require operators to reduce routine flaring of associated gas from development oil wells. With the generous phase-in schedule for the gas capture targets and the quantities of allowable flaring, this rule requires only modest near-term reductions in flaring from existing wells. The BLM believes that it is entirely reasonable to expect operators to work, over time, to reduce flaring from their existing wells, as well as from new developments. Moreover, for this rule to have any meaningful effect on flaring, it must cover both existing and new development. Allowing all current determinations of royalty-free flaring to persist in perpetuity is unnecessary and would substantially undercut the effectiveness of this rule.

Section 3179.5 When Lost Production Is Subject to Royalty

This section provides that royalties are due on all avoidably lost oil or gas, but not on unavoidably lost oil or gas. We received no significant comments on this section, and the final rule is very similar to the proposed rule with minor wording changes to improve clarity.

Section 3179.6 Venting and Flaring From Gas Wells and Venting Prohibition

This section expressly prohibits all venting and flaring from gas wells, except where the gas is unavoidably lost pursuant to section 3179.4(a). In addition, this section requires operators to flare rather than vent all gas that is not captured, except under certain limited circumstances. Operators will be allowed to vent gas in the following situations: (1) When flaring is technically infeasible—for example if the volumes of gas are too small to operate a flare (such as so-called bradenhead gas), or if the gas is not readily combustible; (2) under emergency conditions, 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 the gas is vented from a storage vessel, provided that § 3179.203 does not require the combustion or flaring of the gas; (5) when the gas is vented during downhole well maintenance or liquids unloading activities performed in compliance with § 3179.204; (6) when the gas is vented through a leak where the operator is in compliance with § 3179.301–305; (7) when venting the gas 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; and (8) when release of gas is unavoidable and flaring is prohibited by Federal, State, local or Tribal law, regulation, or enforceable permit term.

The BLM made the following changes to the proposed rule requirements: (1) Changed the title of this section; (2) added a new section (a) that expressly prohibits venting or flaring gas from gas wells, except where the gas is unavoidably lost pursuant to section 3179.4(a); (3) renumbered paragraphs (a)(1) and (2) paragraphs (b)(1) and (2); (4) moved discussion of venting from a storage vessel from proposed paragraph (a)(3) to paragraph (b)(4) and added language clarifying that such venting is permitted when § 3179.203 does not require combustion or flaring of the gas; (5) renumbered proposed paragraph

(a)(4) as paragraph (b)(3) and qualified that venting from a natural gas-activated pneumatic controller or pump is permitted during normal operation and when the pump is in compliance with § 3179.201 and § 3179.202; (6) Added paragraphs (b)(5) through (b)(8) that describe additional cases when venting of gas is permitted (situations 4–8 in the previous paragraph); (7) Removed all of proposed paragraph (b) describing venting or flaring volume limits, because flaring limits are now addressed in a new § 3179.7; and (8) Added a new paragraph (c), which requires that all flares or combustion devices be equipped with an automatic ignition system.

Section 3179.6(a) carries forward NTL–4A's express prohibition on venting and flaring from gas wells. Section IV.A of NTL–4A prohibits the venting or flaring of gas well gas, except for unavoidable losses and short-term venting and flaring during emergencies, well purging and evaluation tests, initial production tests, and wells tests (circumstances now defined as unavoidable in section 3179.4(a)). Similar restrictions on venting and flaring from gas wells were implied in the proposed rule; the BLM has chosen to state this explicitly in the final rule in order to avoid confusion.

Key comments received on this section are discussed in Section III.B.1.b of this preamble. Additional substantial comments received on the venting prohibition provisions are discussed below.

The BLM received comments asserting that the BLM lacked the statutory authority to require operators to flare rather than vent gas that is not captured. Commenters argued that such a requirement does not fall within the BLM's waste-prevention authority under the MLA because shifting from venting to flaring does not prevent waste as the gas is lost in either case. These commenters then argued that the only possible justification for the requirement to flare rather than vent is control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent does result in waste prevention, because it is paired with provisions that limit total flaring—namely, the gas capture requirements in § 3179.7. Under § 3179.7(c), the denominator in the gas capture percentage calculation is “the total volume of gas captured over the month plus the total volume of gas flared over the month from high-pressure flares

from all of the operator's development oil or gas wells in the relevant area, minus” a declining “flaring allowable” volume.. By requiring that operators shift from venting to flaring, the BLM is effectively increasing operators' flared volume in a given month, which in turn increases the total volume of gas that the operators must capture in that month.

Second, directing associated gas to a flare rather than allowing operators to vent it improves waste accounting because under final rule § 3179.9, operators must measure volumes above 50 Mcf per day that are flared from a high pressure flare stack or manifold. By shifting operators from venting to flaring, § 3179.6 will likely increase the number of operators that must measure their flared gas volumes under § 3179.9. This will, in turn, improve operators' (and the BLM's) waste accounting. Better waste accounting is itself a waste prevention measure, because it gives the BLM and operators a better sense of how much gas is being wasted—and thus how much could be made available for productive use and/or sold to offset the costs of waste prevention equipment.

Third, this requirement constitutes waste prevention when applied to operator flaring during activities regulated under §§ 3179.102, 3179.103, and 3179.104. Under §§ 3179.102 and .103, flaring during well completion and initial production testing that exceeds 20 MMcf/well is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(C). The BLM believes that in many instances, the venting prohibition in § 3179.6 may result in operators reaching the 20 MMcf/well royalty flaring threshold sooner, thereby providing an additional financial incentive for operators to reduce waste. Under § 3179.104, all flaring during subsequent well tests that exceeds 24 hours is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(D).

Fourth, as discussed above, the requirement to flare rather than vent associated gas is justified as a safety measure under the MLA. It is generally safer to combust methane gas than allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risks to workers of hypoxia and exposure to various associated pollutants.¹⁴² Fifth, and as also discussed above, even if the venting prohibition were purely an air quality control measure, the BLM does have the authority to regulate air quality

¹⁴² NIOSH–OSHA Hazard Alert entitled, “Health and Safety Risks for Workers Involved in Manual Tank Gauging and Sampling at Oil and Gas Extraction Sites,” February 2016, www.osha.gov.

and GHG impacts on and from the public lands, pursuant to FLPMA and the MLA, as discussed in Section III.C of this Preamble.

Several commenters stated that operators should be required to capture *all* natural gas from all wells, with no exceptions, or that if flaring is allowed, combustion devices should be required to have a design destruction efficiency of at least 98%, that enclosed flares should be required, and that flares should be required to be equipped with a continuous pilot light and an auto-ignition system. As discussed in Section III.B.2 of this preamble, the BLM does not believe that it is feasible to eliminate all venting and flaring, but we have revised both the flaring requirements and the circumstances when venting is permitted in response to comments. The BLM also is not adding a requirement for flares to have a design destruction efficiency of 98%. Many existing flares have a design combustion efficiency of 95%, rather than 98%.

The BLM has added a requirement in the final rule that flares must be equipped with an automatic ignition system, which will provide the flare system with an effective method of ignition in the case of interruption. The term “automatic ignition system” implies the concept of maintaining an ignition source without specifying a particular type of device, and the BLM believes that operators will utilize devices that are appropriate for the circumstance. The BLM does not believe that requiring a specific device, such as a continuous pilot, would necessarily result in reduced waste relative to a more general requirement for an automatic ignition system.

Some commenters requested that the BLM allow venting when flaring is not economically feasible. The BLM believes that this change is unnecessary, would add substantial ambiguity to the rule, and could significantly weaken the requirement to flare rather than vent. Flaring rather than venting gas that is not being captured is widespread industry practice, due in large part to safety concerns. While there are situations where the quantities of gas are too small or difficult to allow for flaring, the rule explicitly allows venting in lieu of flaring in those situations. It is not clear to the BLM what other circumstances would render flaring “economically infeasible,” or what specific concerns the commenter is trying to address.

A commenter seeking to minimize exceptions to the venting prohibition asked the BLM to define the term “technically infeasible.” Given the wide variety of situations that are likely to

occur on a lease that inform an operator’s determination of technical feasibility, the BLM does not believe that it is appropriate to add further specificity to this term. If there is a dispute about the term in a specific case, the BLM has the final say in determining whether flaring is, in fact, technically infeasible.

Section 3179.7 Gas Capture Requirement

Final rule § 3179.7 houses a modified version of the flaring requirements that were in proposed rule s 3179.6. As discussed in Section III.B.2.a, the final rule alters how the proposed rule constrained the quantities of gas lost through flaring, but achieves similar flaring reductions by requiring operators to meet specified monthly capture targets (subject to shrinking flaring allowances), rather than setting per well numeric flaring limits.

Final rule § 3179.7 establishes capture targets that increase over the first nine years of rule implementation. Paragraphs (a) and (b) describe the capture percentage requirements. The schedule for the capture targets is provided in § 3179.7(b)(1)–(4) and is reproduced in Section III.B.2.a of this preamble. Paragraph (c) defines “capture percentage,” “total volume of gas captured,” “adjusted total volume of gas produced,” and “relevant area.” Under § 3179.7(c)(3), an operator may choose whether 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. Section 3179.7(c)(4) defines when an oil or gas well is considered “in production” and therefore subject to the capture targets in this section. Section 3179.7(d) establishes an equation for determining the quantity of “excess flared gas”—that is, the volume of flared gas that causes an operator to fall short of the applicable capture target in a given month, and that is therefore subject to royalties. Section 3179.7(e) requires operators to prorate the excess flared gas to each lease, unit, or communitized area that reported high-pressure flaring, for purposes of calculating royalties.

As discussed in Section III.B.2 of this preamble, the BLM developed the capture target approach in final rule § 3179.7 after careful consideration of the many comments received on the flaring limit approach taken in proposed rule § 3179.6(b). The key comments received on § 3179.7 and BLM’s response to these comments are also discussed in Section III.B of this preamble. Additional substantive

comments received on the proposed flaring provisions are discussed below.

Several commenters asserted that the ability to avoid flaring depends on the capacity of gathering lines, and that operators must prove production for a new oil play and initiate larger scale development before gathering and/or processing companies are willing to invest in infrastructure. These comments informed the revisions to the flaring revisions made in the final rule. The BLM also recognizes that currently the optimal mechanism to capture gas is through connecting to a pipeline, which may take time to achieve in some areas due to lagging infrastructure and capacity constraints. As a result, the final rule provides additional time and flexibility for industry to plan and better coordinate development of production wells with development of pipelines to transport the production. As discussed in section III.B.2, the final rule provides an option for operators to comply with the capture targets on a lease-by-lease, county-wide, or state-wide basis, and also phases in the capture targets over a longer period of time. These changes will allow sufficient time and flexibility to enable industry to better align oil development with gas infrastructure over time.

On the other hand, given the BLM’s statutory obligation to reduce waste of gas, the clear technical capability of operators to capture gas, the economic value of the gas, and the environmental impacts of not capturing it, the BLM has determined that it is not reasonable to allow operators to dispose of large quantities of associated gas from development oil wells using routine flaring. The final rule therefore structures the capture targets in a way that the BLM estimates will achieve slightly greater flaring reductions than the proposed rule, albeit over a longer timeframe.

Many commenters asserted that on-site capture technologies are not technically feasible and/or economically viable. In the proposed rule, we discussed research indicating that LNG stripping, CNG, and gas-to-power are commercially mature technologies that are portable, scalable, and have been utilized economically at well sites.¹⁴³ Moreover, MJ Bradley released a re-analysis of the economic analysis in the proposal, which suggests that for over 500 of the leases in the BLM data set, the CNG trucking option would have total net benefits that exceed total lessee

¹⁴³ 81 FR 6641. See also Carbon Limits. “Improving Utilization of Associated Gas in US Tight Oil Fields”. 2015. Available at http://www.catf.us/resources/publications/files/Flaring_Report.pdf.

costs by approximately \$56.5 million over a 10 year period.¹⁴⁴ The BLM agrees with the commenter's assertion that these remote-site capture technologies may not be viable at all well sites. However, they are viable and currently used at some sites. The final rule's option allowing operators to average compliance across all of their wells in a county or State accommodates this heterogeneity in site/technology compatibility: Operators can deploy on-site capture technologies where it is most cost-effective, and use the increased capture rates at those sites to offset continued flaring at other sites. The BLM also notes that leasing on-site capture equipment during the earlier periods of well production, when associated gas levels and corresponding potential revenues are highest, can enhance the cost-effectiveness of the technologies. Leasing allows operators to avoid upfront capital costs associated with purchasing equipment, making it easier to use such equipment only for periods in the well's life when it is most economic to do so. This strategy also allows operators to match equipment size to expected associated gas production volumes at different stages of well production. Finally, on-site capture technology capital costs may continue to decline as the market further matures and achieves greater economies of scale.

Several commenters expressed concern about delays in approvals of ROWs for gas pipelines, and asserted that such delays will prevent operators from complying with the capture targets. These comments are addressed in Section VI.E of this preamble.

Section 3179.8 Alternative Capture Requirement

Section 3179.8 (§ 3179.7 in the proposed rule) describes an alternative process that is available to an operator that cannot meet the capture targets described in final rule § 3179.7. Under § 3179.8, an operator that cannot meet the capture targets may request that the BLM establish an alternative capture target if three conditions are met: (1) The operator has chosen to comply with the capture target using the lease-by-lease, unit-by-unit, or communitized area-by-communitized areas basis rather than the averaging approach; (2) the potentially noncompliant lease was issued before the effective date of this final rule; and (3) the operator demonstrates via Sundry Notice, and

the BLM agrees, that the applicable capture percentage under final rule § 3179.7 "would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease."

As discussed in Section V.B.2.b of this preamble, § 3179.8 was revised in the final rule to reflect the shift to gas capture targets in final rule § 3179.7. Section 3179.8(a) was also revised to reflect the three conditions discussed above. Section 3179.8 (b) describes the information an operator must submit in the Sundry Notice. The final version of this paragraph makes minor modifications relative to the proposed version, including: Adding the phrase, "to the extent that the operator is able to obtain this information," to the requirements to include pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure; adding cost projections for alternative methods of transportation that do not require pipelines; specifying that the cost projections required in final § 3179.8(b)(5)(i) must be based on the next 15 years or the life of the lease, unit, or communitized area, whichever is less; and dropping the requirement to provide the depths and names of producing formations. Section 3179.8(c) remains similar to the proposed rule (§ 3179.7(c)), with flaring limits changed to capture percentages. The final rule also does not contain the renewable 2-year exemption in proposed § 3179.7(d).

The key comments received on this section and BLM's response to these comments are discussed in Section III.B.2.b of this preamble. Additional substantive comments received on the proposed flaring provisions are discussed below.

Some commenters asserted that the proposed alternative capture and related Sundry Notice requirements were overly burdensome and required submission of confidential information. These commenters contended that oil and gas price and production volume forecasts and pipeline and gas capture costs are considered confidential business information. Commenters also claimed that operators do not have access to information on pipeline capacity.

The BLM does not agree that the Sundry Notice requirements for a request for an alternative capture requirement are unduly burdensome, although the BLM has streamlined the proposed requirements in the final rule where it was possible to do so without losing information that would be necessary to evaluate a request. Commenters did not explain how the BLM would be able to determine

whether a request met the criteria for approval absent the required information. Also, operators routinely provide information to the BLM that they consider confidential; if they indicate on the Sundry Notice that the information is considered confidential, the BLM will handle the information in accordance with applicable regulations in 43 CFR part 2. In response to statements that commenters may not have access to information on pipe capacity, the BLM revised the final rule to state that data on pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure is required to the extent that the operator is able to obtain such information.

Some commenters requested that the BLM clarify what "significant" means with regard to recoverable oil reserves in § 3179.8(c), while another recommended that the criteria should be based on an economic test that would grant an alternative limit if the return on investment would be too low for a prudent operator to proceed with compliance. Another commenter stated that new wells should also be allowed to apply for alternative limits. Other commenters asserted that the BLM should eliminate or substantially narrow the approval of alternative limits, with one commenter stating that the BLM should determine approval of alternative limits based on a cost-benefit analysis that includes the consideration of environmental benefits.

The BLM did not revise the rule based on these comments, but we are providing here additional clarification on the BLM's interpretation of this standard. The BLM believes that requiring the operator 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" is an appropriate threshold for granting alternative capture requirements. The BLM recognizes that the term "significant" is a qualitative rather than quantitative metric. The BLM considered development of a quantitative metric, but determined that setting a quantitative threshold, such as number of days of production lost, might be arbitrary and ineffective. Moreover, the BLM has a history of reviewing and effectively evaluating requests based on similar qualitative criteria. While we do not expect there to be a significant change in the review of these requests from prior practice, as discussed in the preamble to the proposed rule, we do expect that spelling out the requirements and

¹⁴⁴ M.J. Bradley and Associates. "Re-analysis of Proposed BLM Flaring Reduction Rule; Projected Costs and Benefits". September 9, 2016. Pages 13–14.

qualitative criteria more clearly in today's rule will ensure a more consistent review and approval process.

The BLM notes that the phrase "cease production and abandon significant recoverable oil reserves" is not intended to require an operator to demonstrate that the lease could never be developed under any future circumstances. Yet nor would it be sufficient for an operator to show that compliance with the capture targets would cause the operator to shut in the wells on a lease for a limited period of time. Rather, the operator must make a showing that the cost of complying with the capture requirements would cause the operator to shut in the wells on the lease under current market conditions and for the reasonably foreseeable future, taking into account uncertainty regarding the long-term recoverable potential of the lease and reservoir. In other words, the showing should illuminate whether compliance would cause the operator to be deprived of the value of the lease, not simply cause a reduction in profit. For example, depending on the specific economic circumstances of the lease, it may be sufficient for an operator to show that it would have to shut in the wells on a lease for a time period on the order of a year or two. The BLM notes, however, that it is not uncommon for operators to shut in and restart production due to market conditions, and a showing under this exemption should demonstrate a more significant impact that is clearly distinguishable from such normal fluctuations.

With respect to the request to allow an alternative capture target to apply to new wells, the BLM notes that the alternative is limited to existing leases, not existing wells. Thus, the alternative capture target is potentially available with respect to an existing lease with new wells. Moreover, the BLM believes that with the extended phase-in of the capture targets and the state- and county-wide averaging option, operators have ample flexibility to take the capture targets into account as they develop new production wells. Indeed, this rule encourages such planning by requiring operators to submit waste minimization plans with their APDs. Further, the BLM does not believe that the opportunity to request an alternative capture target should be extended to new leases. Operators have broad flexibility to plan to meet the capture targets at the time that they bid on new leases.

Some commenters requested that the Sundry Notices be processed in a timely manner, and that the BLM provide a schedule for applying for and being granted an alternative capture

percentage. One commenter suggested that the BLM should align the phase-in of the rule with the time it would take to for the BLM to approve the requests for alternate capture targets. Given that the final rule phases in the capture targets over a longer period of time, the BLM expects that operators will have sufficient time to prepare their Sundry Notice requests for alternative capture targets if needed. Additionally, the BLM does not anticipate receiving a large number of Sundry Notice requests for alternative capture targets, and therefore anticipates that it will have adequate time to review them in a timely manner.

Section 3179.9 Measuring and Reporting Volumes of Gas Vented and Flared

This section (which was § 3179.8 in the proposed rule) requires operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas, whether royalty-bearing or royalty-free. This section further provides that specific requirements apply when the operator is flaring 50 Mcf or more of gas per day from a high pressure flare stack or manifold, based on estimated volumes from the previous 12 months, or based on estimated volumes over the life of the flare, whichever is shorter. Beginning one year from the effective date of the rule, when this volume threshold is met, the operator must measure the volume of the flared gas, or must calculate the volume of the flared gas based on the results of a regularly performed GOR test, so as to allow the BLM to independently verify the volume, rate, and heating value of the flared gas. This section also requires operators to report all volumes vented or flared under applicable ONRR reporting requirements.

This section allows operators that are flaring gas across multiple leases, unit PAs, communitized areas, or non-Federal or non-Indian leases to measure or calculate the flared volumes at a single point. To mitigate environmental impacts, commingling to a single flare may be approved even though the relevant royalty interests may differ. 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. However, to ensure proper production accountability, the method of allocating the flared volumes to each lease, unit PA, or communitized area must be approved by the BLM where the

flared volumes exceed the 50 Mcf/day threshold.

The BLM made the following changes from the proposed rule: The final rule clarifies that (1) this section applies to gas vented and flared from wells, facilities, and equipment on a lease, unit PA, or communitized area, rather than just referencing gas vented and flared from wells; (2) the 50 Mcf/day threshold triggering the requirement to measure is determined by averaging the estimated volumes from a high pressure flare stack or manifold over the previous 12 months, or the life of the flare, whichever is shorter; (3) when the 50 Mcf/day threshold is met, operators have the choice of measuring or calculating the volume of the gas, rather than being required to measure only; (4) the requirement to measure or calculate volumes applies beginning one year from the effective date of the rule; and (5) under new paragraph § 3179.9(c), operators may measure or calculate commingled gas at a single measurement point at the flare, but they must use an allocation method approved by the BLM to allocate the quantities of flared gas across the leases, unit PAs, or communitized areas that can contribute production to a flare that is above the 50 Mcf/day threshold.

The BLM received a range of comments on § 3179.9 (§ 3179.8 in the proposed rule). Some commenters recommended that the BLM disallow estimation of flared or vented gas and requested that gas be measured in all cases or that the threshold for measurement be lowered from 50 Mcf/day. Commenters asserted that requiring measurement and monitoring rather than allowing operators to estimate flared gas volumes will provide the co-benefits of assisting the BLM with compliance assurance, allowing accurate determination of when royalties are due, and further reducing methane emissions.

Other commenters argued that the threshold for measurement should be raised or that the measurement requirement should be eliminated from the rule altogether. One commenter contended that metering simply adds costs and logistical difficulties without providing environmental benefit or reducing waste. Several commenters asserted that metering technology is not available that can accurately or reliably estimate flare gas volumes over the extreme range of pressures and rates typically encountered on producing wells, and that the measurement equipment and methods in Onshore Order 5 and its successor regulations are not applicable to flares. Arguing that there is no current technology that can

reliably measure low pressure, low volume, fluctuating gas flow, several commenters recommended that the BLM remove the requirement to measure gas at low-volume flow rates and allow the operator to continue to use the estimation requirements and GOR methodology in NTL-4A. Another commenter asserted that operators would need to install meters on any site where vented and flared gas could potentially exceed the threshold. Several commenters requested clarification on the period over which the flaring must exceed the 50 Mcf/day threshold, with one suggesting that the threshold be based on an average value over a production month.

Like the proposed rule, the final rule maintains the 50 Mcf/day threshold for triggering more specific standards for determining the volume of flared gas, however, the BLM has modified the standards that apply when a flare stack or manifold exceeds that threshold to allow either metering or a rigorous GOR-based approach. The final rule also clarifies that exceedance of the 50 Mcf/day threshold will be determined based on the average quantity of flaring per day over the life of the flare or over the previous 12 months of flaring activity, whichever is shorter. The BLM agrees that the rule should specify the measurement period for exceeding the threshold, and believes that limiting the averaging period of 12 months (or the life of well) provides a good indication of ongoing, current levels of flaring that are high enough to warrant measurement.

Although the BLM received comments arguing for both higher and lower thresholds, the BLM ultimately concluded that a change in the threshold is not warranted. The 50 Mcf/day threshold represents a level of activity of high-pressure flares that can be measured or calculated with a reasonable degree of accuracy. In addition, particularly when measured or calculated on average over a period of time at a single flare stack or manifold, 50 Mcf/day is a sufficiently high level of flaring that it could reasonably be expected to lead to royalty obligations on flared volumes considered “avoidably lost” under the final rule. When an operator exceeds this threshold, the operator needs to be able to account accurately for the amount of flaring that occurs and validate its compliance with the capture target, particularly as the “flaring allowable” level decreases and the capture target increases in future years.

The BLM has modified the standards that apply to flares that exceed the 50 Mcf/day threshold, however, to allow

for either metering or a GOR-based calculation of flare volumes in circumstances where a GOR-based approach would allow the BLM to independently verify the volume, rate, and heating value of the flared gas. As noted above, many commenters argued that metering technology is not available to measure gas volumes at many flares, and they asserted that using GOR-based methods provides sufficient information to accurately calculate flared gas volumes. Other commenters argued that all flared gas volumes should be directly metered.

The BLM believes that technology exists to measure flared volumes, especially on higher-volume flares, and that meters would not be prohibitively expensive to install. For example, the gas measurement requirements in recently adopted subpart 3175 contain standards applicable to metering gas at very-low volume FMPs. These are the BLM’s least stringent measurement requirements for gas measurement, and they allow operators to use alternative methods for measuring highly fluctuating gas flows, provided only that the measurements meet the performance goals of section 3175.31. While the specific standards in subpart 3175 are geared to orifice plate measurement, the performance goals for very-low volume FMPs only require that the measurement be verifiable and they do not require the operator to achieve any set level of uncertainty or maintain measurement free of statistically-significant bias. Therefore, the BLM may approve alternate devices for purposes of subpart 3175, such as thermal mass meters, ultrasonic meters, or other technology that industry develops that can provide verifiable measurement, which could also be applicable to measuring flared volumes under this provision. In addition, provisions in newly adopted subparts 3170 and 3175 establish a production measurement team, which will approve technologies for gas metering. Technologies approved by the production measurement team could also be used to comply with the requirements of this section.

Nevertheless, the BLM is sensitive to the performance limitations of many commonly used meters, and the BLM believes that a properly designed GOR-based approach can also produce adequately accurate results. A GOR-based method for calculating volumes of flared gas would use a known GOR and measured volumes of oil production and sold gas. The GOR itself is determined based on a test that directly measures in a controlled manner all of the oil and gas produced by the well over a given period of time. Calculating the volumes

of flared gas based on GOR can be quite accurate, if the GOR value used is accurate and the well conditions are relatively stable. Since the GOR will vary as well conditions change, the accuracy of the GOR value for a well can be enhanced by more frequent GOR testing, either on a set frequency and/or in response to changes in the well’s production. The BLM expects that to meet the standards of § 3179.9, GOR tests would need to be performed at least monthly for most wells.

Commenters also contended that the rule does not clearly specify the type of gas that must be estimated or measured, and they recommended that the rule not apply to “unavoidably lost” gas volumes. The BLM does not agree that measurement should be required only when the volume of avoidably flared gas exceeds the threshold. As a first step to reducing waste through flaring, it is important for both the operator and the BLM to have an accurate understanding of the total quantity of gas that is being flared. While the BLM agrees that estimation techniques can provide a ballpark volume estimate, the BLM believes that direct measurement methods authorized under subpart 3175 more consistently and accurately identify the actual volume of the losses. Furthermore, the BLM notes that if an operator is flaring high pressure gas at a rate of more than 50 Mcf/day, it becomes more likely that the operator is failing to meet capture requirements. If an operator fails to meet capture requirements, then at least a portion of the flared gas is deemed avoidably lost, and therefore royalty bearing.

Several commenters noted that the rule does not provide methods for estimating vented or flared volumes. One commenter asserted that the BLM must require operators to use estimation techniques that provide accurate and reliable estimates of releases, while others recommended that methods currently allowed under NTL-4A should continue to be allowed for estimating associated gas and royalty-free volumes.

The BLM does not believe that it is necessary to specify estimation methods, as the BLM expects the industry to continue to use well-understood and generally accepted engineering practices for estimating quantities of flared gas below the 50 Mcf/day threshold.

Commenters also requested that the BLM make public the data on volumes of gas reported by operators as flared or vented. The BLM agrees that this is important information for the public, and the BLM plans to make this information available, subject to any

protections for confidential business information.

Section 3179.10 Determinations Regarding Royalty-Free Flaring

This section (which was § 3179.9 in the proposed rule) provides for a transition period for operators that are operating under existing approvals for royalty-free flaring, as of the effective date of the rule. Further, this section clarifies that nothing in this subpart alters the royalty-bearing status of flaring that occurred prior to January 17, 2017, nor the BLM's authority to determine that status and collect appropriate back-royalties.

Commenters asserted that the rule represents a change in what is considered "avoidable loss" and therefore cannot be applied to existing leases. Commenters also requested that the BLM permanently grandfather existing approvals for royalty-free flaring and only apply the rule requirements to wells drilled after the effective date of the rule, arguing that 90 days is too little time to design and construct gas capture infrastructure.

As discussed in Preamble Section III.C, the BLM's legal and contractual authority to update its regulations governing existing oil and gas leases is well established. The BLM has the authority to revise its interpretation of what constitutes "avoidably lost" oil and gas and may impose this interpretation on existing leases. The BLM revised the rule, however, to extend the grace period for preexisting approvals to flare royalty free from the 90 days specified in the proposed rule to one year after the final rule becomes effective. After one year, those operators with preexisting royalty-free flaring approvals will become subject to all the provisions of the final rule.

Section 3179.11 Other Waste Prevention Measures

This section clarifies that nothing in this subpart alters the BLM's existing authority under applicable laws, regulations, permits, orders, leases, and unitization or communitization agreements to limit the volume of production from a lease, or to delay action on an APD to minimize the loss of associated gas. Specifically, if production from a new well would force an existing producing well already connected to the pipeline to go offline, then notwithstanding the requirements in 3179.7 and 3179.8, the BLM may limit the volume of production from the new well while gas pressures from the well stabilize. In addition, this section clarifies that, consistent with existing authority, the BLM may delay action on

an APD or approve it with conditions related to gas capture and production levels, and can suspend the lease under 43 CFR 3103.4–4 if the lease associated with the APD is not yet producing.

In the final rule, the BLM revised both paragraphs § 3179.11(a) and (b) to add additional specificity regarding the sources of the BLM's existing authority. Specifically, the BLM added to both paragraphs (a) and (b) language to the effect that the BLM may exercise its existing authority "under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements."

The BLM received a number of comments on this section. While some commenters expressed support for BLM's authority on this matter, other commenters expressed concern that the BLM could delay approval of APDs due to infrastructure limitations that are out of the control of the operator (e.g., third-party pipeline capacity). One commenter suggested that the proposed requirements would result in curtailment of new production, potentially causing reservoir damage during initial production operations. Another commenter asked the BLM to (1) clarify that this portion of the rule applies to Federal minerals only and (2) explain implementation of the rule for special cases, such as long reach horizontal wells that produce from Federal and non-Federal leases within the same wellbore.

The BLM did not revise this section based on comments received. As stated in the regulatory text, the BLM is exercising existing authority and this section does not expand upon that authority. The intent of this section is to address operators' concerns that gas from their existing wells could be forced offline by new Federal gas production, and to clarify that the BLM already has the authority to remedy such circumstances when appropriate to minimize waste of oil and gas on BLM-administered leases. If implementation of this section could result in the incidental curtailment of non-Federal production, the BLM will coordinate on a case-by-case basis with the relevant State regulatory authorities pursuant to Section 3179.12. As noted in Preamble Section VI.D, the fact that a regulatory provision aimed at Federal and Indian production may have incidental impacts on State or private production does not impinge on the BLM's authority to ensure that operators take reasonable steps to minimize waste of Federal and Indian minerals.

Section 3179.12 Coordination With State Regulatory Authority

This section addresses certain "mixed ownership" situations, in which a single well may produce oil and gas from both Federal and/or Indian mineral interests and non-Federal, non-Indian mineral interests. This section provides that to the extent any BLM action to enforce a prohibition, limitation, or order under this subpart might adversely affect production of oil or gas from non-Federal and non-Indian mineral interests, the BLM will coordinate on a case-by-case basis with the State regulatory authority with jurisdiction over that non-Federal and non-Indian production. This is consistent with current practice, in which the BLM and State regulators coordinate closely in regulating and enforcing requirements that apply to operators producing from Federal or Indian interests and from non-Federal, non-Indian mineral interests. The BLM did not revise this section from the proposed rule.

Some commenters asserted that the proposed rule did not indicate what constitutes coordination, and separately, that state-Federal coordination would not reduce duplicative requirements for operators. This provision is aimed at coordinating enforcement of BLM requirements, not intended to address issues related to overlapping state and Federal requirements. The BLM anticipates that its level of coordination will vary by state, and may involve entering into (or revising existing) memoranda of understanding with the relevant State parties.

Section 3179.101 Well Drilling

This section requires that gas reaching the surface as a normal part of drilling operations be used or disposed of in one of four specified 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. The final rule specifies that gas may not be vented except under the circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the ways specified above.

This section also states that gas lost as a result of a loss of well control will be classified as avoidably lost if the BLM determines that the loss of well control was due to operator negligence, in which case it will be subject to royalties.

Several commenters asserted that the proposed requirement that all gas that reaches the surface during drilling be captured and sold, flared, used on-site, or injected is not always technically feasible because such gas can be low

pressure, low volume, and intermittent. Commenters also stated that achieving a no-venting standard is not feasible particularly when gas reaches the surface through unplanned gas kicks. Commenters asserted that in these situations, venting the gas can sometimes be the only safe solution.

In response to these comments, in addition to the exceptions described in § 3179.6(b), the final rule states that operators also do not have to use or dispose of gas that reaches the surface in one of the ways specified in § 3179.101(a) if it is technically infeasible to do so. The BLM believes that a technical infeasibility option is necessary to address the situations described by commenters, which we expect to occur rarely, where the operator cannot use or dispose of the gas as specified in § 3179.101(a).

The BLM also received comments asserting that it lacks the authority to require that gas reaching the surface during drilling operations be flared if not captured, used on the lease, or injected. Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention, as the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments. Flaring during drilling does not count toward an operator's capture target, so the requirement to flare rather than vent this gas does not achieve waste reduction in that way. Nevertheless, the requirement falls squarely within the BLM's authority because, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Section 3179.102 Well Completion and Related Operations

This section addresses gas that reaches the surface during well completion, post-completion, and fluid recovery operations, after a well has been hydraulically fractured or

refractured. It requires the gas to be used or disposed of in one of four specified ways: (1) Captured and sold; (2) directed to a flare pit or stack, subject to a volumetric limitation in section 3179.103; (3) used in the lease operations; or (4) injected. The final rule specifies that gas may not be vented except under the narrow circumstances specified in proposed § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the four ways specified above. It also provides that an operator will be deemed to be in compliance with the gas capture and disposition requirements of § 3179.102(a) if the operator is in compliance with the requirements for control of gas from well completions established under subpart OOOO or subpart OOOOa, or if the well is not a "well affected facility" under either of these subparts.

The final rule also allows an exemption from the requirements of § 3179.102(a) if the operator submits a Sundry Notice to the BLM demonstrating that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant oil reserves under the lease.

In response to comments described below, we have made several changes to the proposed rule requirements. Specifically, the final rule: (1) Clarifies that sources subject to, and in compliance with, subpart OOOO and subpart OOOOa are deemed to be in compliance with this section, without filing a Sundry Notice (as the proposed rule would have required); (2) limits coverage of this section to hydraulically fractured or refractured well completions; (3) adds text to clarify that a well that does not meet the definition of a "well affected facility" under either subpart OOOO or subpart OOOOa, will nevertheless be deemed to be in compliance with this section, since the NSPS provides that existing wells that are refractured and follow the well completion procedures in the NSPS are not affected facilities; (4) adds an exemption for technical infeasibility; and (5) adds an exemption from the requirements of this section when the operator can demonstrate that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance.

Several commenters asserted that the requirements for well completions are duplicative with EPA requirements contained in 40 CFR part 60 subpart OOOO and subpart OOOOa. These EPA rules address emissions from flowback

operations following completion of new gas and oil wells using hydraulic fracturing treatment. Commenters asserted that the EPA rules effectively cover all wells, because most new wells utilize hydraulic fracturing, and existing wells that undergo "recompletion" hydraulic fracturing will be covered as well, as they are considered a "modified" source post-recompletion. Commenters further argued that the BLM should allow for exemptions for wells that comply with either 40 CFR part 60, subpart OOOO or subpart OOOOa, rather than limiting the exemption to wells that comply with subpart OOOOa as the proposed rule would have done. Commenters asserted that several issues related to controlling emissions from well completion operations have already been worked out in detail with the EPA, and these issues would apply to the BLM's rule as well. These issues include inadequate well pressure or gas content during the well completion to operate surface equipment, and the need for an exemption for wells with less than 300 scf of gas per stock tank barrel of oil produced. Other commenters noted that the EPA's well completion requirements in subpart OOOOa do not cover conventional wells because of their low methane and VOC emissions, but that the proposed BLM rule would apply to conventional wells. Commenters also argued that the Sundry Notice requirement to document EPA compliance was an additional and unnecessary burden for sources already regulated elsewhere.

Although we believe that new wells will generally be subject to subpart OOOOa, after considering these comments, we have added language in the final rule stating that wells that are in compliance with either subpart OOOO or subpart OOOOa are deemed to be in compliance with the requirements of this section. We also agree with commenters that filing a Sundry Notice to this effect is unnecessary, and we have not included that proposed requirement in the final rule. We also revised the text to limit the coverage of this section to fractured and refractured wells. Upon consideration of the comments, the BLM agrees that the loss of gas from conventional well completions is very small and that regulating conventional well completions is not a particularly cost-effective way to reduce waste. We also revised the text to clarify that a well that does not meet the definition of a "well affected facility" under either subpart OOOO or subpart OOOOa, and is exempt from those subparts on that

ground, is deemed to be in compliance with this section. This change aligns the coverage of the BLM requirements with the coverage of the EPA requirements, and it ensures that a well that the EPA exempted from the subpart OOOO and subpart OOOOa requirements would not become subject to the BLM requirements by virtue of that exemption.

The BLM is including requirements for well completions in this rulemaking to satisfy its statutory obligations to prevent waste of oil and gas on Federal lands. The well completion requirements are a key part of a comprehensive regulatory regime reducing waste from development of the public's oil and gas resources. The BLM requirements do not require any additional action from an operator that is in compliance with subparts OOOO and OOOOa. Thus, without imposing any burden on an operator, the BLM requirements provide a backstop in the unlikely event that subparts OOOO or OOOOa are no longer in effect. The BLM does not in any way question the validity of the EPA regulations, but we note that some of the same commenters that claim the BLM regulations are unnecessarily duplicative are separately challenging EPA's subpart OOOOa in court.

Commenters also questioned the technical feasibility of the proposed requirement that all gas that reaches the surface during well completion and post completion, drilling fluid recovery, or fracturing or refracturing must be captured and sold, flared, used on-site, or injected. These commenters contended that gas releases during these stages of development, especially immediately following drilling, may involve small quantities, or gas with low BTU or high contaminant concentrations. As a result, the commenters stated, the compliance options in the proposed rule are cost prohibitive and not technically feasible. They further argued that capturing low quantities of gas requires significant compression capacity to enter a sales line, that gas that does not meet pipeline specifications for sales is unlikely to burn (without makeup gas) or be appropriate for beneficial use, and that reinjection of small volumes produced for a limited time is cost prohibitive.

In response to these comments, the final rule includes an exemption from the requirements for handling gas from a well completion when it is technically infeasible to use or dispose of the gas using any of the four identified options. Commenters also asserted that under the proposed rule, absent an exemption, if using any of the four identified

compliance options was technically infeasible, the operator would have been forced to abandon the well. While we do not believe that the requirements for well completions are likely to impose such costs as to cause an operator to abandon the lease, the final rule also includes an exemption from § 3179.102(a) when the operator can demonstrate that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance.

The BLM also received comments asserting that it lacks the authority to require that gas reaching the surface during well completions be flared if not captured, used on the lease, or injected. Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.*, the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent constitutes waste prevention because (a) all flaring covered by this section and § 3179.103 is subject to a volumetric royalty-free flaring limit of 20 MMcf/well; and (b) flared gas from well completions that exceeds this volumetric limit is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(B). This royalty trigger provides an incentive for operators to stay under the 20 MMcf/well flaring limit—and thus to limit their waste. Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Section 3179.103 Initial Production Testing

This section clarifies when gas may be flared royalty-free during a well's initial production test. It provides that gas may be flared royalty-free during initial production testing until the first of the following events: (1) The operator

determines that it has obtained adequate reservoir information for the well; (2) 30 days have elapsed; (3) 20 MMcf of gas have been flared (as measured in combination with volumes flared during well completion under section 3179.102); or (4) the beginning of well production. Under any of these scenarios, royalty-free flaring allowed by this section ends when production begins.

Paragraph (b) of this section allows the BLM to approve royalty-free flaring for up to an additional 60 days, if there are well or equipment problems or a need for additional testing to develop adequate reservoir information. Paragraph (d) allows a 90-day period for royalty-free flaring during dewatering and initial evaluation of an exploratory coalbed methane well, and the BLM may approve up to two extensions of 90 days each. This approach recognizes that it generally takes substantially more than 30 days to dewater a coalbed methane well, but the time required can vary considerably between different coalbed methane resources. The operator is required to submit a Sundry Notice to BLM if it wishes to request a longer test period under paragraph (b) or (d) of this section.

In response to comments described below, the final rule includes a new provision in paragraph (c) of this section that allows the BLM to increase the 20 MMcf royalty-free flaring limit by up to an additional 30 MMcf of gas for exploratory wells in remote locations where additional testing is needed in advance of development of pipeline infrastructure. The operator is required submit a Sundry Notice to BLM if it wishes to request this higher limit.

Under any of these circumstances, notwithstanding an extension of the test period, the well will still be subject to the royalty-free flaring limit of 20 MMcf limit or, upon approval through a Sundry Notice, the higher limit specified in paragraph (c) of this section. Volumes vented or flared under this section must be reported to ONRR as directed in § 3179.9 of this subpart.

Several commenters argued that the proposed royalty-free flaring limit of 20 MMcf was too low, and that higher limits are needed due to higher production rates being achieved through advancements in hydraulic fracturing. They further requested that the rule state that the duration and maximum gas volumes for initial production testing do not include the duration of flowback operations and gas volumes produced during those operations. In response to these comments, the BLM added new paragraph (c) of this section (discussed above), which allows the

BLM to increase the 20 MMcf royalty-free flaring limit by up to an additional 30 MMcf of gas for exploratory wells in remote locations where additional testing is needed in advance of the development of pipeline infrastructure. While the BLM believes that for established fields, adequate testing to determine a well's production capacity can be conducted with no more than 20 MMcf of flared gas (including flaring from flowback operations), we recognize that a higher amount of flaring may be necessary for exploratory wells that are located in remote areas where no existing infrastructure exists. To the extent that an operator chooses to conduct additional testing beyond the royalty-free limits established in this section, the operator is free to do so, but the operator is responsible for paying royalties on the flared gas, rather than being able to shift the associated royalty losses to the public.

Section 3179.104 Subsequent Well Tests

The requirement in this section is essentially the same as NTL-4A's requirement regarding subsequent well tests. This section limits to 24 hours any royalty-free flaring during production tests conducted after the initial production test, unless the BLM approves or requires a longer test period. The operator must submit via Sundry Notice its request for a longer test period. Volumes vented or flared under this section must be reported to ONRR as directed in proposed § 3179.9 of this subpart. The BLM received few comments on this provision and made no substantive changes to this provision from the proposed to final rule.

Section 3179.105 Emergencies

This section allows operators to flare (or in some cases vent) royalty-free during an emergency, which is a temporary, infrequent, and unavoidable situation in which the loss of gas is uncontrollable or necessary to avoid immediate and substantial adverse impacts to safety, public health, or the environment. Paragraph (a) further limits royalty-free emergency venting or flaring to a maximum of 24 hours per incident, unless the BLM agrees that the emergency conditions necessitate flaring—and possibly venting—for a longer period. In addition, paragraph (b) clarifies situations that do not constitute an emergency for purposes of royalty assessment, including: More than three failures of the same equipment within any 365-day period; failures from improperly sized, installed, or maintained equipment; failure to limit production when the production rate

exceeds the capacity of related equipment or other infrastructure; scheduled maintenance; a situation caused by operator negligence; and when a lease, unit, or communitized area has already experienced three or more emergencies within the past 30 days, except when the BLM determines such emergencies were unanticipated and beyond the operator's control. Volumes vented or flared under this proposed section must be reported to ONRR as directed in § 3179.9 of this subpart.

Based on a number of comments requesting additional clarification, the BLM has added a definition of "emergency" to the final text. Additionally, in response to comments stating that certain emergency situations may necessitate flaring beyond 24 hours, the final rule allows operators to flare or vent royalty-free beyond the 24-hour limit, but only when necessary and with BLM approval. While the BLM asserts that in most cases, 24 hours is a sufficient timeframe to address an emergency and/or make an appropriate business decision, we acknowledge that venting or flaring beyond 24 hours might be necessary in a limited number of cases, such as a natural disaster that prevents access to the site.

Some commenters asserted that the BLM was being too strict in limiting royalty-free flaring in emergencies to 3 emergencies in a 30-day period. BLM believes that after multiple incidents in a short timeframe, operators should identify and correct any maintenance or operational issues, and that repetitive, systemic events do not constitute an emergency situation. Commenters also recommended that the BLM remove the provisions listing improper installation and scheduled maintenance as events that do not constitute emergencies. The BLM did not revise the rule based on these comments, as scheduled maintenance is not an unanticipated disruption and improper installation can be avoided through good work practices.

The BLM notes that the provisions on downhole well maintenance in § 3179.204 cover well maintenance activities.

Section 3179.201 Equipment Requirements for Pneumatic Controllers

This section addresses gas losses from pneumatic controllers. Paragraph (a) establishes that this section applies to 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, if the controllers (1) have a continuous bleed rate greater than 6 scf/

hour ("high-bleed" controllers); and (2) are not covered by EPA regulations that prohibit the new use of high-bleed pneumatic controllers (40 CFR 60, subpart OOOO or subpart OOOOa), but would be subject to those regulations if the controllers were new, modified, or reconstructed sources.

Paragraph (b) of this section requires pneumatic controllers subject to the requirement 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 the exceptions described below. Paragraph (c) is discussed below, in connection with the exceptions. Under paragraph (d), operators are required to replace such controllers within 1 year from the effective date of the final rule, or within 3 years from the effective date of the rule if the well or facility served by the controller has an estimated remaining productive life of 3 years or less. Under paragraph (e), operators are also required to ensure that pneumatic controllers are functioning within the manufacturers' specifications.

This section provides several exceptions to the replacement requirement in paragraph (b). First, an operator is not required to replace a controller if a high-bleed controller is necessary to perform the needed function. For example, replacement might not be required if a low-bleed controller would not provide a timely response, which would lead to greater waste or create a safety hazard. To avail themselves of this exception, operators must submit a Sundry Notice to the BLM that describes the functional needs requiring the use of higher-bleed controllers. Second, replacement is not required if the controller was routed to a flare device or low-pressure combustor as of the effective date of this rule, and continues to be so-routed. Third, an operator is not required to replace its pneumatic controller if it chooses to route the pneumatic controller exhaust to processing equipment for capture and sale. Fourth, an operator may be exempted from the replacement requirement if it demonstrates through a Sundry Notice (described in paragraph (c)), and the BLM concurs, that replacing the pneumatic controllers on the lease would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

In response to comments and to further clarify the section, the BLM made the following four changes to the proposed rule requirements: (1) Clarified that a pneumatic controller is subject to this section if it is not subject

to 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to either of those subparts if it were a new, modified, or reconstructed source; (2) clarified that the operator may replace a high-bleed pneumatic controller with a continuous pneumatic controller, an intermittent pneumatic controller, or a non-pneumatic device, as long as the replacement has a bleed rate no greater than 6 scf per hour; (3) clarified that an operator may be exempted from replacement if it was routing the controller exhaust to a flare or a low-pressure combustor device at the time the rule was effective, so long as the operator continues to do so; (4) allowed an operator to be exempted from replacement if it routes the controller exhaust to processing equipment; and (5) included in paragraph (c) the information that must be included in the Sundry Notice to demonstrate that the costs of replacing a pneumatic controller would cause the operator to cease production and abandon significant recoverable oil reserves.

Several commenters requested that the final rule clarify perceived conflicting regulatory coverage between the proposed rule and the EPA's subparts OOOO and OOOOa. Based on these comments, we revised § 3179.201(a)(2) to further qualify that a pneumatic controller is subject to this section if it "[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source." This change ensures that the BLM requirements do not inadvertently apply to existing equipment that would not be covered by the EPA requirements. We believe this change properly conveys our original intent to cover the same types of pneumatic controllers that EPA rules cover.

Some commenters stated that pneumatic controller exhaust should be allowed to be routed to processing equipment, such as a vapor recovery unit, on-site fuel line, or a control device (in addition to a flare), noting that Wyoming's recent regulation for existing pneumatic controllers in the Upper Green River Basin allow operators this flexibility. The BLM agrees with these comments and as stated previously, revised the rule to state that operators may route the pump to processing equipment. However, the final rule clarifies that with respect to routing pneumatic controller exhaust to a flare or low-pressure combustor, an operator may only be exempted from replacement of the controller if it is already routing such exhaust in this

manner as of the effective date of the rule, and continues to do so. The BLM believes that given the low cost and high return on pneumatic controller replacement, spending capital to route controller exhaust to a flare or low-pressure combustor is unlikely to make sense from an economic, practical and waste prevention perspective.

Some commenters stated that the BLM should require the use of zero-bleed devices on leases where on-site electrical grid power is used, or that the BLM should require bleed gas to be routed to a flare or other control device. The final rule does not require the use of zero-bleed pneumatic controllers. Many sites using pneumatic controllers are not connected to the electric grid, and the BLM believes that requiring operators to route gas from pneumatic controllers would impose considerable costs on them and involve technical complications which could impact the cost effectiveness of the replacement requirement. The BLM did clarify in the final rule that operators using pneumatic controllers that have a bleed rate greater than 6 scf per hour have the option to route the exhaust to processing equipment rather than replace the controller.

Many commenters stated that one year is insufficient to replace high-bleed pneumatic controllers and requested that requirements be extended to two or three years. The BLM believes that one year is a sufficient time period for operators to replace high-bleed pneumatic controllers, given the relatively low cost and rapid pay-back period of these replacements, as discussed in section V. Discussion of the Proposed Rule of the preamble to the proposed rule. In addition, as included in the proposed rule, if the well or facility that the pneumatic controller serves has an estimated remaining productive life of three years or less from the effective date of the rule, the operator has three years from the effective date of the rule to replace the pneumatic controller, provided that the operator notifies the BLM through a Sundry Notice.

Several commenters argued that operators should not have to submit a Sundry Notice and wait for BLM approval, if they meet one of the exemptions to the requirements. These commenters also asserted that the requirement for submission of a Sundry Notice (and hence, they assumed, BLM approval) set a higher standard for retaining a high-bleed controller based on functional need than the requirements in 40 CFR part 60, subpart OOOOa, under which they claimed EPA only requires recordkeeping to

document why a high bleed pneumatic controller is needed.

As provided in the proposed rule, operators seeking exemptions based on a functional need for the equipment need only notify the BLM of that need and do not have to get the BLM's approval. Further, if the exhaust from the pneumatic controller was already being routed to a flare or other control device on the effective date of the rule, or if the operator chooses to route the exhaust to processing equipment, no notice is required. The BLM only requires a Sundry Notice and approval for exemptions based on the cost of replacing the equipment.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to install low-bleed pneumatic controllers to route their existing pneumatic controllers to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.*, the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments. The final rule does not require flaring in lieu of venting as a means of compliance with this section. The primary means of compliance is replacement with a low-bleed pneumatic controller, which prevents waste by reducing the amount of gas diverted to the pneumatic controllers—which, in turn, makes more gas available for capture. An operator is exempted from this requirement if a high-bleed pneumatic controller is required based on functional needs, if the operator directs its controller exhaust to processing equipment for capture, or if the operator is *already* directing the exhaust from the controller to a flare (or low-pressure combustor). The rule therefore imposes no new or additional flaring requirements.

Section 3179.202 Requirements for Pneumatic Diaphragm Pumps

This section establishes 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 includes a Federal or Indian lease. It applies to such pumps if they are 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. It does not apply to pneumatic diaphragm pumps that vent exhaust gas to the atmosphere or that operated fewer than 90 days in the prior calendar year (as documented in a Sundry Notice).

For covered pneumatic pumps, this section requires 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 may route the exhaust to a flare or low pressure combustion device if the operator makes a determination (and notifies the BLM through a Sundry Notice) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust is not viable because (1) a pneumatic pump is necessary to perform the function required, and (2) capturing the exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low-pressure combustor on-site, or routing to such a device would be technically infeasible, the operator is not required to route the exhaust to a flare or low-pressure combustion device. Further, an operator that is required to replace a pump or route the exhaust gas from a pump either for capture or to a flare or combustion device may be exempt from the requirement if the operator demonstrates through a Sundry Notice, and the BLM concurs, that the cost would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

Operators must comply with these requirements no later than one year after the effective date of the rule. In addition, similar to the requirements for pneumatic controllers and based on the same rationale, this section provides that if the estimated remaining productive life of the well or facility is three years or less, the operator is allowed to notify BLM through a Sundry Notice and replace the pneumatic pump no later than three years from the effective date of this section, rather than within one year. The section also requires that pneumatic pumps function within manufacturers' specifications.

The final rule makes five changes to the proposed rule requirements. First, it restructures the requirements as discussed above to require that operators either replace pneumatic diaphragm pumps with zero emission pumps or capture the exhaust for sale. As explained above, the operator may route the exhaust to a flare or low pressure combustor device if it makes a determination that replacing the pump with a zero-emissions pump is not viable because (a) a pneumatic pump is

necessary to perform the function required, and (b) capturing the pneumatic pump exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low pressure combustor on-site (or flaring to such a device would be technically infeasible), the operator is not required to route the exhaust to a flare or low pressure combustion device. Second, in response to comments and as discussed below, the final rule removes chemical injection pumps from inclusion in this section. Third, it adds paragraph (b) stating that an operator is not required to replace a pump if the pump does not vent exhaust gas to the atmosphere (*e.g.*, already is routed to a flare or to capture equipment) or if the operator submits a Sundry Notice to the BLM documenting that the pump(s) operated fewer than 90 individual days in the prior calendar year. Fourth, the final rule clarifies that a pneumatic diaphragm pump is subject to this section if it is not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new, modified, or reconstructed source. Fifth, it adds paragraph (d), which includes information that must be included in the Sundry Notice specified in § 3179.202(f).

Some commenters suggested that the BLM require the use of zero-bleed pumps in all cases except where technically infeasible, while other commenters stated that routing pump exhaust to a flare offers no product recovery potential and does not minimize loss or waste. The BLM agrees that the installation of zero-bleed pumps is technically feasible in many cases. In response to these comments, and to require operators to employ waste minimization practices when feasible, the final rule is restructured to require operators, when feasible, to install zero-bleed pumps or route the pump exhaust to process equipment for capture and sale. However, in making this revision, the BLM does not intend to require operators to replace pumps that are already routed to flare or capture equipment (*i.e.*, pumps that do not currently vent exhaust gas to the atmosphere), and we have added clarifying language to avoid this result. As discussed below, the compliance mechanisms in this section are structured to encourage the prevention of waste.

Some commenters stated that chemical injection and temporary use pumps should be exempt because they have low aggregate emissions and operate intermittently. The BLM agrees that chemical injection pumps release

substantially lower quantities of gas than diaphragm pumps. The BLM also recognizes that some diaphragm pumps are used very intermittently or only for a short portions of the year, and that low usages result in low quantities of lost gas. In the final rule, the BLM has specified that the rule does not apply to chemical injection pumps or to diaphragm pumps that operated fewer than 90 individual days in the prior calendar year. This change also aligns the requirements of this section with the requirements for pneumatic pumps under 40 CFR part 60 subpart OOOOa.

Several commenters requested that the final rule clarify perceived conflicting regulatory coverage between the proposed rule and 40 CFR part 60 subpart OOOOa. In addition to the change to chemical injection pumps, we revised § 3179.202(a)(2) to further qualify that a pneumatic diaphragm pump is subject to this section if it "[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new or modified source." This change ensures that the BLM requirements do not inadvertently apply to existing equipment that would have been exempted under the EPA requirements. We believe this change properly conveys our original intent to cover the same types of pneumatic pumps that EPA rules cover.

Similar to comments received on pneumatic controllers, some commenters stated that pneumatic pumps should be allowed to be routed to processing equipment, such as a vapor recovery unit, on-site fuel line, or a control device (in addition to a flare). The BLM agrees with these comments and revised the rule to state that operators may route the pneumatic pump exhaust to processing equipment for capture and sale, or, under certain conditions described above, to either a low-pressure combustor device or a flare.

Several commenters stated that 1 year is insufficient to replace covered pneumatic pumps and requested that the replacement requirements be extended to 3 years. The BLM believes that one year is a sufficient time period for operators to replace pneumatic diaphragm pumps, or route them to a flare that is already installed on-site, given the relatively low cost and rapid pay-back period of these replacements, as discussed in the preamble to the proposed rule, and the relatively low cost of connecting a pump to a pre-existing on-site flare. Moreover, because the BLM is not including chemical injection pumps in this final rule, operators will need to address far fewer

pneumatic pumps than the proposed rule would have required. In addition, as included in the proposed rule, if a well or facility that the pneumatic pump serves has an estimated remaining productive life of three years or less from the effective date of the rule, the operator has three years from the effective date of the rule to complete the replacement, provided that notification is filed through a Sundry Notice.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to install zero-emission pneumatic pumps to route their existing pneumatic pumps to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.*, the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent associated gas constitutes waste prevention. Requiring operators to (at minimum) direct associated gas that bleeds from their pneumatic pumps to a flare device eliminates the lowest cost method of handling such gas (that is, venting). This, in turn, provides a greater incentive for operators to upgrade to a zero-emission pneumatic pump or capture pump exhaust gas. Upgrading to a zero-emission pneumatic pump prevents waste by reducing the amount of gas diverted to the pneumatic pumps—which, in turn, directs more gas to either a capture line or the high-pressure flare. If an operator chooses to capture, upgrading the pneumatic pump will directly prevent waste by causing more gas to be sold.

Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Some commenters raised concerns about differences between the proposed BLM and EPA requirements for

pneumatic pumps, asserting that the BLM proposed rules are different and more stringent. First, they asserted that the EPA rule limits “affected facilities” to sites with a control device already on-site, while the proposed BLM requirements would apply to pneumatic pumps regardless of whether a control device is present. Second, commenters asserted that the EPA rule only requires operators to route pump emissions to a control device if one already exists on site, while the BLM proposed rule may require replacement with a zero emission pump in such a circumstance.

Some of these concerns were addressed by the EPA's final subpart OOOOa regulations, while other differences are appropriate given the different authorizing statutes and primary foci of the two sets of regulations. As an initial matter, the BLM requirements apply only to pumps that are not subject to subparts OOOO or OOOOa (but would be if the pump was new, modified, or reconstructed), so no pump will be subject to both regulations.

With regard to the first issue described above, the final BLM and EPA rules apply to the same types of pneumatic pumps. In its final rule, EPA noted that there was some confusion regarding the proposed definition of affected facility, and stated that it had modified the regulatory text to clarify that “all natural gas-driven diaphragm pumps at natural gas processing plants or well sites are affected facilities, except for pumps at well sites that operate less than 90 days per calendar year.”¹⁴⁵ The final subpart OOOOa text requires operators to maintain records on the control status of all pneumatic pump affected facilities and to include them all in the operators' annual reports. The final BLM rule aligns with the scope and requirements of the final EPA rule in these respects.

With regard to the second issue, the BLM final rule does apply somewhat different requirements to pumps covered by the BLM rule as compared to pumps covered by the EPA rule, due to differences between the two agencies' legal authorities. The legal authority for subpart OOOOa is section 111 of the Clean Air Act, which requires the EPA to set standards of performance for new sources and requires a “standard of performance” to be based on the best system of emission reduction (BSER) “adequately demonstrated.”¹⁴⁶ As noted in the proposed subpart OOOOa preamble, the EPA did not require zero emissions pumps at facilities other than

gas processing plants because the availability of consistent, reliable electrical power at all affected facilities could not be reasonably assumed.¹⁴⁷ The BLM, however, has flexibility to require waste reduction measures at any site where such measures would work, without specifically defining such sites, even if the measures may not be available at all sites. Zero emission pumps are feasible where solar power is adequate to power the pump for its intended function and at sites where other sources of electric power are available. Where they are feasible, our analysis indicates that the cost of replacing a gas-driven pneumatic pump with a zero emission pump is modest and would be at least partially offset by the value of the saved gas.

Additionally, the BLM final rule establishes a preference for operators who do not replace their pumps with a zero-emissions pump to route exhaust gas to capture in lieu of routing to a flare. This emphasis on either replacement or capture is a function of the BLM's waste prevention focus. Thus, unlike subpart OOOOa, the final BLM rule requires operators with a gas-driven pneumatic pump that is currently venting to the atmosphere to replace it with a zero emission pump, if a zero-emission pump would work at that site to perform the function required, or route the exhaust gas to capture. If a zero-emission pump is not viable at that site and routing the exhaust gas to capture is technically infeasible or unduly costly, however, then the operator must comply with a requirement that tracks the requirement under subpart OOOOa—the operator must route the exhaust gas from the pneumatic pump to a flare, if there is already a flare on-site. While the BLM rule establishes an additional requirement on operators, it does not conflict in any way with the EPA rule or increase an operator's burden to comply with both rules. Any pump that is already routed to a flare in compliance with the EPA rule will also be in compliance with the BLM rule. For pumps without a flare on-site, the EPA rule requires no further action, while the BLM rule requires replacement or routing to capture, absent the listed conditions.

The third potential difference that commenters highlighted between the BLM and EPA requirements for pneumatic pumps is the level of documentation required to show that routing to a flare is technically infeasible. To clarify a possible misunderstanding by the commenters, a

¹⁴⁵ 81 FR 35851.

¹⁴⁶ 81 FR 35884.

¹⁴⁷ 80 FR 56625.

requirement to notify the BLM through a Sundry Notice, as specified in this section, is not a requirement to obtain approval from the BLM. Sundry Notices may be used simply for notification purposes, or to obtain approval from the BLM for an action. The final rule specifies the purpose of each requirement to file a Sundry Notice.

Here, the BLM final rule requires an operator to notify the BLM through a Sundry Notice if the operator is not replacing the pump for one of the reasons specified. The operator must also notify the BLM if the operator is not routing the pump to a flare because there is no flare on site or routing to a flare would be technically infeasible. Subpart OOOOa establishes requirements for an engineering evaluation of whether routing to a flare would be technically infeasible, requires the evaluation and determination of technical infeasibility to be certified by a qualified professional engineer, and requires this information to be included in the operator's annual report. Thus, while the specific documentation requirements for pumps covered by the BLM requirements differ from those established by the EPA, both rules require the operator, under specified circumstances, to either route the pump exhaust to a flare or notify the respective agency that the pump meets the criteria for an exemption. The BLM notification requirements are less specific than the EPA requirements, which the BLM believes will make compliance less burdensome for an operator.

Section 3179.203 Storage Vessels

This section addresses gas vented from crude oil, condensate, intermediate hydrocarbon liquid, or produced water storage vessels that contain production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, and are 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 have the potential for VOC emissions equal to or greater than 6 tpy, the final rule requires operators to route all gas vapor from the vessels to a sales line. Alternatively, the operator may route the vapor to a combustion device if it determines that routing the vapor to a sales line is technically infeasible or unduly costly. The operator also may submit a Sundry Notice to the BLM that demonstrates that compliance with the above options would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of

compliance. Operators must meet this requirement no later than one year after the rule becomes effective, or three years after the rule becomes effective if the operator needs to replace the storage vessel in order to comply.

Operators must determine the rate of VOC emissions from the storage vessel within 60 days after this rule is effective, and within 30 days after adding a new source of production to a storage vessel. This determination is based on the maximum average daily throughput for a 30-day period of production, and may take into account any legally and practically enforceable limits in an operating permit or other requirements applicable to the storage vessel. This section no longer applies to a storage vessel whose total uncontrolled VOC emissions rate declines to 4 tpy in the absence of controls for 12 consecutive months.

In response to comments, the BLM has made the following changes to the requirements in the proposed rule: (1) Clarified the exemption for sources subject to 40 CFR part 60, subparts OOOO or OOOOa; (2) extended the initial compliance period from 6 months to 1 year; (3) added a 3-year initial compliance period for operators that must replace storage vessels to comply with the requirements; (4) required gas to be routed to a sales line when that option is neither technically infeasible nor unduly costly, as determined by the operator; (5) added a requirement that operators must determine whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production, which may take into account legally and practically enforceable limits applicable to the storage vessel; (6) added a requirement that storage vessels subject to the final rule must be adequately sized to accommodate the operator's production levels and equipped to meet any applicable regulatory requirements for tank vapors; and (7) added a requirement that storage vessels subject to the final rule may only vent through properly functioning pressure relief devices. Each change is discussed below along with a summary of the relevant comments and responses.

Several commenters expressed concerns about differences between the types of new storage vessels that are subject to subparts OOOO or OOOOa and the types of existing storage vessels that would have been subject to the proposed rule. The BLM agrees that applying the requirements of this section, as proposed, to storage vessels "not subject to 40 CFR part 60, subparts

OOOO or OOOOa" could encompass storage vessels that neither the EPA nor the BLM intended to cover. In the final rule, § 3179.203(a)(2) covers a storage vessel if it "[i]s not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to that subpart if it were a new, modified, or reconstructed source."

Several commenters argued that the proposed initial period of 6 months to comply with the emission reduction provisions was too short. Commenters stated that it would take longer than 6 months to complete engineering studies of existing storage vessels; design, order and construct the control device; and then install the control device. Commenters recommended various time periods ranging from 1 to 3 years. We believe a 1-year initial compliance period is adequate to perform the tasks necessary to install a control device, and we have modified § 3179.203(c) accordingly.

Commenters also stated that in some cases they would likely have to replace an existing tank in order to meet the emission limitations. In such cases, commenters stated that even more time would be needed to obtain capital funding approval and purchase the new storage vessel. In response, we further amended § 3179.203(c) to provide a 3-year initial compliance period when the operator must replace a storage vessel in order to comply with the rule requirements.

In the proposed rule, § 3179.203(c) allowed the operator to choose between routing emissions from storage vessels subject to the rule to a combustion control device, a continuous flare, or a sales line. Some commenters opposed these provisions because they believe BLM should focus on preventing loss of natural resources. The BLM agrees that this rule should focus on gas capture and use whenever possible, and in the final rule, § 3179.203(c) first requires the operator to route tank vapor gas from a storage vessel to a sales line. If the operator determines that routing the emissions to the sales line is technically infeasible or unduly costly, the operator may route the gas to a combustion device.

We also received numerous comments requesting that we align the final rule as much as possible with the requirements finalized by the EPA in subparts OOOO and OOOOa. As stated in the preamble to the proposed rule, the BLM and the EPA understand that aligning our requirements to the extent possible, provides common standards that ease implementation and reduce confusion for both the regulated industry and

regulatory agencies.¹⁴⁸ Several small changes in the final rule help clarify the rule and better align it with the final requirements in subparts OOOO and OOOOa. In § 3179.203(b), the rule provides additional guidance to operators on how to make the threshold determination that a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy. Changes to the definition of “storage vessel” in § 3179.3 also synchronize the coverage between the two sets of rules, such that these provisions cover the same types of storage vessels that would be covered by subparts OOOO or OOOOa if they were new, modified, or reconstructed.

One commenter suggested that the BLM make it clear that venting from access points or pressure relief devices during normal operation is prohibited. The commenter stated that to account for those instances where venting may be necessary, the BLM could adopt the approach taken by Colorado by specifying those instances where venting is reasonably required, such as for “maintenance, gauging or safety of personnel and equipment.” The commenter also recommended that the BLM add a requirement that operators certify that their storage tank facilities are adequately sized in order to capture, convey, and control emissions. They stated that this is required in Colorado and is a direct response to the Air Pollution Control Division and EPA investigations that revealed significant leaks and venting from controlled facilities.

In response to this comment, final rule § 3179.203(f) provides that storage vessels subject to this section must be adequately sized to accommodate production levels and equipped to meet any applicable regulatory requirements for emissions. Also, § 3179.203(g) requires that storage vessels subject to this section may only vent through properly functioning pressure relief devices. We believe both of these provisions embody good engineering practices and should be common practice when operating a storage vessel.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to capture tank vapor gas to route such gas to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM’s MLA authority because it is not waste prevention—*i.e.*, the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the

requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA’s domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent tank vapor gas constitutes waste prevention. Requiring operators to (at minimum) direct tank vapor gas to a flare device eliminates the lowest cost method of handling such gas (*i.e.*, venting), and thereby provides a higher baseline for operators to calculate whether it would be economical to install a VRU to capture the tank vapor gas for sale. The BLM anticipates that this higher baseline may encourage more operators to install VRUs.

Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane’s explosiveness and the risk of exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Some commenters requested that the BLM require storage vessel vapors to be combusted at an efficiency of 98%. Storage vessel vapors can be combusted at an efficiency of 98% using an enclosed combustor. However, the BLM has determined that requiring the operator to install an enclosed combustor on a location with an existing flaring system would be relatively costly compared to the benefit of modestly higher combustion efficiency applied to a comparatively small volume of vapor coming from storage vessels flares. The BLM believes that in those instances where storage vessel vapors must be controlled on a site that does not have an existing flare system, the operator will likely elect to install an enclosed combustor rather than a flare, because it will more effectively combust the lower volumes of vapor associated with storage vessels.

Section 3179.204 Downhole Well Maintenance and Liquids Unloading

This section establishes requirements for venting and flaring during downhole well maintenance and liquids unloading. It requires the operator to use practices for such operations that minimize vented gas and the need for well venting, unless the practices are necessary for safety. The rule also requires that for wells equipped with a

plunger lift system or an automated well control system, the operator must optimize the operation of the system to minimize gas losses.

For all wells, before the operator manually purges a well for the first time after the effective date of this section, the operator must document in a Sundry Notice that other methods for liquids unloading are technically infeasible or unduly costly. In addition, during any liquids unloading by manual well purging, the person conducting the well purging is required to be present on-site to minimize to the maximum extent practicable any venting to the atmosphere. This section also requires the operator to maintain records of the cause, date, time, duration and estimated volume of each venting event associated with manual well purging, and to make those records available to the BLM upon request.

The operator must notify the BLM by Sundry Notice within 30 days after the first liquids unloading by manual or automated well purging after the effective date of the rule. Additionally, operators must notify the BLM by Sundry Notice within 30 days after the following conditions are met: (1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or (2) the estimated volume of gas vented in the process of conducting liquids unloading by manual well purging for a well exceeds 75 Mcf during any production month. The final rule also defines “well purging” for purposes of this section and requires operators to report to ONRR gas volumes vented during manual and automated downhole maintenance and liquids unloading, including through the operation of plunger lifts.

In response to comments on the proposed rule, we removed the proposed prohibition on well purging for wells drilled after the effective date of this section, as discussed in above in section III.D.3., and made several smaller changes in the final rule: (1) Removing the proposed requirement to flare unrecovered gas during downhole well maintenance and liquids unloading operations; (2) clarifying recordkeeping and reporting requirements and increased the length of time operators have to submit reports; and (3) revising the definition of “well purging.”

The BLM is aware, and many commenters observed, that flares are not always feasible control options for downhole well maintenance and liquids unloading activities, and we recognize that there may be difficulties separating liquids from the purged gases. For these reasons, we proposed the use of flares

¹⁴⁸ See, e.g., 81 FR 6647.

where other recovery or gas loss reduction technologies cannot be used, and only then when flaring is not technically infeasible or unduly costly (see proposed § 3179.204(a)). Although we attempted in the proposed rule to narrow the use of flares to situations in which they are more likely to be feasible, and provided an option for operators to document those situations where flaring is infeasible, commenters raised several concerns related to safety, cost and feasibility. Upon further review of the information provided by the commenters, we believe there is uncertainty in the ability of operators to be able to consistently and safely operate a flare during these operations.

For these reasons, we did not finalize the proposed flaring requirement. Instead, the final rule requires operators to minimize vented gas during downhole well maintenance and liquids unloading operations, and it specifies best management practices that operators must follow. For wells equipped with a plunger lift system or an automated well control system, these practices include optimizing the operation of the system to minimize gas losses.

Proposed § 3179.204(a) would have required the operator to use best practices to maximize the recovery of gas from downhole well maintenance and liquids unloading operations. Commenters expressed concern that the word “maximize” could be construed to imply that the operator must use the technology that provides the absolute highest amount of gas recovery, regardless of other concerns. This is not our intent, as evidenced by our discussion of the proposed requirements in the preamble to the proposed rule. For example, we discuss that some technologies are less costly than others, and that some technologies make more sense to install early in the life of a well rather than later. We also state that we expect most new wells to use plunger lifts, and that the proposed rule would not require (though it would encourage) the use of automated systems.¹⁴⁹ We expect the operator to make an informed and reasoned decision on which technology makes the most sense for each well based on the conditions and economics of the well. To further clarify this, rather than requiring operators to maximize recovery of gas, the final rule requires operators to minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading operations.

Several commenters objected to the extent and content of the proposed recordkeeping requirements, but did not identify changes that could be made without compromising the information needed for effective implementation of the rule. The BLM believes the recordkeeping and reporting requirements are essential to verify compliance and to more accurately assess the amount of gas lost through liquids unloading events, including for the purposes of royalty calculations. In response to commenters’ concerns, however, the final rule extends the time to submit a Sundry Notice of large quantity liquids unloading events from 14 days to 30 days, to allow operators more time to gather information. Similarly, we have extended the time to submit a Sundry Notice after the first liquids unloading event from 10 days to 30 days.

Some commenters contended that recordkeeping and reporting requirements related to each well purging event are unnecessary, but the BLM does not agree. Large quantities of gas are lost through well purging that cannot be used to supply the country’s energy needs and provide no royalty revenues to taxpayers. Building a historical record of the amount of gas lost is key to determining proper management of these events in the future. For example, more accurate knowledge of the amount of gas lost to well purging events will allow operators to make better-informed decisions on the financial viability of each liquids unloading technology. Also, the BLM will be able to better estimate the cost of lost royalties associated with vented gas from well purging activities. We believe these important benefits justify the expenditures related to obtaining and reporting the required records.

A number of commenters asserted that BLM should withdraw the proposed downhole well maintenance and liquids unloading provisions of the rule because of the complexity of the issue. They argued that the BLM does not understand the impacts of the proposed requirements. In particular, they noted EPA’s decision not to regulate liquids unloading.

The BLM has engaged numerous stakeholders throughout the rulemaking process to better inform its final rule decisions, and has coordinated closely with the EPA in sharing technical information and expertise.¹⁵⁰ This is an area where differences between the two agencies’ approaches stem in large part from their different statutory authorities. As noted above in connection with

§ 3179.202, the legal authority for 40 CFR part 60 subpart OOOOa is section 111 of the Clean Air Act, which requires the EPA to set a standard of performance for new sources and defines a “standard of performance” as to be based on the best system of emission reduction (BSER) “adequately demonstrated.”¹⁵¹

In explaining its decision not to regulate liquids unloading at this time, the EPA stated that although it had received valuable information from the public on technologies to reduce emissions, “the information was not sufficient to finalize a national standard representing BSER for liquids unloading.”¹⁵² The BLM, however, has the flexibility to require a suite of best management practices to achieve waste reduction, as we have done here, rather than being required to identify the best system of emission reduction under the specific criteria in section 111 of the Clean Air Act.

Section 3179.301 Operator Responsibility

This section establishes that the LDAR requirements in §§ 3179.301 through 3179.305 of this subpart apply to oil or natural gas wells and all equipment associated with the well sites that produce, process, compress, treat, store, or measure natural gas from a Federal or Indian lease, or from a unit or communitized area, where the site is upstream of or contains the approved point of royalty measurement. These sections also apply to a site and all equipment operated by the operator and associated with a site that is used to store, measure, or dispose of produced water that is located on a Federal or Indian lease. The sections obligate operators to inspect all equipment that is used to produce, compress, treat, store, or measure natural gas or to store, measure or dispose of produced water for gas leaks from leak components, with the exception of wells and well equipment that have been depressurized, and sites that contain only a well head and no other equipment. The first inspection must occur within one year of the effective date of the rule for sites that have begun production prior to the effective date. For production sites that begin production after the effective date, the first inspection must occur within 60 days of beginning production. For sites that were out of service and brought back into service, the first inspection must occur within 60 days of the date the site is brought back into service and

¹⁴⁹ 81 FR 6655–6656.

¹⁵⁰ 81 FR 6617–6618.

¹⁵¹ 42 U.S.C. 7411(a)(1).

¹⁵² 81 FR 35846.

re-pressurized. These sections do not apply to a site that contains a wellhead or wellheads and no other equipment, nor to a well or well equipment that has been depressurized.

Operators are required to conduct the inspections during production operations, and to fix any leaks found. Subsequent inspections must be conducted according to the schedule in § 3179.303. Operators may satisfy the requirements of §§ 3179.301 through 3179.305 for all of their equipment on a given lease by complying with the fugitive emissions requirements established under 40 CFR part 60, subpart OOOOa with respect to all equipment covered by the BLM leak detection requirements. This includes equipment such as covers and closed vent systems, and thief hatches and other openings on controlled storage vessels, which if new, modified or reconstructed, are subject to 40 CFR 60.5411a or 60.5395a under OOOOa and not the fugitive emissions requirements under OOOOa. Specifically, the operator must treat each of its sites and equipment as if it were a collection of fugitive emissions components as defined in 40 CFR part 60 subpart OOOOa; comply with the requirements of 40 CFR part 60 subpart, OOOOa that apply to affected facility fugitive emissions components at a well site or compressor station, as applicable, under 40 CFR part 60, subpart OOOOa; and notify the BLM through a Sundry Notice of such compliance.

Several changes were made to this section in response to comments and to provide additional clarity. As discussed in Section V.B.2., § 3179.301(a) clarifies the specific sites and equipment subject to the leak inspection requirements, which apply to all equipment handling Federal or Indian gas, upstream of and including the site where the royalty measurement point is located—whether the equipment is on or off the lease and regardless of the ownership of the equipment. This section also specifies that the leak detection requirements apply to equipment handling produced water only if the equipment is operated by the operator and located on the Federal or Indian lease. The BLM added a provision to § 3179.301(b) stating that the LDAR requirements do not apply to a well or well equipment that has been depressurized, nor to a site that contains a wellhead or wellheads and no other equipment. In § 3179.301(c), the BLM clarified that the operator must inspect for gas leaks from leak components. In conjunction with this change, we added definitions for “leak” and “leak component” in § 3179.3. We also moved the definition of “site” from

§ 3179.303(a) to § 3179.301(e) and revised the definition for clarity.

Additionally, the BLM moved the requirement in proposed § 3179.303(c) that exempts leak components that are not accessible from the inspection and monitoring requirements to paragraph (d) of this section; added paragraph (f) to specify when the first inspection must take place; and replaced proposed paragraph (e) with new paragraph (j) to provide an exemption for sites and equipment that are in compliance with the fugitive emission requirements under 40 CFR part 60, subpart OOOOa.

This section of the preamble discusses additional comments on the LDAR provisions in § 3179.301, beyond the comments discussed in Section IV.A.d. The BLM made changes to clarify the scope of LDAR coverage in the final rule in response to commenters who asserted that the proposed rule was not entirely clear on the scope of coverage. The final rule now explicitly describes the “sites” to which the LDAR provisions apply and no longer makes use of the term “facilities.” The proposed rule covered “facilities,” as well as compressors that were on lease and operated by the operator, regardless of whether they handled Federal or Indian product. “Facility” is defined in section 3170.3 to include a site and associated equipment used to process, treat, store, or measure production from a Federal or Indian lease, unit or communitized area, as well as a site and associated equipment used to store, measure, or dispose of produced water. With respect to produced water, the definition of “facility” only includes sites on a Federal or Indian lease, unit or communitized area, but the definition is not similarly limited with respect to sites associated with Federal or Indian production. Using the term “facilities” to define the coverage of the LDAR program would create a distinction between equipment upstream and downstream of the approved point of royalties measurement on an otherwise covered site. In addition, the BLM has not retained in the final rule the proposed coverage for compressors that do not handle Federal or Indian product. Given the potential for confusion here, we believe that it is clearer to simply specify the sites and equipment subject to the LDAR requirements in the final rule, rather than use the term “facilities.”

With respect to the LDAR requirements in this rule, the BLM believes it is reasonable and appropriate to apply the requirements to all equipment at a site that is subject to these requirements. Once an operator is already on-site, inspecting additional

equipment adds little cost and burden, particularly if the operator is using optical gas imaging technology, and inspecting such equipment offers the same potential additional benefits as any other inspection. Thus, the BLM believes that requiring inspection of all of the equipment at a given site will make the rule more cost-effective in avoiding waste, as compared to exempting inspection of some equipment at a site that is already being inspected. Moreover, the BLM believes that applying the LDAR requirements to most but not all of the equipment at a single site would heighten the potential for inspection errors and confusion, and make administration and tracking of the results more difficult.

Commenters also urged the BLM to exclude from the LDAR requirements the following additional types of sites or equipment, beyond those discussed in Section IV.A.d.: Wells that are shut-in at the time of an LDAR inspection; sites where there is only a small amount of mineral interest from or allocated to a Federal or Indian lease, unit, or communitization agreement; equipment operated by an entity other than the operator; sites with a legally and practically enforceable leak detection and repair requirement in an operating permit, or other enforceable requirement established under a Federal, State, local or tribal authority; and sites located on the North Slope of Alaska.

With respect to wells that are shut-in at the time an inspection occurs, coverage under LDAR depends on whether the shut-in is temporary, or the well or well equipment has been depressurized. Leaks will only be detectable when a well is operating, so the rule provides that leak inspections must occur during production operations. The BLM agrees that a well that has been depressurized is no longer in operation and should not leak, and the BLM has excluded such wells from the LDAR requirements. Depressurized wells that are brought back into service do not need to be inspected until 60 days after the date that the well is re-pressurized. A well that is temporarily shut-in but not depressurized, however, may have significant leaks when it is brought back into production. Exempting such a well from any inspection obligations might provide an incentive for operators to schedule inspections during shut-ins to reduce the number of sites that would need to be inspected.

With respect to leases where the Federal or Indian mineral interest is a minority interest, the BLM has the authority and an obligation to minimize the waste of Federal and Indian mineral

resources. The waste of Federal and Indian resources is of no less concern to the BLM when the Federal or Indian interest is a minority interest. Even a small percentage interest could still represent a significant volume of Federal or Indian resources, depending on the reservoir. Also, as a policy matter, the BLM believes that the LDAR requirements of this rule are cost-effective and provide net public benefits. Thus, the BLM does not believe that it is appropriate to arbitrarily limit the benefits of this rule based on the proportion of the Federal or Indian mineral interest at issue in the lease, unit, or communitized area. In the final rule, the BLM has clarified that where a site is upstream of or contains the royalty measurement point, the LDAR provisions cover the site and all equipment associated with it that handles Federal or Indian gas.

Similarly, neither legal nor policy considerations support exempting equipment operated by an entity other than the site operator. The operator is responsible for ensuring that operations conducted pursuant to a Federal or Indian lease are in compliance with the lease terms and applicable regulations.¹⁵³ Exempting equipment that is operated by an entity other than the operator could create an incentive for operators to establish contractual arrangements that avoid the LDAR requirements. The BLM believes that through cooperation with contractors that own or operate equipment on the lease, the operator has the practical means of ensuring compliance with the LDAR requirements on lease, regardless of who owns the equipment.

The BLM recognizes that some equipment at the site containing the facility measurement point, such as storage vessels or compressors, may be downstream of the measurement point and may be in control of the purchaser rather than the operator.¹⁵⁴ Nevertheless, as discussed previously, the BLM believes that it is appropriate to require the operator to conduct LDAR on all equipment located at the site. Once the operator is inspecting a given site, particularly when using optical gas imaging, it will add minimal time and cost to inspect additional co-located equipment. It should be noted that,

although a facility measurement point may be located on lands not covered by a Federal or Indian lease, unit, or communitization agreement (as might be the case when off-lease measurement occurs pursuant to applicable regulations in 43 CFR subpart 3173), the LDAR requirements of this rule do not apply to sites that are not located on a Federal or Indian lease, unit or communitized area.

In addition, the BLM disagrees with the suggestion to create a blanket exemption from the LDAR requirements for sites with another legally and practically enforceable leak detection and repair requirement in an operating permit or other enforceable Federal, State, local or tribal requirement. The final rule already contains provisions to address overlapping EPA or State requirements, as discussed in sections III.B.3 VI.A. of this preamble. An operator with a specific program contained in its operating permit could, under section 3179.303(b) request approval of that program as an alternative to the BLM requirements, provided the permit program is at least equally effective at detecting and reducing losses from leaks as the BLM requirements. By contrast, exempting any site with existing enforceable LDAR requirements provides no assurance that those requirements will produce results equivalent to the BLM requirement.

The BLM also declines to exclude automatically from the LDAR requirements sites that are located on the North Slope of Alaska. The BLM notes that one operator has argued that conditions on the North Slope make it impossible to meet all of the LDAR requirements, and that the operator has in place alternative practices, equipment, and techniques that reduce the likelihood of leaks and facilitate prompt detection of any that might occur. The final provision allowing the BLM to approve an operator's alternative instrument-based leak detection program is designed to address just this sort of situation.

Certain operators requested that facilities subject to the EPA subpart OOOOa fugitive emissions requirement be exempt from the BLM LDAR requirements. After review of these comments, the BLM agrees that those facilities should not have to comply with both the EPA subpart OOOOa program and a separate BLM LDAR program, and the final rule provides that an operator in compliance with the requirements of subpart OOOOa will be deemed in compliance with the BLM LDAR requirements as well. In addition, even though the BLM and the EPA have largely aligned their leak detection

requirements, an operator might prefer to comply with the OOOOa requirements for all of its facilities on a lease, including existing facilities that are not covered by subpart OOOOa, rather than complying with subpart OOOOa for new, modified and reconstructed facilities and the BLM LDAR requirements for existing facilities. Thus, the final rule provides that an operator may satisfy the BLM LDAR requirements by complying with the subpart OOOOa fugitive emission requirements for all sites and equipment on a given lease.

However, by providing that compliance with subpart OOOOa is deemed compliance with the BLM requirements, rather than simply exempting all facilities subject to subpart OOOOa, the BLM maintains enforcement authority if an operator is subject to both subpart OOOOa and the BLM requirements, but complies with neither. Under this approach, a BLM inspector in the field could review information to confirm that the operator is in fact in compliance with one set of leak detection requirements.

Section 3179.302 Approved Instruments and Methods

This section prescribes the types of instruments that an operator must use to inspect for leaks. Specifically, operators must use: (1) An optical gas imaging device such as an infrared camera; (2) a portable analyzer capable of detecting leaks in compliance with Method 21 of 40 CR part 60, appendix A-7; or (3) a leak detection device not listed in this section that has been approved by BLM. The persons using the above devices must be adequately trained in their use.

Anyone may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice with the information specified in paragraph (c) of this section, subject to the approval of the BLM as specified in paragraph (d).

In the final rule, the BLM amended paragraph (a) of this section by removing reference to monitoring methods since this paragraph specifies monitoring equipment, not methods. In paragraph (a)(2), we added a provision that portable analyzers must be operated in compliance with Method 21 rather than manufacturers specifications. We removed from paragraph (a) the proposed option of using a comprehensive program approved by the BLM under § 3179.303(b).

The BLM also added a provision at paragraph (b) that the person operating the leak detection device must be adequately trained in the proper use of the device. We added an option at

¹⁵³ See *Luff Exploration Co.*, 115 IBLA 134 (1990) (upholding enforcement action against operator based on noncompliant equipment owned and operated by purchaser).

¹⁵⁴ The BLM's jurisdiction over Federal and Indian oil and gas production does not cease at the point of royalty measurement. See *Wexpro Company*, 174 IBLA 57 (2008) (requiring BLM to consider whether use of gas in operations downstream of the royalty measurement point constituted royalty-free "beneficial use").

paragraph (c) where any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice with the information specified in paragraph (c). The request will be subject to the approval of the BLM as specified in newly added paragraph (d), which includes the requirement that it must be demonstrated that the alternative leak detection device and associated protocol will achieve equal or greater reduction of gas lost through leaks compared to the approach specified in § 3179.302(a)(1). Paragraph (d) also establishes that the BLM will provide public notice of the submission of an alternative device or monitoring protocol for approval, and will post on the BLM Web site a list of each approved alternative monitoring device and protocol and limitations on its use. The final rule also notes that the BLM may approve an alternative device and monitoring protocol for use in all or most applications, or instead just for use on a pilot or demonstration basis.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.303 Leak Detection Inspection Requirements for Natural Gas Wellhead Equipment and Other Equipment

This section requires operators to conduct initial site inspections within specified timeframes after the effective date of the rule. The section requires the operator initially to conduct site inspections twice a year, with consecutive semiannual inspections conducted at least four months apart; and to conduct compressor station inspections quarterly, with consecutive quarterly inspections conducted at least 60 days apart. The inspection frequencies are fixed.

Paragraph (b) of this section authorizes the BLM to approve an alternative instrument-based leak detection program if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a). The operator must submit the request through a Sundry Notice. The operator also has the option to request approval of a leak detection program that does not meet the criterion specified in § 3179.303(b) when it can be demonstrated that compliance with the requirements of §§ 3179.301 through 3179.305 would cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

In the final rule, the BLM clarified in paragraph (a) of this section that the operator must inspect leak components at the site, and that the inspection must be conducted using a leak detection device listed under § 3179.302. The BLM is maintaining a semiannual inspection frequency for each site, and added provisions for quarterly inspections of compressor stations. In the final rule, these inspection frequencies are fixed, and the BLM did not finalize the proposed table of variable, performance-based inspection frequencies.

Paragraph (b) of this section allows for BLM approval of an alternative program, if an operator submits an approval request via a Sundry Notice. It is the BLM's intent that those approvals be made at the State office level for intrastate programs, and at the national or Washington office level for interstate programs. Final § 3179.303(b) differs slightly from the proposed version of this provision. First, the final rule specifies that the approval applies to an "alternative instrument-based leak detection program" instead of the proposed "alternative leak detection device, program, or method." Next, the rule specifies that the approval is in lieu of complying with paragraph (a) of this section, and that the alternative must achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a). The BLM also added details of what the Sundry Notice must include at § 3179.303(b)(1)–(5), and added paragraph (e) stating that approved alternative LDAR programs will be posted online.

Additionally, the BLM added a provision at paragraph (c) of this section to provide the operator with the option to request approval of a leak detection program that does not meet the criterion specified in § 3179.303(b) when it can be demonstrated that compliance with the requirements of §§ 3179.301 through 3179.305 would cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM also added paragraph (d) setting forth the requirements for the Sundry Notice to support a demonstration under paragraph (c).

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.304 Repairing Leaks

This section requires operators to repair any leak as soon as practicable and no later than 30 calendar days after discovery of the leak, unless there is good cause for repair to take longer. The

rule requires the operator to notify the BLM by Sundry Notice if there is good cause to delay the repairs beyond 30 days, and to complete the repair at the earliest opportunity, but in no case longer than 2 years after discovery. The rule also requires the operator to conduct a follow-up inspection, using an authorized method, to verify the effectiveness of the repair within 30 calendar days after the repair, and to make additional repairs within 15 calendar days if the previous repair was not effective. This repair and follow-up process must be followed until the repair is effective. The BLM does not consider an inspection to verify the effectiveness of a repair to be a periodic inspection under § 3179.303.

In the final rule, the BLM increased the time period for completing repairs from the proposed 15 days to 30 days. Operators also have 30 days, as opposed to the proposed 15 days, to verify the effectiveness of the repair through a follow-up inspection. While the proposed rule would have required that the follow-up inspection be carried out using the method originally used to detect the leak, the final rule specifies that any of the instruments specified or approved under § 3179.302(a) or the soap bubble test under EPA's Method 21, section 8.3.3, may be used.

In paragraph (a) of this section in the proposed rule, the BLM specified that the operator must repair any leak "not associated with normal equipment operations." In the final rule, we specify that "any leak" must be repaired as soon as practicable, but within 30 days after discovery. In conjunction with this change, we have added to § 3179.3 a definition of "leak" that excludes releases due to normal operation of equipment that is intended to vent.

The proposed rule, as well as the final rule, allows the owner to delay repair if a good cause exists. Although "good cause" was not defined in the proposed rule, we have added a definition in paragraph (a) of the final rule. Also, the final rule allows the operator up to two years to repair a leak if good cause for delay exists, although the operator must submit a Sundry Notice and repair the leak sooner than 2 years if the opportunity arises. Previously, we had proposed that the operator repair the leak within 15 days after the cause for the delay ceases to exist.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.305 Leak Detection Inspection, Recordkeeping and Reporting

This section requires operators to maintain records of LDAR inspections and repairs, including dates, locations, methods, where leaks were found, dates of repairs, and dates of follow-up inspections. These records must be made available to the BLM upon request. AVO inspections only have to be documented if they find a leak requiring repair. Paragraph (b) of the section also requires operators to submit to the BLM, by March 31 of each calendar year, an annual summary report on the previous year's LDAR inspection activities. The BLM plans to make these reports available to the public, subject to any protections for confidential business information.

The final rule amends the records that must be maintained. The BLM did not finalize the proposed recordkeeping requirements regarding the equipment or facility inspected, descriptions of each leak, and the date of each leak repair attempt. We clarified, however, that AVO checks need only be documented if they find a leak requiring repair.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.401 State or Tribal Requests for Variances From the Requirements of This Subpart

This section creates a variance procedure under which the BLM State Director may grant a State or tribe's request to have a State, local or tribal regulation apply in place of a provision or provisions of this subpart. The variance request must: (1) Identify the specific provisions of the BLM requirements for which the variance is requested; (2) identify the specific State, local or tribal regulation that would substitute for the BLM requirements; (3) explain why the variance is needed; and (4) demonstrate how the State, local or tribal regulation will satisfy the purposes of the relevant BLM provisions. The BLM State Director will review a State or tribal variance request. To approve a request, the BLM State Director will determine that the State, local or tribal regulation: (1) Would perform at least equally well in terms of avoiding 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, compared to the particular provision(s) from which the State or tribe is requesting the variance, and (2) would be consistent with the terms of

the affected Federal or Indian leases and applicable statutes.

This section also clarifies that a variance granted under this proposed section does not constitute a variance from provisions of regulations, laws, or orders other than subpart 3179, and it reserves the BLM's authority to rescind a variance or modify any condition of approval in a variance. Additionally, this section requires States or tribes with approved variances to notify the BLM in writing of any substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s). This section further specifies that if the BLM approves a variance for State, local or tribal regulation(s) or rule(s), the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart.

In response to comments received, the BLM made the following changes to the proposed rule requirements: (1) Revised paragraph (a)(1) to change a reference to granting a variance from "any individual provision of this subpart" to "any provisions of this subpart"; (2) revised paragraphs (a)(2)(iv) and (b) to state that the State, local or tribal regulations or rules would "perform at least equally well 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, compared to the particular provision(s) from which the State or tribe is requesting the variance"; (3) added text to allow variances for requirements and regulations of local governments, in addition to State and tribal requirements (though the variance request must still come from the State or tribe, not from a locality); (4) added new paragraph (e) that requires the State or tribe that requested the variance to notify the BLM of substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s); and (5) added new paragraph (f) that clarifies that if the BLM approves a variance for State, local or tribal regulation(s) or rule(s), the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart. Paragraph (f) also clarifies that a State's or tribe's enforcement of its own regulations would not be affected by the BLM's approval of a variance.

Major comments received on variances are discussed in Section III.E.3 of this preamble; additional comments on variances are discussed below.

Some commenters requested that additional entities be allowed to apply

for variances, such as local air authorities, multiple State agencies, or operators. Commenters asserted that allowing only States or tribes to request variances causes uncertainty for operators, and that if a State declined to put forth a variance request, companies would bear the cost and burden of complying with multiple regulatory regimes. As stated above, the BLM has modified the rule to allow local requirements, in addition to State and tribal requirements, to substitute for BLM requirements. Regarding the comment that multiple State agencies may need to request a variance, the final rule does not preclude different State or tribal agencies from requesting variances from different provisions of the rule. The BLM has not modified the final rule to allow localities or operators, in addition to States and tribes, to request a variance to be able to comply with State, local or tribal requirements in lieu of the BLM requirements. Specifically with respect to local requirements, the BLM believes that it is important to ensure that the State supports a variance request, and thus that the State prefers the BLM to enforce the State's or locality's requirements rather than federal requirements. Additionally, we believe that a State has the best understanding of its own regulatory requirements and how those compare to the requirements of this rule.

Several commenters asserted that the variance application and approval processes were unclear and/or overly burdensome. These commenters expressed various concerns, including: (1) Lack of a clear and comprehensive description of the information needed to request a variance; (2) lack of timelines for review and approval; (3) lack of criteria by which the BLM would evaluate variance requests; and (4) lack of provisions stating how the BLM will address future modifications to either this rule or State regulations once variances are approved. Commenters were also concerned about the BLM's ability to review variance requests in a timely manner. To address these concerns, comments suggested clarifying the regulatory text as well as developing formal implementation guidance in consultation with the States prior to the effective date of the rule.

In response to these comments, as discussed in Section III.E.2 of this preamble, the final rule provides three specific criteria for evaluating whether it is appropriate to apply the State, local or tribal requirements in lieu of this rule. In addition, the final rule added new paragraph (e) that requires the State or tribe that requested the variance to

notify the BLM of substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s). This requirement will ensure that the BLM is aware of changes to State, local or tribal regulations that may impact whether the State, local or tribal regulation or requirement continues to meet the variance criteria established in the final rule. Regarding the comments arguing for a timeline for submittal and processing of the variances, the BLM is confident that it will be able to process these requests in a timely manner that will allow sufficient time for operators to have a clear understanding of their compliance requirements.

Some commenters also expressed concern with the proposed BLM State Director review of the variance requests. These commenters asserted that delegating the approval process to the BLM State Director could result in uneven treatment among States. The BLM agrees that achieving consistent implementation of the regulations is an important goal, and this is one reason why the BLM does not believe that decisions on variance requests should be made below the BLM State Director level. Further, the BLM believes that BLM State Directors are in a good position to evaluate how State, local or tribal rules or requirements compare to the requirements of this rule, given their familiarity with the regulatory regimes that apply in the relevant State or States. In addition, once the rule is in effect, the BLM would have the opportunity to issue guidance to enhance coordination among State Directors in evaluating variances, as well as with the BLM Washington office, to help ensure consistency across the BLM State Offices. Finally, the more specific criteria in the final rule for evaluating a variance request will enhance consistency across States.

Some commenters also opposed the proposed provision in § 3179.401(d) stating that the “BLM reserves the right to rescind a variance or modify any condition of approval.” These commenters asserted that such a proposal undermines certainty for operators and discourages States and tribes from seeking a variance. Other commenters requested that the BLM include an appeals process for revoked or denied variances, stating that if a variance were requested and denied, States would have no administrative means by which to address the BLM decision without going to court.

The BLM believes that maintaining BLM authority to rescind a variance or modify any condition of approval is necessary to guard against situations in

which a variance leads to unintended or unforeseen consequences that run counter to the BLM’s determination that the State, local, or tribal regulation performs at least as well as the BLM rule. The BLM expects that such situations will arise infrequently, but the BLM nevertheless believes it is important to include a mechanism for addressing such situations as they occur. After considering the comments, the BLM determined that consideration of waste reduction, environmental, and safety interests outweighs commenters’ concerns. As a result, the final rule maintains the BLM’s discretion to rescind a variance or modify any condition of approval. Regarding the comments requesting that the BLM include an appeals process for revoked or denied variances, the BLM did not provide for administrative appeals on similar variance decisions under the hydraulic fracturing rule, and the BLM is maintaining this practice in this final rule. Applying this approach also helps to avoid a protracted appeals process with respect to State and tribal variances.

VIII. Analysis of Impacts

A. Description of the Regulated Entities

1. Potentially Affected Entities

Entities that will be directly affected by the rule include most, if not all, entities involved in the exploration and development of oil and natural gas on Federal and Indian lands. According to AFMSS data (as of March 27, 2015), there are up to 1,828 entities that currently operate Federal and Indian leases.¹⁵⁵ We believe that these 1,828 entities will be most affected by the rule, in addition to entities currently involved with drilling and support activities, and any entities that become involved in the future.

The potentially affected entities are likely to fall within one of the following industries, identified by the North American Industry Classification System (NAICS) codes:

- NAICS Code 21111 “Oil and Gas Extraction”
- NAICS Code 213111 “Drilling Oil and Gas Wells”
- NAICS Code 213112 “Support Activities”

According to 2014 data from the U.S. Census Bureau, there were 6,532 entities directly involved in extraction of oil and gas in the United States, 2,121 entities involved in the drilling of wells, and 8,577 entities providing other support

functions.¹⁵⁶ Therefore, the approximately 17,000 entities associated with developing, and producing of domestic oil and gas¹⁵⁷ represent an upper bound estimate of the operators that could potentially be affected by this rulemaking.

2. Affected Small Entities

The Small Business Administration (SBA) has developed size standards to carry out the purposes of the Small Business Act.¹⁵⁸ For mining, including the extraction of crude oil and natural gas, the SBA defines a small entity as an individual, limited partnership, or small company, at “arm’s length” from the control of any parent companies, with fewer than 1,250 employees. For entities drilling oil and gas wells, the threshold is 1,000 employees. For entities involved in support activities, the standard is annual receipts of less than \$38.5 million Table 9–3a in the RIA displays the number of establishments in the oil and gas sector using a 1,000 employee cutoff. This table shows that over 99% of the establishments involved in oil and gas extraction and the drilling of oil and gas wells are classified as small.

To estimate a percentage of small firms involved in oil and gas support activities, we reference Table 9–3d of the RIA, which provides the NAICS information for firms involved in oil and gas support activities based on the size of receipts. The most recent data available from the U.S. Census Bureau for establishment/firm size based on receipts is for 2007. Of the firms providing oil and gas support activities in 2007, about 97 percent had annual receipts of less than \$35 million and are classified as small.¹⁵⁹

B. Impacts of the Requirements

1. Overall Costs of the Rule

Overall, the BLM estimates that this rule will pose costs of about \$114–279 million per year (with capital costs annualized using a 7% discount rate) or \$110–275 million per year (with capital costs annualized using a 3% discount rate).¹⁶⁰ These costs include engineering compliance costs and the social cost of minor additions of carbon dioxide to the

¹⁵⁶ RIA at 122.

¹⁵⁷ U.S. Census Bureau data does not readily differentiate between the number of firms involved in oil development and production activities versus gas development and production.

¹⁵⁸ 13 CFR 121.201.

¹⁵⁹ U.S. Census Bureau does not provide receipt data that allow a break at the \$38.5 million threshold as defined by SBA. As such, the 97 percent figure is a slight underestimate.

¹⁶⁰ RIA at 4.

¹⁵⁵ The actual number is expected to be slightly lower due to duplicate entries.

atmosphere.¹⁶¹ The engineering compliance costs presented do not include potential cost savings from the recovery and sale of natural gas (those savings are shown in the summary of benefits). In some areas, operators have already undertaken, or plan to undertake, voluntary actions to address gas losses. To the extent that operators are already in compliance with the requirements of this rule, the above estimates overstate the likely impacts of the rule.

2. Overall Benefits of the Rule

The benefits of the rule include the additional production of resources from Federal and Indian leases; reductions in venting, flaring, and leaks of gas, including GHG emissions; and increased opportunities for royalties. We measure the benefits of the rule as the cost savings that the industry will receive from the recovery and sale of natural gas and the projected environmental benefits of reducing the amount of GHG pollution released into the atmosphere. As with the estimated costs, we expect benefits on an annual basis.

The BLM estimates that this rule would result in monetized benefits of \$209–403 million per year (calculating the monetized emissions reductions using model averages of the social cost of methane with a 3 percent discount rate).¹⁶² We estimate that the rule would reduce methane emissions by 175,000–180,000 tpy, which we estimate to be worth \$189–247 million per year (this social benefit is included in the monetized benefit above). We estimate that the rule would reduce VOC emissions by 250,000–267,000 (this benefit is not monetized in our calculations).¹⁶³ Overall, we predict the rule will reduce methane emissions by 35% from the 2014 estimates and reduce the flaring of associated gas by 49%, when the capture requirements are fully phased in.¹⁶⁴

The rule will also have numerous ancillary benefits. These include improved quality of life for nearby residents, who note that flares are noisy and unsightly at night; reduced release of VOCs, including benzene and other hazardous air pollutants; and reduced production of NO_x and particulate matter, which can cause respiratory and heart problems.

3. Net Benefits of the Rule

Overall, the BLM estimates that the benefits of this rule outweigh its costs by a significant margin. The BLM expects net benefits ranging from \$46–199 million per year (capital costs annualized using a 7% discount rate) or \$50–204 million per year (capital costs annualized using a 3% discount rate).¹⁶⁵

4. Distributional Impacts

a. Energy Systems

The rule has a number of requirements that are expected to influence the production of natural gas and crude oil from onshore Federal and Indian oil and gas leases. We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context. We estimate additional natural gas production ranging from 9–41 Bcf per year (representing 0.03–0.15 percent of the total U.S. production) and a reduction in crude oil production ranging from 0.0–3.2 million bbl per year (representing 0–0.07 percent of the total U.S. production).¹⁶⁶ Separate from the volumes listed above, we also expect 0.8 Bcf of gas to be combusted on-site that would have otherwise been vented. Since the relative changes in production are expected to be small, we do not expect that the rule would significantly impact the price, supply, or distribution of energy.

b. Royalties

The rule is expected to increase natural gas production from Federal and Indian leases, and likewise, is expected to increase annual royalties to the Federal Government, tribal governments, States, and private landowners. For requirements that would result in incremental gas production, we calculate the additional royalties based on that production. We estimate that the rule will result in additional royalties of \$3–13 million per year.¹⁶⁷

Royalty payments are recurring income to Federal or tribal governments and costs to the operator or lessee. As such, they are private 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 of the benefits and costs of a regulation, they may be important for describing distributional effects.

c. Small Businesses

The BLM identified up to 1,828 entities that currently operate Federal and Indian leases. The vast majority of these entities are small businesses, as defined by the SBA. We estimated a range of potential per-entity costs, based on different discount rates and scenarios. Those per-entity compliance costs are presented in the RIA.¹⁶⁸

Recognizing that the SBA defines a small business for oil and gas producers as one with fewer than 1,250 employees, a definition that encompasses many oil and gas producers, the BLM looked at company data for 26 different small-sized entities that currently hold BLM-managed oil and gas leases. The BLM ascertained the following information from the companies' annual reports to the U.S. Securities and Exchange Commission (SEC) for 2012 to 2014. From data in the companies' 10-K filings to the SEC, the BLM was able to calculate the companies' profit margins¹⁶⁹ for the years 2012, 2013 and 2014. We then calculated a profit margin figure for each company when subject to the average annual cost increase associated with this rule. For simplicity, we used the midpoint of the low and high average per-entity cost increase figures, or \$55,200, recognizing that this figure includes compliance costs (annualized using a 7% discount rate) and cost savings. For these 26 small companies, a per-entity compliance cost increase of \$55,200 would result in an average reduction in profit margin of 0.15 percentage points (based on the 2014 company data). The full detail of this calculation is available in the RIA.¹⁷⁰

d. Employment

Executive Order 13563 states, "Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation."¹⁷¹ An analysis of employment impacts is a standalone analysis and the impacts should not be included in the estimation of benefits and costs.

¹⁶⁸ The BLM conducted a Final Regulatory Flexibility Analysis, RIA at 123–136.

¹⁶⁹ The profit margin was calculated by dividing the net income by the total revenue as reported in the companies' 10-K filings.

¹⁷⁰ RIA at 129.

¹⁷¹ Executive Order 13563, *Improving Regulation and Regulatory Review* (Jan. 18, 2011).

¹⁶¹ Some gas that would have otherwise been vented would now be combusted on-site or downstream to generate electricity. The estimated value of the carbon additions do not exceed \$30,000 in any given year.

¹⁶² RIA at 5.

¹⁶³ RIA at 106.

¹⁶⁴ *Id.*

¹⁶⁵ RIA at 6. The highs and lows of the benefits and costs do not occur during the same years; therefore, the net benefit ranges presented here do not calculate simply as the range of benefits minus the range of costs presented above.

¹⁶⁶ RIA at 7.

¹⁶⁷ RIA at 8.

The rule is not expected to materially impact employment within the oil and gas extraction, drilling, and support industries.¹⁷² As noted previously, the anticipated additional gas production volumes represent only a small fraction of the U.S. natural gas production volumes. Additionally, the annualized compliance costs represent only a small fraction of the annual net incomes of companies likely to be impacted. Therefore, we believe that the rule would not alter the investment or employment decisions of firms or significantly adversely impact employment.

The requirements would require the one-time installation or replacement of equipment and the ongoing implementation of an LDAR program, and labor would be necessary to comply with each of these. The Supporting Statement for the Paperwork Reduction Act describes the labor requirements posed by the rule.

e. Impacts on Tribal Lands

This section presents the costs, benefits, net benefits, and incremental production associated with operations on Indian leases, as well as royalty implications for tribal governments.¹⁷³ We estimate that the rule's operation on Indian lands would pose costs ranging from \$15–\$39 million per year (using a 7% discount rate to annualize capital costs) or \$14–\$39 million per year (using a 3% discount rate to annualize capital costs).¹⁷⁴ Projected benefits from the rule's operation on Indian lands range from \$3–\$23 million per year (using model averages of the social cost of methane with a 3 percent discount rate).¹⁷⁵ Net benefits from operation of the rule on leases on Indian lands range from \$3–\$25 million per year (with capital costs annualized using 7% and 3% discount rates).¹⁷⁶

For impacts on production from leases on Indian lands, the rule is projected to result in additional natural gas production ranging from 1.1–5.8 Bcf per year and a reduction in crude oil production ranging from 0–320,000 bbl per year.¹⁷⁷ We further estimate that the rule would reduce methane emissions from leases on Indian lands by 22,000 tpy, and would reduce VOC emissions

by 30,000–32,000 tpy.¹⁷⁸ We estimate additional royalties from leases on Indian lands of \$0.3–1.9 million per year.¹⁷⁹

IX. Procedural Matters

A. Executive Order 12866, Regulatory Planning and Review¹⁸⁰

Executive Order 12866 requires agencies to assess the benefits and costs of regulatory actions, and, for significant regulatory actions, submit a detailed report of their assessment to the OMB for review. A rule is deemed significant under Executive Order 12866 if it may:

- (a) Have an annual effect on the economy of \$100 million or more or 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;
- (b) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (c) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (d) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

After reviewing the requirements, the BLM has determined that the rule is an economically significant regulatory action according to the criteria of Executive Order 12866, and we have prepared a regulatory impact analysis for the rule.

B. Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act of 1996¹⁸¹

The Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act, unless the head of the agency certifies that the rule would not have a significant economic impact on a substantial number of small entities.¹⁸² 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 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 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 rule will likely affect a substantial number of small entities. The BLM believes, however, that the final rule will not have a significant economic impact on a substantial number of small entities. Although the rule will affect a substantial number of small entities, the BLM does not believe that these effects would be economically significant. The screening analysis conducted by BLM estimates the average reduction in profit margin for small companies will be just a fraction of one percentage point, which is not a large enough impact to be considered significant.

Although it is not required, the BLM nevertheless chose to prepare an Initial Regulatory Flexibility Analysis and Final Regulatory Flexibility Analysis for this rule. Due to the fact that the rule is economically significant and impacts a substantial number of small entities, the BLM believes it is prudent, and potentially helpful to small entities, to provide an IRFA and FRFA for the rulemaking. We do not believe this decision should be viewed as a precedent for other rulemakings.

C. Unfunded Mandates Reform Act of 1995

Under the Unfunded Mandates Reform Act (UMRA), agencies must prepare a written statement about benefits and costs prior to issuing a proposed rule that includes any Federal mandate that is likely to result in aggregate expenditure by State, local, and tribal governments, or by the private sector, of \$100 million or more in any 1 year, and prior to issuing any final rule for which a proposed rule was published.

This final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more by State, local, and tribal governments, in the aggregate, or by the private sector in any 1 year. Thus, the final rule is also not subject to the requirements of Section 205 of UMRA.

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. It contains no requirements that apply to

¹⁷² RIA at 118.

¹⁷³ RIA at 118–120.

¹⁷⁴ RIA at 118.

¹⁷⁵ RIA at 119.

¹⁷⁶ RIA at 119. The highs and lows of the benefits and costs do not occur during the same years; therefore, the net benefit ranges presented here do not calculate simply as the range of benefits minus the range of costs presented above.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ RIA at 120.

¹⁸⁰ RIA at 138.

¹⁸¹ RIA at 167–168.

¹⁸² 5 U.S.C. 601–612. The exception is found in 5 U.S.C. 605(b).

such governments, nor does it impose obligations upon them.

D. Executive Order 12630, Governmental Actions and Interference With Constitutionally Protected Property Rights (Takings)

Under Executive Order 12630, the final rule would not have significant takings implications. A takings implication assessment is not required. The final rule would establish a limited set of standards under which gas can be flared or vented, and under which an operator can use oil and gas on a lease, unit, or communitized area for operations and production purposes, without paying royalty.

Oil and gas operators on BLM-administered leases are subject to lease terms that expressly require that subsequent lease activities be conducted in compliance with applicable Federal laws and regulations. The final rule is consistent with the terms of those Federal leases and is authorized by applicable statutes. Thus, the final rule is not a governmental action capable of interfering with constitutionally protected property rights, it would not cause a taking of private property, and it does not require further discussion of takings implications under this Executive Order.

E. Executive Order 13132, Federalism

The final rule would not have a substantial direct effect on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the levels of government. It would not apply to States or local governments or State or local government entities. 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.

F. Executive Order 12988, Civil Justice Reform

This final rule would comply with the requirements of Executive Order 12988. Specifically, this rulemaking: (a) Meets the criteria of section 3(a) requiring that all regulations be reviewed to eliminate errors and ambiguity and be written to minimize litigation; and (b) Meets the criteria of section 3(b)(2) requiring that all regulations be written in clear language and contain clear legal standards.

G. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

In accordance with Executive Order 13175, the BLM has evaluated this rulemaking and determined that it will not have substantial direct effects on federally recognized Indian tribes. Nevertheless, on a government-to-government basis we initiated consultation with tribal governments that the final rule may affect.

In 2014, the BLM conducted a series of forums to consult with tribal governments to inform the development of this proposal. We held tribal outreach sessions in Denver, Colorado (March 19, 2014), Albuquerque, New Mexico (May 7, 2014), Dickinson, North Dakota (May 9, 2014), and Washington, DC (May 14, 2014).¹⁸³ At the Denver and Washington, DC sessions, the tribal meetings were live-streamed to allow for the greatest possible participation by tribes and others. The tribal outreach sessions served as initial consultation with Indian tribes to comply with Executive Order 13175. As part of our outreach efforts, the BLM accepted informal comments generated as a result of the public/tribal outreach sessions through May 30, 2014.

After the proposed rule published on February 8, 2016, the BLM conducted another round of outreach meetings, with the tribal sessions taking place in the morning, and the general-public sessions taking place in the afternoon, with a conference call-in number for the public to listen in remotely. These meetings were held at four locations: Farmington, New Mexico (February 16, 2016), Oklahoma City, Oklahoma (February 18, 2016), Denver, Colorado (March 1, 2016), and Dickinson, North Dakota (March 3, 2016).

H. Paperwork Reduction Act

1. Overview

The Paperwork Reduction Act (PRA)¹⁸⁴ 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 OMB control number. Collections of information include requests and requirements that an individual, partnership, or corporation obtain information, and report it to a Federal agency. See 44 U.S.C. 3502(3); 5 CFR 1320.3(c) and (k).

This rule contains information collection activities that require

approval by the OMB under the PRA. The BLM included an information collection request in the proposed rule. OMB has approved the information collection for the final rule under control number 1004–0211.

2. Summary of Information Collection Requirements

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

- *Forms:* Form 3160–3, Application for Permit to Drill or Reenter; and Form 3160–5, Sundry Notices and Reports on Wells.

- *OMB Control Number:* 1004–0211.

- *Description of Respondents:* Holders of Federal and Indian (except Osage Tribe) oil and gas leases, those who belong to federally approved units and CAs, and those who are parties to IMDA oil and gas agreements.

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

- *Frequency of Collection:* On occasion and monthly.

- *Abstract:* This rule updates standards to reduce wasteful venting, flaring, and leaks of natural gas from onshore wells located on Federal and Indian oil and gas leases, units and CAs.

- *Estimated Number of Responses:* 63,200.

- *Estimated Total Annual Burden Hours:* 82,170 hours.

- *Estimated Total Non-Hour Cost:* None.

3. Discussion of Regulations

Except for the recordkeeping required by 43 CFR 3179.305, the information-collection activities in the final rule involve new uses and burdens for BLM Forms 3160–3 and 3160–5, the use of which has been cleared by OMB under control number 1004–0137, Onshore Oil and Gas Operations (43 CFR part 3160) (expiration date January 31, 2018). After this rule goes into effect, the BLM plans to request that OMB merge the new uses and burdens of Forms 3160–3 and 3160–5 with control number 1004–0137.

The information collection activities in this rule are described below along with estimates of the annual burdens. Included in the burden estimates are the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each component of the information collection.

Plan to Minimize Waste of Natural Gas (43 CFR 3162.3–1)

This rule adds a new provision to 43 CFR 3162.3–1 that requires a plan to

¹⁸³ More info can be found at: http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.html.

¹⁸⁴ 44 U.S.C. 3501–3521.

minimize waste of natural gas when submitting an APD for a development oil well. This information is in addition to the APD information that the BLM already collects under OMB Control Number 1004-0137. The required elements of the waste minimization plan are listed at paragraphs (j)(1) through (j)(7).

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 3178.9 requires the following additional information in a request for prior approval of royalty-free use under section 3178.5, or for prior approval of off-lease royalty-free use under section 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 some other disposition).

Notification of Choice To Comply on County- or State-Wide Basis (43 CFR 3179.7(c)(3)(ii))

Section 3179.7 requires operators flaring gas from development oil wells to capture a specified percentage of the operator's adjusted volume of gas produced over the relevant area. The "relevant area" is each of the operator's leases, units, or communitized areas, unless the operator chooses to comply on a county- or State-wide basis and the operator notifies the BLM of its choice by Sundry Notice by January 1 of the relevant year.

Request for Approval of Alternative Capture Requirement (43 CFR 3179.8(b))

Section 3179.8 applies only to leases issued before the effective date of the final rule and to operators choosing to comply with the capture requirement in section 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis. The regulation provides that operators who meet those parameters may seek BLM approval of a capture percentage other than that which is applicable under 43 CFR 3179.7. The operator must submit a Sundry Notice that includes the following information:

- The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
- The oil and gas production levels of each of the operator's wells on the lease, unit, or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well;

In addition, the request must include map(s) showing:

- The entire lease, unit, or communitized area, and the surrounding lands to a distance and on a scale that shows the field in which the well is or will be located (if applicable), and all pipelines that could transport the gas from the well;
- All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases, (both on Federal or Indian leases and on other properties) within the map area;
- Identification of all of the operator's wells within the lease from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and

- Identification of all of the operator's wells within the lease from which gas is captured;

The following information is also required:

- Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines; and

- Projected costs of and the combined stream of revenues from both gas and oil production, including:

- The operator's projections of gas prices, gas production volumes, gas quality (i.e., heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and
- The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Request for Exemption From Well Completion Requirements (43 CFR 3179.102(c) and (d))

Section 3179.102 lists several requirements pertaining to gas that reaches the surface during well completion and related operations. An operator may seek an exemption from these requirements by submitting a Sundry Notice that includes the following information:

- (1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

- (2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

- (3) Data that show the costs of compliance; and

- (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (i.e., heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

The rule also provides that an operator that is in compliance with the EPA regulations for well completions under 40 CFR part 60, subpart OOOO or subpart OOOOa is deemed in compliance with the requirements of this section. As a practical matter, all hydraulically fractured or refractured wells are now subject to the EPA requirements, so the BLM does not believe that the requirements of this section would have any independent effect, or that any operator would request an exemption from the requirements of this section, as long as the EPA requirements remain in effect.

Request for Extension of Royalty-Free Flaring During Initial Production Testing (43 CFR 3179.103)

Section 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 by submitting a Sundry Notice to the BLM.

Request for Extension of Royalty-Free Flaring During Subsequent Well Testing (43 CFR 3179.104)

Section 3179.104 allows gas to be flared royalty-free for no more than 24 hours during well tests subsequent to the initial production test. The operator may seek authorization to flare for a longer period by submitting a Sundry Notice to the BLM.

Reporting of Venting or Flaring (43 CFR 3179.105)

Section 3179.105 allows an operator to flare gas royalty-free during a temporary, short-term, infrequent, and unavoidable emergency. Venting gas is permissible if flaring is not feasible during an emergency. The regulation defines limited circumstances that constitute an emergency, and other circumstances that do not constitute an emergency. The operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented in the following circumstances that, as provided by 43 CFR 3179.105, do not constitute emergencies for the purposes of royalty assessment:

(1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;

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

(3) 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;

(4) Scheduled maintenance;

(5) A situation caused by operator negligence; or

(6) 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.

Pneumatic Controllers—Introduction

Section 3179.201 pertains to any pneumatic controller that: (1) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source; and (2) has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour.

Section 3179.201(b) requires operators to replace each high-bleed pneumatic controller with a controller with a bleed rate lower than 6 scf per hour within 1 year of the effective date of the rule, unless (1) the pneumatic controller exhaust is routed to processing equipment; (2) the pneumatic controller exhaust was, as of the effective date of the rule, and continues to be routed to a flare device or low pressure combustor; or (3) one of the following applies:

Notification of Functional Needs for a Pneumatic Controller (43 CFR 3179.201(b)(1))

The operator notifies the BLM through a Sundry Notice that use of a pneumatic controller with a bleed rate greater than 6 scf per hour is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, and the Sundry Notice describes those functional needs.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Controllers) (43 CFR 3179.201(b)(4) and 3175.201(c))

The operator demonstrates to the BLM through a Sundry Notice, and the BLM agrees, that replacement of a pneumatic controller would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice must include the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the

lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including: The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Controller Within 3 Years (43 CFR 3179.201(d))

The operator may replace a high-bleed pneumatic controller within 3 years of the effective date of the rule (instead of within 1 year of the effective date) if the operator notifies the BLM through a Sundry Notice that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of the rule.

Pneumatic Diaphragm Pumps—Introduction

With some exceptions, section 3179.202 pertains to any pneumatic diaphragm pump that: (1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source. This regulation generally requires replacement of such a pump with a zero-emissions pump or routing of the pump's exhaust gas to processing equipment for capture and sale within 1 year of the effective date of the final rule.

This requirement does not apply to pneumatic diaphragm pumps that do not vent exhaust gas to the atmosphere. In addition, this requirement does not apply if one of the following applies:

Showing That a Pneumatic Diaphragm Pump Was Operated on Fewer Than 90 Individual Days in the Prior Calendar Year (43 CFR 3179.202(b)(2))

A pneumatic diaphragm pump is not subject to section 3179.202 if the

operator documents in a Sundry Notice that the pump was operated fewer than 90 days in the prior calendar year.

Notification of Functional Needs for a Pneumatic Diaphragm Pump (43 CFR 3179.202(d))

In lieu of replacing a pneumatic diaphragm pump or routing the pump exhaust gas to processing equipment, an operator may submit a Sundry Notice to the BLM showing that replacing the pump with a zero emissions pump is not viable because a pneumatic pump is necessary to perform the function required, and that routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pumps) (43 CFR 3179.202(f) and (g))

An operator may be exempted from the replacement requirement if the operator submits a Sundry Notice to the BLM that provides an economic analysis that demonstrates, and the BLM agrees, that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice must include the following information:

(1) Well information that must include: (i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and (ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with paragraphs (c) through (e) of § 3179.202; and

(3) The operator's estimate of the costs and revenues of the combined stream of revenues from both the gas and oil components, including: (i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (ii) the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Diaphragm Pump Within 3 Years (43 CFR 3179.202(h))

The operator may replace a pneumatic diaphragm pump within 3 years of the effective date of the rule (instead of within 1 year of the effective date) if the operator notifies the BLM through a Sundry Notice that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of the rule.

Storage Vessels (43 CFR 3179.203(c))

A storage vessel is subject to 43 CFR 3179.203(c) if the vessel: (1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to any of the requirements of EPA regulations at 40 CFR part 60, subpart OOOO, but would be subject to that subpart if it were a new or modified source.

Within 60 days after the effective date of this section, and within 30 days after any new source of production is added to the tank, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.

If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy, no later than 1 year after the effective date of this section, or 3 years if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

To support the demonstration described above, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease; and

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components, including: The operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting (43 CFR 3179.204(c) and (e))

The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations. Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of a Sundry Notice within 30 calendar days after the first liquids unloading event by manual or automated well purging conducted after the effective date of this section. This requirement applies to each well the operator operates.

For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 and make them available to the BLM, upon request.

Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume (43 CFR 3179.204(f))

The operator must notify the BLM by Sundry Notice, within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

Leak Detection—Compliance With EPA Regulations (43 CFR 3179.301(j))

Sections 3179.301 through 3179.305 include information collection activities pertaining to the detection and repair of gas leaks during production operations. These regulations require operators to inspect all equipment covered under § 3179.301(a) for gas leaks. Section 3179.301(k) allows an operator to satisfy the requirements of §§ 3179.301 through 3179.305 for all of the equipment on a given lease by notifying the BLM in a Sundry Notice that the operator is applying the EPA subpart OOOOa fugitive emissions requirements to such equipment.

Leak Detection—Request To Use an Alternative Monitoring Device and Protocol (43 CFR 3179.302(c))

Section 3175.302 specifies the instruments and methods that an operator may use to detect leaks. Section 3175.302(d) allows the BLM to approve an alternative monitoring device and associated inspection protocol if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a).

Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice to BLM that includes the following information: (1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function; (2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded; (3) Records and data from laboratory and field testing, including but not limited to performance testing; (4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the

approach specified in the regulations; (5) Tracking and documentation procedures; and (6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

Leak Detection—Operator Request To Use an Alternative Leak Detection Program (43 CFR 3179.303(b))

Section 3179.303(b) allows an operator to submit a Sundry Notice requesting authorization to detect gas leaks using an alternative instrument-based leak detection program, different from the specified requirement to inspect each site semi-annually using an approved monitoring device.

To obtain approval for an alternative leak detection program, the operator must submit a Sundry Notice that includes the following information:

(1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);

(2) The proposed monitoring protocol;

(3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;

(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);

(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and

(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program That Does Not Meet Specified Criteria (43 CFR 3179.303(d))

An operator may seek authorization for an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks compared to the required approach, if the operator demonstrates that compliance with the leak-detection regulations (including the option for an alternative program under 43 CFR 3179.303(b)) would impose such costs

as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM may approve an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks, but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

To obtain approval for an alternative program under this provision, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301–305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;

(5) The information required to obtain approval of an alternative program under § 3179.303(b), except that the estimated volume of gas that will be lost through leaks under the alternative program must be compared to the volume of gas lost under the required program, but does not have to be shown to be at least equivalent.

Leak Detection—Notification of Delay in Repairing Leaks (43 CFR 3179.304(a))

Section 3179.304(a) requires an operator to repair any leak no later than 30 calendar days after discovery of the leak, unless there is good cause for delay in repair. If there is good cause for a delay beyond 30 calendar days, section 3179.304(b) requires the operator to submit a Sundry Notice notifying the BLM of the cause.

Leak Detection—Inspection Recordkeeping and Reporting (43 CFR 3179.305)

Section 3179.305 requires operators to maintain the following records and make them available to the BLM upon request: (1) For each inspection required under § 3179.303, documentation of the date of the inspection and the site where the inspection was conducted; (2) The monitoring method(s) used to determine the presence of leaks; (3) A list of leak components on which leaks were found; (4) The date each leak was repaired; and (5) The date and result of the follow-up inspection(s) required under § 3179.304. By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that

includes: (1) The number of sites inspected; (2) The total number of leaks identified, categorized by the type of component; (3) The total number of leaks repaired; (4) The total number of leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak; and (5) A certification by a responsible officer that the information in the report is true and accurate.

Leak Detection—Annual Reporting of Inspections (43 CFR 3179.305(b))

By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

- (1) The number of sites inspected;

(2) The total number of leaks identified, categorized by the type of component;

(3) The total number of leaks repaired;

(4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.

(5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

4. Burden Estimates

The following table details the estimated annual burdens of activities that would involve APDs and Sundry Notices, the use of which has been authorized under Control Number 1004–0137.

ESTIMATED HOUR BURDENS

Type of response	Number of responses	Hours per response	Total hours (column B × column C)
A.	B.	C.	D.
Plan to Minimize Waste of Natural Gas, 43 CFR 3162.3–1, Form 3160–3	2,000	8	16,000
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	4	200
Notification of Choice to Comply on County- or State-wide Basis, 43 CFR 3179.7(c)(3)(iii)	200	1	200
Request for Approval of Alternative Capture Requirement, 43 CFR 3179.8(b), Form 3160–5 ..	50	16	800
Request for Exemption from Well Completion Requirements, 43 CFR 3179.102(c) and (d), Form 3160–5	0	0	0
Request for Extension of Royalty-Free Flaring During Initial Production Testing, 43 CFR 3179.103, Form 3160–5	500	2	1,000
Request for Extension of Royalty-Free Flaring During Subsequent Well Testing, 43 CFR 3179.104, Form 3160–5	5	2	10
Reporting of Venting or Flaring, 43 CFR 3179.105, Form 3160–5	250	2	500
Notification of Functional Needs for a Pneumatic Controller, 43 CFR 3179.201(b)(1), Form 3160–5	10	2	20
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3179.201(b)(4) and 3179.201(c), Form 3160–5	50	4	200
Showing in Support of Replacement of Pneumatic Controller within 3 Years, 43 CFR 3179.201(d), Form 3160–5	100	1	100
Showing that a Pneumatic Diaphragm Pump was Operated on Fewer than 90 Individual Days in the Prior Calendar Year, 43 CFR 3179.202(b)(2), Form 3160–5	100	1	100
Notification of Functional Needs for a Pneumatic Diaphragm Pump, 43 CFR 3179.202(d), Form 3160–5	150	1	150
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3179.202(f) and (g), Form 3160–5	10	4	40
Showing in Support of Replacement of Pneumatic Diaphragm Pump within 3 Years, 43 CFR 3179.202(h), Form 3160–5	100	1	100
Storage Vessels, 43 CFR 3179.203(c), Form 3160–5	50	4	200
Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting, 43 CFR 3179.204(c) and (e), Form 3160–5	5,000	1	5,000
Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume, 43 CFR 3179.204(f), Form 3160–5	250	1	250
Leak Detection—Compliance with EPA Regulations, 43 CFR 3179.301(j), Form 3160–5	50	4	200
Leak Detection—Request to Use an Alternative Monitoring Device and Protocol, 43 CFR 3179.302(c), Form 3160–5	5	40	200
Leak Detection—Operator Request to Use an Alternative Leak Detection Program, 43 CFR 3179.303(b), Form 3160–5	20	40	800
Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program that Does Not Meet Specified Criteria, 43 CFR 3179.303(d), Form 3160–5	150	20	3,000
Leak Detection—Notification of Delay in Repairing Leaks, 43 CFR 3179.304(a), Form 3160–5 ..	100	1	100
Leak Detection—Inspection Recordkeeping and Reporting, 43 CFR 3179.305	52,000	.25	13,000
Leak Detection—Annual Reporting of Inspections, 43 CFR 3179.305(b), Form 3160–5	2,000	20	40,000
Totals	63,200	.....	82,170

I. National Environmental Policy Act

The BLM prepared a draft environmental assessment (EA) to determine whether issuance of this proposed regulation pertaining to oil and gas waste prevention and royalty clarification would constitute a “major Federal action significantly affecting the quality of the human environment” under Section 102(2)(C) of the National Environmental Policy Act (NEPA). This EA was posted for public comment for a period of 75 days, from February 8 through April 22, 2016. During the public comment period for the proposed rule and draft EA, BLM received comments that further informed the analysis of the potential environmental impacts of the rule. In response to these comments, BLM incorporated changes in the final EA, which will be released concomitantly with the rule.

The BLM believes that the rule would benefit the environment by reducing emissions of methane (a potent GHG), VOCs (which contribute to smog), and hazardous air pollutants such as benzene (a known carcinogen). In addition, the rule would reduce light pollution and other impacts from flaring. These reductions would contribute to a more robust environmental quality overall. BLM has determined that the rule may also have a certain degree of adverse environmental impacts, primarily due to land disturbance from increased or accelerated construction of gas gathering lines or pipelines and compressors and/or increased truck traffic on existing disturbed surfaces from the increased use of mobile capture technology. After careful consideration of the impacts and alternatives discussed in the final EA, BLM has determined that this action does not meet the criteria of significance under 40 CFR 1508.27 either in terms of context or intensity; therefore, BLM finds that the promulgation of the rule has no significant impact.

J. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

Under Executive Order 13211, agencies are required to prepare and submit to OMB a Statement of Energy Effects for significant energy actions. This statement is to include a detailed statement of “any adverse effects on energy supply, distribution, or use (including a shortfall in supply, price increases, and increase use of foreign supplies)” for the action and reasonable alternatives and their effects.

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 proposed rulemaking, and notices of proposed 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 (OIRA) as a significant energy action.”

Since the compliance costs for this rule would represent such a small fraction of company net incomes, we believe that the rule is unlikely to impact the investment decisions of firms. Also, the incremental production of gas estimated to result from the rule’s enactment constitutes a small fraction of total U.S. production, and any potential and temporary deferred production of oil would likewise constitute a small fraction of total U.S. production. For these reasons, we do not expect that the final rule will significantly impact the supply, distribution, or use of energy. As such, the rulemaking is not a “significant energy action” as defined in Executive Order 13211.

K. Executive Order 13563, Improving Regulation and Regulatory Review

Executive Order 13563 reaffirms the principles of E.O. 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. E.O. 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 final rule in a manner consistent with these requirements.

X. Authors

The principal authors of this rule are: Timothy Spisak and James Tichenor of the BLM Washington Office; Eric Jones of the BLM Moab, Utah Field Office; and David Mankiewicz of the BLM Farmington, New Mexico Field Office; assisted by Faith Bremner of the staff of the BLM’s Regulatory Affairs Division.

List of Subjects*43 CFR Part 3100*

Government contracts; Mineral royalties; Oil and gas reserves; Public lands—mineral resources; Reporting and recordkeeping requirements; Surety bonds.

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: November 14, 2016.

Amanda Leiter,

Acting Assistant Secretary, 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 3100, 3160 and 3170 as follows:

PART 3100—ONSHORE OIL AND GAS LEASING

- 1. Amend the authority citation for part 3100 to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359 and 1751; 43 U.S.C. 1732(b), 1733, and 1740; and the Energy Policy Act of 2005 (Pub. L. 109–58).

- 2. Revise § 3103.3–1 to read as follows:

§ 3103.3–1 Royalty on production.

(a) Royalty on production will be payable only on the mineral interest owned by the United States. Royalty must be paid in amount or value of the production removed or sold as follows:

(1) For leases issued on or before January 17, 2017, the rate prescribed in the lease or in applicable regulations at the time of lease issuance;

(2) For leases issued January 17, 2017:

- (i) 12½ percent on all noncompetitive leases;

- (ii) A rate of not less than 12½ percent on all competitive leases, exchange and renewal leases, and leases issued in lieu of unpatented oil placer mining claims under § 3108.2–4 of this title;

(3) 16⅔ percent on noncompetitive leases reinstated under § 3108.2–3 of this title plus an additional 2 percentage-point increase added for each succeeding reinstatement;

(4) The rate used for royalty determination that appears in a lease that is reinstated or that is in force for competitive leases at the time of issuance of the lease that is reinstated, plus 4 percentage points, plus an additional 2 percentage points for each succeeding reinstatement.

(b) Leases that qualify under specific provisions of the Act of August 8, 1946 (30 U.S.C. 226c) may apply for a limitation of a 12½ percent royalty rate.

(c) The average production per well per day for oil and gas will be determined pursuant to 43 CFR 3162.7–4.

(d) Payment of a royalty on the helium component of gas will not convey the right to extract the helium from the gas stream. Applications for the right to extract helium from the gas stream will be made under part 16 of this title.

PART 3160—ONSHORE OIL AND GAS OPERATIONS

■ 3. 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.

§ 3160.0–5 [Amended]

■ 4. Amend § 3160.0–5 by removing the definition of “Avoidably lost.”

■ 5. Amend § 3162.3–1 by adding paragraph (j) to read as follows:

§ 3162.3–1 Drilling applications and plans.

* * * * *

(j) When submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The

waste minimization plan must include the following information:

(1) The anticipated completion date of the proposed well(s);

(2) A description of anticipated production, including:

(i) The anticipated date of first production;

(ii) The expected oil and gas production rates and duration from the proposed well. If the proposed well is on a multi-well pad, the plan should include the total expected production for all wells being completed;

(iii) The expected production decline curve of both oil and gas from the proposed well; and

(iv) The expected Btu value for gas production from the proposed well.

(3) 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;

(4) Identification of a gas pipeline to which the operator plans to connect, with sufficient capacity to accommodate the anticipated production of the proposed well(s), and information on the pipeline, including, to the extent that the operator can obtain it, the following information:

(i) Maximum current daily capacity of the pipeline;

(ii) Current throughput of the pipeline;

(iii) Anticipated daily capacity of the pipeline at the anticipated date of first gas sales from the proposed well;

(iv) Anticipated throughput of the pipeline at the anticipated date of first gas sales from the proposed well; and

(v) Any plans known to the operator for expansion of pipeline capacity for the area that includes the proposed well; and

(5) If an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well(s), the waste minimization plan must also include:

(i) A gas pipeline system location map of sufficient detail, size, and scale as to show the field in which the proposed well will be located, and all existing gas trunklines within 20 miles of the well. The map should also contain:

(A) The name and location of the gas processing plant(s) closest to the proposed well(s), and of the intended destination processing plant, if different;

(B) The location and name of the operator of each gas trunkline within 20 miles of the proposed well;

(C) The proposed route and tie-in point that connects or could connect the subject well to an existing gas trunkline;

(ii) The total volume of produced gas, and percentage of total produced gas, that the operator is currently flaring or venting from wells in the same field and any wells within a 20-mile radius of that field; and

(iii) A detailed evaluation, including estimates of costs and returns, of opportunities for on-site capture approaches, such as compression or liquefaction of natural gas, removal of natural gas liquids, or generation of electricity from gas.

PART 3170—ONSHORE OIL AND GAS PRODUCTION

■ 6. 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.

■ 7. Add subparts 3178 and 3179 to part 3170, to read as follows:

Subpart 3178—Royalty-Free Use of Lease Production

Sec.

3178.1 Purpose.

3178.2 Scope.

3178.3 Production on which a royalty is not due.

3178.4 Uses of oil or gas on lease, unit, or communitized area that do not require prior written BLM approval for royalty-free treatment of volumes used.

3178.5 Uses of oil or gas on a lease, unit, or communitized area that require prior written BLM approval for royalty-free treatment of volumes used.

3178.6 Uses of oil or gas moved off the lease, unit, or communitized area that do not require prior written approval for royalty-free treatment of volumes used.

3178.7 Uses of oil or gas moved off the lease, unit, or communitized area that require prior written approval for royalty-free treatment of volumes used.

3178.8 Measurement or estimation of volumes of oil or gas that are used royalty-free.

3178.9 Requesting approval of royalty-free treatment when approval is required.

3178.10 Facility and equipment ownership.

Subpart 3179—Waste Prevention and Resource Conservation

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 prohibition.

3179.7 Gas capture requirement.

3179.8 Alternative limits on venting and flaring.

3179.9 Measuring and reporting volumes of gas vented and flared from wells.

- 3179.10 Determinations regarding royalty-free venting or flaring.
 3179.11 Other waste-prevention measures.
 3179.12 Coordination with State regulatory authority.

Flaring and Venting Gas During Drilling and Production Operations

- 3179.101 Well drilling.
 3179.102 Well completion and related operations.
 3179.103 Initial production testing.
 3179.104 Subsequent well tests.
 3179.105 Emergencies.

Gas Flared or Vented From Equipment During Well Maintenance Operations

- 3179.201 Equipment requirements for pneumatic controllers.
 3179.202 Requirements for pneumatic chemical injection pumps or pneumatic diaphragm pumps.
 3179.203 Storage vessels.
 3179.204 Downhole well maintenance and liquids unloading.

Leak Detection and Repair (LDAR)

- 3179.301 Operator responsibility.
 3179.302 Approved instruments and methods.
 3179.303 Leak detection and inspection requirements for natural gas wellhead equipment, facilities, and compressors.
 3179.304 Repairing leaks.
 3179.305 Leak detection inspection recordkeeping.

State or Tribal Variances

- 3179.401 State or tribal requests for variances from the requirements of this subpart.

§ 3178.1 Purpose.

The purpose of this subpart is to address the circumstances under which oil or gas produced from Federal and Indian leases may be used royalty-free in operations on the lease, unit, or communitized area. 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 or Gas Lost (NTL-4A), pertaining to oil or gas used for beneficial purposes.

§ 3178.2 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) Indian Mineral Development Act (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 wells, and production equipment located on a Federal or Indian lease or a federally approved unit or communitized area, and compressors located on a Federal or Indian lease or a federally approved unit or communitized area and which compress production from the same Federal or Indian lease or federally approved unit or communitized area.

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

§ 3178.3 Production on which royalty is not due.

(a) To the extent specified in §§ 3178.4 and 3178.5, royalty is not due on:

(1) Oil or gas that is produced from a lease or communitized area and used for operations and production purposes (including placing oil or gas in marketable condition) on the same lease or communitized area without being removed from the lease or communitized area; or

(2) Oil or gas that is produced from a unit PA and used for operations and production purposes (including placing oil or gas in marketable condition) on the unit, for the same unit PA, without being removed from the unit.

(b) For the uses described in § 3178.5, the operator must obtain prior written BLM approval for the volumes used for operational and production purposes to be royalty free.

§ 3178.4 Uses of oil or gas on a lease, unit, or communitized area that do not require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may be used royalty-free for operations and production purposes on the lease, unit, or communitized area without prior written BLM approval in the following circumstances:

(1) Use of fuel to generate power or operate combined heat and power;

(2) Use of fuel to power equipment, including artificial lift equipment, equipment used for enhanced recovery, drilling rigs, and completion and workover equipment;

(3) Use of gas to actuate pneumatic controllers or operate pneumatic pumps at production facilities;

(4) Use of fuel to heat, separate, or dehydrate production;

(5) Use of gas as a pilot fuel or as assist gas for a flare, combustor, thermal oxidizer, or other control device;

(6) Use of fuel to compress or treat gas to place it in marketable condition;

(7) Use of oil to clean the well and improve production, *e.g.*, hot oil treatments. The operator must document the removal of the oil from the tank or pipeline under Onshore Oil and Gas Order No. 3 (Site Security), or any successor regulation;

(8) Use of oil as a circulating medium in drilling operations, if the use is part of an approved Drilling Plan under Onshore Oil and Gas Order No. 1;

(9) Injection of gas for the purpose of conserving gas or increasing the recovery of oil or gas, if the BLM has approved the injection under applicable regulations in parts 3100, 3160, or 3180 of this title; and

(10) Injection of gas that is cycled in a contained gas-lift system.

(b) The volume to be treated as royalty free must not exceed the amount of fuel reasonably necessary to perform the operational function, using equipment of appropriate capacity.

§ 3178.5 Uses of oil or gas on a lease, unit, or communitized area that require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may also be used royalty-free for the following operations and production purposes on the lease, unit, or communitized area, but prior written BLM approval is required to ensure that production accountability is maintained:

(1) Use of oil or gas that the operator removes from the pipeline at a location downstream of the Facility Measurement Point (FMP);

(2) Use of gas that has been removed from the lease, unit PA, or communitized area for treatment or processing because of particular physical characteristics of the gas that require the gas to be treated or processed prior to use, where the gas is returned to, and used on, the lease, unit PA, or communitized area from which it was produced; and

(3) Any other types of use of produced oil or gas for operations and production purposes, which are not identified in § 3178.4.

(b)(1) The operator must obtain BLM approval to conduct activities under paragraph (a) of this section by submitting a Form 3160-5, Sundry Notices and Reports on Wells (Sundry Notice) containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this

section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.

(2) With respect to uses under paragraph (a)(1) of this section, the operator must measure the volume of oil or gas used in accordance with Onshore Oil and Gas Orders No. 4 (oil) and 5 (gas) as applicable, or other successor regulations.

(3) With respect to removals under paragraph (a)(2) of this section, the operator must measure any gas returned to the lease, unit, or communitized area under such an approval in accordance with Onshore Oil and Gas Order No. 5 or other successor regulations.

§ 3178.6 Uses of oil or gas moved off the lease, unit, or communitized area that do not require prior written approval for royalty-free treatment of volumes used.

Oil or gas used after being moved off the lease, unit, or communitized area may be treated as royalty free without prior written BLM approval only if the use meets the criteria under § 3178.4 and when:

(a) The oil or gas is transported from one area of the lease, unit, or communitized area to another area of the same lease, unit, or communitized area where it is used, and no oil or gas is added to or removed from the pipeline while crossing lands that are not part of the lease, unit, or communitized area; or

(b) A well is directionally drilled, the wellhead is not located on the producing lease, unit, or communitized area, and oil or gas is used on the same well pad for operations and production purposes for that well.

§ 3178.7 Uses of oil or gas moved off the lease, unit, or communitized area that require prior written approval for royalty-free treatment of volumes used.

(a) Except as provided in § 3178.6(b) and paragraph (b) of this section, royalty is owed on all oil or gas used in operations conducted off the lease, unit, or communitized area.

(b) The BLM may grant prior written approval to treat oil or gas used in operations conducted off the lease, unit, or communitized area as royalty free (referred to as off-lease royalty-free use) if the use is among those listed in § 3178.4(a) and § 3178.5(a) and if:

(1) 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

(2) The operations are conducted upstream of the FMP.

(c) The operator must obtain BLM approval under paragraph (b) of this section by submitting a Sundry Notice containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.

(d) Approval of measurement or commingling off the lease, unit, or communitized area under other regulations does not constitute approval of off-lease royalty-free use. The operator or lessee must expressly request, and submit its justification for, approval of off-lease royalty-free use.

(e) If equipment or a facility located on a particular lease, unit, or communitized area treats oil or gas produced from properties that are not unitized or communitized with the property on which the equipment or facility is located, in addition to treating oil or gas produced from the lease, unit, or communitized area on which the equipment or facility is located, the operator may report as royalty free only that portion of the oil or gas used as fuel that is properly allocable to the share of production contributed by the lease, unit, or communitized area on which the equipment is located, unless otherwise authorized by the BLM under this section.

§ 3178.8 Measurement or estimation of volumes of oil or gas that are used royalty-free.

(a) The operator must measure or estimate the volumes of royalty-free gas used in operations upstream of the FMP.

(b) The operator must measure the volume of gas that is removed from the product stream downstream of the FMP and used royalty-free pursuant to sections 3178.4 through 3178.7.

(c) The operator must measure the volume of oil that is used royalty-free pursuant to sections 3178.4 through 3178.7. The operator must also document removal of such oil from the tank or pipeline.

(d) If the operator removes oil or gas downstream of the FMP and that oil or gas is used royalty-free pursuant to sections 3178.4 through 3178.7, the operator must apply for an FMP under section 3173.12 to measure the oil or gas that is removed for use.

(e) When estimating gas volumes, the operator must use the best available

information to make a reasonable estimate.

(f) Each of the volumes required to be measured or estimated, as applicable, under this subpart, must be reported by the operator following applicable ONRR reporting requirements.

§ 3178.9 Requesting approval of royalty-free treatment when approval is required.

To request written approval of royalty-free use when required under § 3178.5 or § 3178.7, the operator must submit a Sundry Notice that includes the following information:

(a) 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;

(b) 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;

(c) If the volume of gas expected to be used will be estimated, the basis for the estimate (e.g., equipment manufacturer's published consumption or usage rates); and

(d) 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 used in some other way).

§ 3178.10 Facility and equipment ownership.

The operator is not required to own or lease the equipment or facility that uses oil or gas royalty free. The operator is responsible for obtaining all authorizations, measuring production, reporting production, and all other applicable requirements.

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;

(5) All onshore wells, tanks, compressors, and other equipment located on a Federal or Indian lease or a federally approved unit or communitized area; and

(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:

Accessible component means a component that can be reached, if necessary, by safe and proper use of portable ladders or by built-in ladders and walkways. Accessible components also include components that can be reached by the safe use of an extension on a monitoring probe.

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 reinjection and royalty-free on-site uses pursuant to subpart 3178.

Capture infrastructure means any pipelines, facilities, or other equipment (including temporary or mobile equipment) used to capture, transport, or process gas. Capture infrastructure includes, but is not limited to, equipment that compresses or liquefies natural gas, removes natural gas liquids, or generates electricity from gas.

Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations. The

combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station.

Continuous bleed means a continuous flow of pneumatic supply natural gas to a pneumatic controller.

Development oil well or development gas well means a well drilled to produce oil or gas, respectively, from an established field in which commercial quantities of hydrocarbons have been discovered and are being produced. For purposes of this subpart, the BLM will determine when a well is a development oil well or development gas well in the event of a disagreement between the BLM and the operator.

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. Unless more specific British thermal unit (Btu) values are available, a well with a gas-to-oil ratio greater than 6,000 standard cubic feet (scf) of gas per barrel of oil is a gas well. Except where gas has been re-injected into the reservoir, a mature oil well would not be reclassified as a gas well even after normal production decline has caused the GOR to increase beyond 6,000 scf of gas per barrel of oil.

High pressure flare means an open-air flare stack or flare pit designed for the combustion of natural gas leaving a pressurized production vessel (such as a separator or heater-treater) that is not a storage vessel.

Leak means a release of natural gas from a component that is not associated with normal operation of the component, when such release is:

(1) A visible hydrocarbon emission detected by use of an optical gas imaging instrument;

(2) At least 500 ppm of hydrocarbon detected using a portable analyzer or other instrument that can measure the quantity of the release; or

(3) Visible bubbles detected using soap solution.

Releases due to normal operation of equipment intended to vent as part of normal operations, such as gas-driven pneumatic controllers and safety release devices, are not considered leaks unless the releases exceed the quantities and frequencies expected during normal operations. Releases due to operator errors or equipment malfunctions or from control equipment at levels that exceed applicable regulatory

requirements, such as releases from a thief hatch left open, a leaking vapor recovery unit, or an improperly sized combustor, are considered leaks.

Leak component means any component that has the potential to leak gas and can be monitored in the manner described in sections 3179.301 through 3179.305 of this subpart, including, but not limited to, valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

Liquid hydrocarbon means chemical compounds of hydrogen and carbon atoms that exist as a liquid under the temperature and pressure at which they are measured. The term is used to refer to oil, condensate, liquefied petroleum gas (LPG), liquefied natural gas (LNG), and natural gas liquids (NGL).

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.

Pneumatic controller means an automated instrument used for maintaining a process condition such as liquid level, pressure, delta-pressure, or temperature.

Storage vessel means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic), which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback, for a period that exceeds 60 days, is considered a storage vessel under this subpart unless the storage of the recovered liquids in the vessel is governed by § 3162.3–3 of this title. For purposes of this subpart, the following are not considered storage vessels:

(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. This exclusion does not apply to well completion vessels or to storage vessels that are located at a site for at least 180 consecutive days.

(2) Process vessels such as surge control vessels, bottoms receivers, or knockout vessels.

(3) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

(4) Tanks holding hydraulic fracturing fluid prior to implementation of an approved permanent disposal plan under Onshore Oil and Gas Order No. 7.

Volatile organic compounds (VOC) has the same meaning as defined in 40 CFR 51.100(s).

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

For purposes of this subpart:

Unavoidably lost oil or gas means lost oil or gas provided that the operator has not been negligent; the operator has complied fully with applicable laws, lease terms, regulations, provisions of a previously approved operating plan, or other written orders of the BLM; and the oil or gas is:

(1) Produced oil or gas that is lost from the following operations or sources, and that cannot be recovered in the normal course of operations, where the operator has taken prudent and reasonable steps to avoid waste:

- (i) Well drilling;
- (ii) Well completion and related operations;
- (iii) Initial production tests, subject to the limitations in § 3179.103;
- (iv) Subsequent well tests, subject to the limitations in § 3179.104;
- (v) Exploratory coalbed methane well dewatering;
- (vi) Emergencies, subject to the limitations in § 3179.105;
- (vii) Normal operating losses from a natural gas-activated pneumatic controller or pump that is in compliance with § 3179.201 and § 3179.202;
- (viii) Normal operating losses from a storage vessel or other low pressure production vessel that is in compliance with § 3179.203 and § 3174.5(b);

(ix) Well venting in the course of downhole well maintenance and/or liquids unloading performed in compliance with § 3179.204;

(x) Leaks, when the operator has complied with the leak detection and repair requirements in §§ 3179.301–305;

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

(xii) Flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market, if the operator has notified the BLM through a Sundry Notice that the operator is conducting such capture; or

(2) Produced gas that is flared or vented from a well that is not connected

to a gas pipeline, provided the BLM has not determined loss of gas through such venting or flaring is otherwise avoidable.

Avoidably lost oil or gas means: Lost oil or gas that is not “unavoidably lost,” as defined in paragraph (a) of this section; waste oil that became waste oil through operator negligence; and, any “excess flared gas,” as defined in § 3179.7.

§ 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 prohibition.

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

(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 the gas is vented from a storage vessel, provided that § 3179.203 does not require the combustion or flaring of the gas;

(5) When the gas is vented during downhole well maintenance or liquids unloading activities performed in compliance with § 3179.204;

(6) When the gas is vented through a leak, provided that the operator is in full compliance with §§ 3179.301 through 3179.305;

(7) 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

(8) 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.

§ 3179.7 Gas capture requirement.

(a) Except as provided in § 3179.8, on a monthly basis, each operator must

capture for sale or use on site a volume of gas sufficient to meet the “capture percentage” requirement specified in paragraph (b) of this section.

(b) Beginning January 17, 2018, the operator’s capture percentage must equal:

(1) For each month during the period from January 17, 2018 until December 31, 2019: 85 percent;

(2) For each month during the period from January 1, 2020 until December 31, 2022: 90 percent;

(3) For each month during the period from January 1, 2023 until December 31, 2025: 95 percent; and

(4) For each month beginning January 1, 2026: 98 percent.

(c) The term “capture percentage” in this section means the “total volume of gas captured” over the “relevant area” divided by the “adjusted total volume of gas produced” over the “relevant area.”

(1) The term “total volume of gas captured” in this section means: for each month, the volume of gas sold from all of the operator’s development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term “adjusted total volume of gas produced” in this section means: the total volume of gas captured over the month *plus* the total volume of gas flared over the month from high pressure flares from all of the operator’s development oil wells that are in production in the relevant area, *minus*:

(i) For each month from January 17, 2018 until December 31, 2018: 5,400

Mcf times the total number of development oil wells “in production” in the relevant area;

(ii) For each month in calendar year 2019: 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month in calendar year 2020: 1,800 Mcf times the total number of development oil wells in production in the relevant area; and

(iv) For each month in calendar year 2021: 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month in calendar years 2022–2023: 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month in calendar year 2024: 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month in calendar year 2025 and thereafter: 750 Mcf times the total number of development oil wells in production in the relevant area.

(3) The term “relevant area” in this section means:

(i) Each of the operator's leases, units, or communitized areas; or

(ii) All of the operator's development oil wells on leases, units, and communitized areas within a county or within a State, if the operator notifies the BLM by Sundry Notice by January 1, of the relevant year that the operator has chosen to comply on a county- or State-wide basis.

(4) An oil well is considered "in production" only after the well has begun producing oil, and only during a month in which it produces gas (that is sold or flared) for 10 or more days.

(d) In any month in which the operator fails to meet the required capture percentage, the "excess flared gas" is royalty-bearing under § 3179.4. The term "excess flared gas" means:

Excess flared gas = (required capture percentage * adjusted total volume of gas produced over the relevant area) – total volume of gas captured.

(e) For purposes of calculating royalties on an operator's excess flared gas in a given month, the operator must prorate the excess flared gas across the relevant area to each lease, unit or communitized area *that reported high-pressure flaring during the month*.

§ 3179.8 Alternative capture requirement.

(a) With respect to leases issued before the effective date of this regulation, for operators choosing to comply with the capture requirement in § 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis, the BLM may approve a capture percentage lower than the applicable capture percentage specified under § 3179.7, if the operator demonstrates, and the BLM agrees, 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.

(b) To support a demonstration under paragraph (a) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well;

(3) Map(s) showing:

(i) The entire lease, unit, or communitized area and the surrounding

lands to a distance and on a scale that shows the field in which the well or wells are or will be located (if applicable), and all pipelines that could transport the gas from the well or wells;

(ii) All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases (both on Federal or Indian leases and on other properties) within the map area;

(iii) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and

(iv) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is captured;

(4) Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines;

(5) Projected costs of and the combined stream of revenues from both gas and oil production, including:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(c) In establishing an alternative capture requirement under this section, the BLM will set the capture percentage at the highest level that the BLM determines, considering the information identified in paragraph (b) of this section, will not cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

(a) The operator must estimate or measure all volumes of gas vented or flared 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 estimate such volumes, except:

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning January 17, 2018 the operator must either:

(i) *Measure* the volume of the flared gas; or

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

(2) If the BLM determines and informs the operator that the additional accuracy offered by measurement is necessary for effective implementation of this Subpart, then the operator must measure the volume of the flared gas.

(c) If measurement or calculation is required under paragraph (b) of this section for a flare that is combusting gas that is combined across multiple leases, unit PAs, or communitized areas, the operator may measure or calculate the gas at a single point at the flare, but must use an allocation method approved by the BLM to allocate the quantities of flared gas to each lease, unit PA, or communitized area.

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of the effective date of this rule, will continue in effect until January 17, 2018.

(b) The provisions of this subpart do not affect any determination made by the BLM before or after January 17, 2017, with respect to the royalty-bearing status of flaring that occurred prior to January 17, 2017.

§ 3179.11 Other waste prevention measures.

(a) If production from an oil well newly connected to a gas pipeline results or is expected to result in one or more producing wells already connected to the pipeline being forced off the pipeline, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to limit the production level from the new well until the pressure of gas production from the new well stabilizes at levels that allow transportation of gas from all wells connected to the pipeline.

(b) If gas capture capacity is not yet available on a given lease, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to delay action on an APD for that lease, or approve the APD with conditions for gas capture or limitations on production. If the lease for which an APD is submitted is not yet producing, the BLM may direct or grant a lease suspension under 43 CFR 3103.4–4.

§ 3179.12 Coordination with State regulatory authority.

To the extent that any BLM action to enforce a prohibition, limitation, or order under this subpart may adversely affect production of oil or gas that comes from non-Federal and non-Indian mineral interests, the BLM will coordinate, on a case-by-case basis, with the State regulatory authority having jurisdiction over the oil and gas production from the non-Federal and non-Indian interests.

Flaring and Venting Gas During Drilling and Production Operations

§ 3179.101 Well drilling.

(a) Except as provided in § 3179.6 of this subpart, and unless technically infeasible, gas that reaches the surface as a normal part of drilling operations must be:

- (1) Captured and sold;
- (2) Directed to a flare pit or flare stack to combust any flammable gasses;
- (3) Used in operations on the lease, unit, or communitized area; or
- (4) Injected.

(b) If gas is lost as a result of loss of well control, the BLM will make a determination of whether the loss of well control is due to operator negligence. Such gas is avoidably lost if the BLM determines that the loss of well control is due to operator negligence. The BLM will notify the operator in writing when it makes a determination that gas was lost due to operator negligence.

§ 3179.102 Well completion and related operations.

(a) Except as provided in § 3179.6, and unless technically infeasible, after a well has been hydraulically fractured or refractured, gas that reaches the surface during well completion, post-completion, and fluid recovery operations must be:

- (1) Captured and sold;
- (2) Directed to a flare pit or flare stack to combust any flammable gasses, subject to the volumetric limitations in § 3179.103(a)(3);

(3) Used in operations on the lease, unit, or communitized area; or

(4) Injected.

(b) An operator will be deemed to be in compliance with the requirements of paragraph (a) of this section, if the operator is in compliance with the requirements for control of gas from well completions established under 40 CFR part 60, subpart OOOO or subpart OOOOa or if the well is not a “well affected facility” under either of those subparts.

(c) The requirements of paragraph (a) of this section will not apply where the operator demonstrates through a Sundry Notice, and the BLM agrees, that compliance with paragraph (a) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(d) To support a demonstration under paragraph (d) of this section, the operator must submit a Sundry Notice that includes the following information:

- (1) The name, number, and location of each of the operator’s wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator’s wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (a) of this section on the lease; (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator’s projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator’s lease, unit, or communitized area, whichever is less.

§ 3179.103 Initial production testing.

(a) Gas flared during a well’s initial production test is royalty-free under §§ 3179.4(a)(1)(iii) and 3179.5(b) of this subpart until one of the following occurs:

(1) The operator determines that it has obtained adequate reservoir information for the well;

(2) 30 days have passed since the beginning of the production test, except as provided in paragraph (b) and paragraph (d) of this section;

(3) The operator has flared 20 million cubic feet (MMcf) of gas, when volumes flared under this section are combined with volumes flared under § 3179.102(a)(2), except as provided in paragraph (c) of this section; or

(4) Production begins.

(b) The BLM may extend the period specified in paragraph (a)(2) not to exceed an additional 60 days, based on testing delays caused by well or equipment problems or if there is a need for further testing to develop adequate reservoir information.

(c) The BLM may increase the limit specified in paragraph (a)(3) by up to an additional 30 million cubic feet of gas for exploratory wells in remote locations where additional testing is needed in advance of development of pipeline infrastructure.

(d) During the dewatering and initial evaluation of an exploratory coalbed methane well, the 30-day period specified in paragraph (a)(2) of this section is extended to 90 days. The BLM may approve up to two extensions of this evaluation period, of up to 90 days each.

(e) The operator must submit its request for a longer test period or increased limit under paragraphs (b), (c), or (d) of this section using a Sundry Notice.

§ 3179.104 Subsequent well tests.

During well tests subsequent to the initial production test, the operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period. The operator must request a longer period under this section using a Sundry Notice.

§ 3179.105 Emergencies.

(a) An operator may flare or, if flaring is not feasible given the emergency, vent gas royalty-free under § 3179.4(a)(vi) of this subpart during an emergency. 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. For purposes of royalty assessment, an “emergency” is limited to a short-term situation of 24 hours or less (unless the BLM agrees that the emergency conditions necessitating venting or flaring extend for a longer period) caused by an unanticipated event or failure that is out of the operator’s control and was not due to operator negligence.

(b) The following do not constitute emergencies for the purposes of royalty assessment:

- (1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;
- (2) The operator’s failure to install appropriate equipment of a sufficient

capacity to accommodate the production conditions;

(3) 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;

(4) Scheduled maintenance;

(5) A situation caused by operator negligence; or

(6) 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.

(c) 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 timeframes specified in paragraph (b) of this section.

Gas Flared or Vented From Equipment and During Well Maintenance Operations

§ 3179.201 Equipment requirements for pneumatic controllers.

(a) A pneumatic controller that uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, is subject to this section if the pneumatic controller:

(1) Has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source.

(b) The operator must replace a pneumatic controller subject to this section with a controller (including but not limited to a continuous or intermittent pneumatic controller) having a bleed rate of 6 scf per hour or less within the timeframes set forth in paragraph (d) of this section, unless:

(1) Use of a pneumatic controller with a bleed rate greater than 6 scf per hour is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, provided that the operator notifies the BLM through a Sundry Notice that describes the functional needs necessitating the use of a pneumatic controller with a bleed rate greater than 6 scf per hour;

(2) The pneumatic controller exhaust was, as of January 17, 2017 and continues to be, routed to a flare device or low-pressure combustor;

(3) The pneumatic controller exhaust is routed to processing equipment; or

(4) The operator notifies the BLM through a Sundry Notice and demonstrates, and the BLM agrees, based on the information identified in paragraph (c) of this section, that replacement of a pneumatic controller subject to paragraph (a)(1)(i) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(c) To support a demonstration under paragraph (b)(4) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (b) of this section on the lease;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(d) The operator must replace the pneumatic controller(s) no later than 1 year after the effective date of this section as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of this section, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from the effective date of this section.

(e) The operator must ensure pneumatic controllers are functioning within manufacturers' specifications.

§ 3179.202 Requirements for pneumatic diaphragm pumps.

(a) A pneumatic diaphragm pump is subject to this section if it:

(1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new, modified or reconstructed source.

(b) An operator is not required to comply with paragraphs (c) through (h), with respect to a pneumatic diaphragm pump or pumps if:

(1) The pump does not vent exhaust gas to the atmosphere; or

(2) The operator submits a Sundry Notice to the BLM documenting that the pump(s) operated on less than 90 individual days in the prior calendar year.

(c) For each pneumatic diaphragm pump subject to this section and within the timeframes set forth in paragraph (h) of this section, the operator must:

(1) Replace the pump with a zero-emissions pump, which may be an electric-powered pump; or

(2) Route the pump exhaust gas to processing equipment for capture and sale.

(d) As an alternative to compliance with paragraph (c), the operator may route the pump exhaust gas to a flare or low pressure combustor device within the timeframes set forth in paragraph (h) of this section, if the operator determines and notifies the BLM through a Sundry Notice that:

(1) Replacing the pump with a zero-emissions pump is not viable because a pneumatic pump is necessary to perform the function required; and

(2) Routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

(e) If the operator has met the criteria in paragraph (d) allowing the operator to use the compliance alternative provided in paragraph (d), but the operator has no flare or low pressure combustor device on site, or routing the exhaust gas to such a flare or low pressure combustor device would be technically infeasible, the operator need take no further action to comply with paragraphs (c) through (h).

(f) An operator that is required to replace a pump or route the exhaust gas from a pump to capture or a flare or combustion device under this section, may nonetheless be exempt from such requirement if the operator submits a Sundry Notice to the BLM that provides an economic analysis that demonstrates,

and the BLM agrees, based on the information identified in paragraph (g) of this section, that compliance with the provisions of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(g) The Sundry Notice described in paragraph (f) must include the following information:

(1) Well information must include:

(i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and

(ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with paragraphs (c) through (e) of this section on the lease;

(3) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device no later than 1 year after the effective date of this section, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from the effective date of this section, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from the effective date of this section.

(i) The operator must ensure its pneumatic diaphragm pumps are functioning within manufacturers' specifications.

§ 3179.203 Storage vessels.

(a) A storage vessel is subject to this section if the vessel:

(1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to one of those subparts if it were a new, modified or reconstructed source.

(b) Within 60 days after the effective date of this section, and within 30 days after any new source of production is added to the storage vessel, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, no later than one year after the effective date of this section, or three years if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the

lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease;

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:

(i) The operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(e) If the rate of total uncontrolled VOCs released from a storage vessel declines to 4 tpy or less for any continuous 12 month period, the requirements of paragraph (c) no longer apply.

(f) Storage vessels subject to this section must be adequately sized to accommodate the operator's production levels and equipped to meet any applicable regulatory requirements regarding tank vapors.

(g) Storage vessels subject to this section may only vent through properly functioning pressure relief devices.

§ 3179.204 Downhole well maintenance and liquids unloading.

(a) The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations.

(b) For wells equipped with a plunger lift system and/or an automated well control system, minimizing gas venting under paragraph (a) 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.

(c) Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of the Sundry Notice required under paragraph (e) of this section.

(d) For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 of this title and make them available to the BLM, upon request.

(e) The operator must notify the BLM by Sundry Notice within 30 calendar days after the first liquids unloading event by manual or automated well purging conducted after the effective date of this section. This requirement applies to each well the operator operates.

(f) The operator must notify the BLM by Sundry Notice, within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

(g) 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.

(h) Total estimated volumes vented as a result of downhole well maintenance and liquids unloading, including through the operation of plunger lifts and automated well controls, during the production month must be included in volumes reported to ONRR as vented.

Leak Detection and Repair (LDAR)

§ 3179.301 Operator responsibility.

(a) The requirements of §§ 3179.301 through 3179.305 of this subpart apply to:

(1) A site and all equipment associated with it used to produce, process, compress, treat, store, or measure natural gas (including oil wells that also produce natural gas) from or allocated to a Federal or Indian lease, unit, or communitized area, where the site is upstream of or contains the approved point of royalty measurement; and

(2) A site and all equipment operated by the operator and associated with a site used to store, measure, or dispose of produced water, where the site is located on a Federal or Indian lease.

(b) The requirements of §§ 3179.301 through 3179.305 of this subpart do not apply to:

(1) A site that contains a wellhead or wellheads and no other equipment; or

(2) A well or well equipment that has been depressurized.

(c) As prescribed in §§ 3179.302 and 3179.303 of this subpart, the operator must inspect all equipment covered under this section, as provided in paragraph (a) of this section, for gas leaks from leak components.

(d) The operator is not required to inspect or monitor a leak component that is not an accessible component.

(e) For purposes of §§ 3179.301 through 3179.305, the term “site” means a discrete area located on a lease, unit, or communitized area, and containing a wellhead, wellhead equipment, or other equipment used to produce, process, compress, treat, store, or measure natural gas or store, measure, or dispose of produced water, which is suitable for inspection in a single visit.

(f) The operator must make the first inspection of each site:

(1) Within one year of January 17, 2017 for sites that have begun production prior to January 17, 2017;

(2) Within 60 days of beginning production for sites that begin production after January 17, 2017; and

(3) Within 60 days of the date when a site that was out of service is brought back into service and re-pressurized.

(g) The operator must make subsequent inspections as prescribed in § 3179.303.

(h) All leak inspections must occur during production operations.

(i) The operator must fix identified leaks as prescribed in §§ 3179.304 and 3179.305 of this subpart. See 43 CFR 3162.5–1 for responsibility to repair oil leaks.

(j) With respect to new, modified or reconstructed equipment, an operator will be deemed to be in compliance with the requirements of this section for such equipment, if the operator is in compliance with the requirements of subpart OOOOa applicable to such equipment.

(k) For each lease, unit, or communitized area, for all covered sites and equipment not already deemed in compliance with the requirements of this section pursuant to paragraph (j), an operator may choose to satisfy the requirements of §§ 3179.301 through 3179.305 by:

(1) Treating each of those sources as if it were a collection of fugitive emissions components as defined in 40 CFR part 60 subpart OOOOa;

(2) Complying with the requirements of 40 CFR part 60 subpart OOOOa that apply to affected facility fugitive emissions components at a well site (or for compressor stations, that apply to

affected facility fugitive emissions components at a compressor station) under 40 CFR part 60, subpart OOOOa; and

(3) Notifying the BLM through a Sundry Notice regarding such compliance.

§ 3179.302 Approved instruments and methods.

(a) The operator must use one or more of the following instruments, operated according to the manufacturer’s specifications or as specified below, to detect leaks:

(1) An optical gas imaging device capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of less than or equal to 60 grams per hour from a quarter inch diameter orifice;

(2) A portable analyzer device capable of detecting leaks, such as catalytic oxidation, flame ionization, infrared absorption or photoionization devices, used for a leak detection survey conducted in compliance with the relevant sections of Method 21 at 40 CFR part 60, appendix A–7, including section 8.3.1. and assisted by audio, visual, and olfactory inspection; or

(3) A leak detection device not listed in this section that is approved by the BLM for use by any operator under § 3179.302(d) of this subpart.

(b) The person operating any of the leak detection devices listed in or approved under this section must be adequately trained in the proper use of the device.

(c) Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice to BLM that includes the following information:

(1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function;

(2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded;

(3) Records and data from laboratory and field testing, including but not limited to performance testing;

(4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart;

(5) Tracking and documentation procedures; and

(6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

(d) The BLM may approve an alternative monitoring device and associated inspection protocol, if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart.

(1) The BLM will provide public notice of a submission for approval under section 3179.302(c).

(2) The BLM may approve an alternative device and monitoring protocol for use in all or most applications, or for use on a pilot or demonstration basis under specified circumstances that limit where and for how long the device may be used.

(3) The BLM will post on the BLM Web site a list of each approved alternative monitoring device and protocol, along with any limitations on its use.

§ 3179.303 Leak detection inspection requirements for natural gas wellhead equipment and other equipment.

(a) Except as provided below or otherwise authorized in paragraph (b) of this section, the operator must inspect leak components located on and around the equipment identified in § 3179.301(a) of this subpart for leaks using a leak detection device listed under § 3179.302 according to the following parameters:

(1) The operator must inspect each site at least semi-annually, and consecutive semiannual inspections must be conducted at least 4 months apart; and

(2) The operator must inspect each compressor station at least quarterly, and consecutive quarterly inspections must be conducted at least 60 days apart.

(b) The BLM may approve an operator's request to use an alternative instrument-based leak detection program, in lieu of compliance with the requirements of § 3179.303(a), if the BLM finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a) of this subpart. The operator must submit its request for an alternative leak detection program through a Sundry Notice that includes the following information:

(1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices

that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);

(2) The proposed monitoring protocol;

(3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;

(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);

(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and

(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

(c) If the operator demonstrates, and the BLM agrees, that compliance with the requirements of §§ 3179.301–305, including the option for compliance with an alternative leak detection program under § 3179.303(b) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease, the BLM may approve an alternative leak detection program for that operator that does not meet the criterion specified in § 3179.303(b)(4), but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301–305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over

the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;

(5) The information required under § 3179.303(b), except that in lieu of the demonstration required under § 3179.303(b)(4), the operator must demonstrate that the alternative program is as effective as possible, consistent with not imposing such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

(e) For any BLM approval of an operator's use of an alternative leak detection program under subparagraph (b) or (c) of this section, the BLM will post online the alternative program approved for that operator, including, at minimum, the information required in subparagraph (b)(1), (b)(2), (b)(5), and (b)(6) of this section.

§ 3179.304 Repairing leaks.

(a) The operator must repair any leak as soon as practicable, and in no event later than 30 calendar days after discovery, unless good cause exists for repair requiring a longer period. Good cause for delay of repair exists if the repair (including replacement) is technically infeasible (including unavailability of parts that have been ordered), would require a pipeline blowdown, a compressor station shutdown, a well shut-in, or would be unsafe to conduct during operation of the unit.

(b) If there is good cause for delaying the repair beyond 30 calendar days, the operator must notify the BLM of the cause by Sundry Notice and must complete the repair at the earliest opportunity, for example during the next compressor station shutdown, well shut-in, or pipeline blowdown. In no case may the repair be delayed beyond 2 years.

(c) Not later than 30 calendar days after completion of a repair, the operator must verify the effectiveness of the repair through a follow-up inspection using one of the instruments specified or approved under § 3179.302(a) or a soap bubble test under Section 8.3.3 of EPA Method 21—Determination of Volatile Organic Compound

Leaks (40 CFR Appendix A–7 to part 60).

(d) If the repair is not effective, the operator must complete additional repairs within 15 calendar days, and conduct follow-up inspections and repairs until the leak is repaired.

(e) A follow-up inspection to verify the effectiveness of repairs does not constitute an inspection for purposes of § 3179.303.

§ 3179.305 Leak detection inspection recordkeeping and reporting.

(a) The operator must maintain the following records for the period required under § 3162.4–1 of this title and make them available to the BLM upon request:

(1) For each inspection required under § 3179.303 of this subpart, documentation of:

(i) The date of the inspection; and
(ii) The site where the inspection was conducted;

(2) The monitoring method(s) used to determine the presence of leaks;

(3) A list of leak components on which leaks were found;

(4) The date each leak was repaired; and

(5) The date and result of the follow-up inspection(s) required under § 3179.304 paragraph (c) or (d) of this subpart.

(b) By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

(1) The number of sites inspected;

(2) The total number of leaks identified, categorized by the type of component;

(3) The total number of leaks repaired;

(4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.

(5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

(c) AVO checks are not required to be documented unless they find a leak requiring repair.

State or Tribal Variances**§ 3179.401 State or tribal requests for variances from the requirements of this subpart.**

(a)(1) At the request of a State (for Federal land) or a tribe (for Indian lands), the BLM State Director may grant a variance from any provision(s) of this Subpart that would apply to all Federal leases, units, or communitized areas within a State or to all tribal leases, units, or communitized areas within that tribe's lands, or to specific fields or basins within the State or that tribe's lands, if the BLM finds that the variance would meet the criteria in paragraph (b) of this section.

(2) A State or tribal variance request must:

(i) Identify the provision(s) of this subpart from which the State or tribe is requesting the variance;

(ii) Identify the State, local, or tribal regulation(s) or rule(s) that would be applied in place of the provision(s) of this subpart;

(iii) Explain why the variance is needed; and

(iv) Demonstrate how the State, local, or tribal regulation(s) or rule(s) would perform at least equally well 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, compared to the particular provision(s) from which the State or tribe is requesting the variance.

(b) The BLM State Director, after considering all relevant factors, may approve the request for a variance, or approve it with one or more conditions, only if the BLM determines that the State, local or tribal regulation(s) or rule(s) would perform at least equally

well 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, compared to the particular provision(s) from which the State or tribe is requesting the variance, and would be consistent with the terms of the affected Federal or Indian leases and applicable statutes. The decision to grant or deny the variance will be in writing and is within the BLM's discretion. The decision on a variance request is not subject to administrative appeals under 43 CFR part 4.

(c) A variance from any particular requirement of this rule does not constitute a variance from provisions of other regulations, laws, or orders.

(d) The BLM reserves the right to rescind a variance or modify any condition of approval.

(e) If the BLM approves a variance under this section, the State or tribe that requested the variance must notify the BLM in writing in a timely manner of any substantive amendments, revisions, or other changes to the State, local or tribal regulation(s) or rule(s) to be applied under the variance.

(f) If the BLM approves a variance under this section, the State, local or tribal regulation(s) or rule(s) to be applied under the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart. The State, locality, or tribes' own authority to enforce its regulation(s) or rule(s) to be applied under the variance would not be affected by the BLM's approval of a variance.

[FR Doc. 2016–27637 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–84–P

Attachment 2

BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, **Proposed Rule**, 81 Fed. Reg. 6616 (Feb. 8, 2016)
(excerpts)



FEDERAL REGISTER

Vol. 81

Monday,

No. 25

February 8, 2016

Part II

Department of the Interior

Bureau of Land Management

43 CFR Parts 3100, 3160, and 3170

Waste Prevention, Production Subject to Royalties, and Resource
Conservation; Proposed Rule

DEPARTMENT OF THE INTERIOR**Bureau of Land Management****43 CFR Parts 3100, 3160, and 3170****[15X.LLWO300000.L13100000.NB00000]****RIN 1004-AE14****Waste Prevention, Production Subject to Royalties, and Resource Conservation****AGENCY:** Bureau of Land Management, Interior.**ACTION:** Proposed rule.

SUMMARY: The Bureau of Land Management (BLM) is proposing new regulations to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian leases. The regulations would also clarify when produced gas lost through venting, flaring, or leaks is subject to royalties, and when oil and gas production used on site would be royalty-free. These proposed regulations would be codified at new 43 CFR subparts 3178 and 3179. They would replace the existing provisions related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A), which are over 3 decades old.

DATES: Send your comments on this proposed rule to the BLM on or before April 8, 2016. The BLM is not obligated to consider any comments received after this date in making its decision on the final rule.

As explained later, the proposed rule would establish new information collection requirements that must be approved by the Office of Management and Budget (OMB). If you wish to comment on the information collection requirements in this proposed rule, please note that the OMB is required to make a decision concerning the collection of information contained in this proposed rule between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment to the OMB on the proposed information collection requirements is best assured of having its full effect if the OMB receives it by March 9, 2016.

ADDRESSES: *Mail:* U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134 LM, 1849 C St. NW., Washington, DC 20240, Attention: 1004-AE14. *Personal or messenger delivery:* 20 M Street SE., Room 2134LM, Washington, DC 20003.

Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions at this Web site.

Comments on the information collection burdens: *Fax:* Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Desk Officer for the Department of the Interior, fax 202-395-5806. *Electronic mail:* OIRA_Submission@omb.eop.gov. Please indicate "Attention: OMB Control Number 1004-XXXX," regardless of the method used to submit comments on the information collection burdens. If you submit comments on the information collection burdens, you should provide the BLM with a copy, at one of the addresses shown earlier in this section, so that we can summarize all written comments and address them in the final rule preamble.

FOR FURTHER INFORMATION CONTACT: Eric Jones at the BLM Moab Field Office, 82 East Dogwood Ave., Moab, UT 84532, or by telephone at 435-259-2117; or Timothy Spisak at the BLM Washington Office, 20 M Street SE., Room 2134LM, Washington, DC 20003, or by telephone at 202-912-7311. For questions relating to regulatory process issues, contact Faith Bremner at 202-912-7441.

Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to contact these individuals during normal business hours. FIRS is available 24 hours a day, 7 days a week to leave a message or question with these individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:**I. Executive Summary****A. Background**

This proposed regulation aims to reduce the waste of natural gas from mineral leases administered by the BLM. This gas is lost during oil and gas production activities through flaring or venting of the gas, and equipment leaks. While oil and gas production technology has advanced dramatically in recent years, the BLM's requirements to minimize waste of gas have not been updated in over 30 years. The Mineral Leasing Act of 1920 (MLA) requires the BLM to ensure that lessees "use all reasonable precautions to prevent waste of oil or gas developed in the land" 30 U.S.C. 225. The BLM believes there are economical, cost-effective, and reasonable measures that operators should take to minimize waste, which will enhance our nation's natural gas supplies, boost royalty receipts for American taxpayers, tribes,

and States, and reduce environmental damage from venting and flaring.

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. Domestic production from over 100,000 Federal onshore oil and gas wells accounts for 11 percent of the Nation's natural gas supply and 5 percent of its oil. In Fiscal Year (FY) 2014, operators produced 204.6 million barrels (bbl) of oil, 2 trillion cubic feet (Tcf) of natural gas, and 3.1 billion gallons of natural gas liquids (NGLs) from onshore Federal and Indian oil and gas leases. The production value of this oil and gas exceeded \$27.2 billion and generated approximately \$3.1 billion in royalties.¹

Over the past decade, the United States has experienced a dramatic increase in oil and natural gas production due to technological advances, such as hydraulic fracturing combined with directional and/or horizontal drilling. This boost in production has brought many benefits in the form of expanded and more secure domestic oil and gas supplies, lower oil and gas prices, increased economic activity, and greater royalty revenues for Federal, State and tribal governments. At the same time, the American public has not benefited from the full potential of this increased production, due to the flaring, venting, and leakage of significant quantities of gas during the production process. According to data reported to the Office of Natural Resources Revenue (ONRR), Federal and Indian onshore lessees and operators lost 375 billion cubic feet (Bcf) of natural gas between 2009 and 2014—enough gas to serve about 5.1 million households for a year, assuming 2009 usage levels.²

Flaring, venting, and leaks waste a valuable resource that could be put to productive use, and deprive American taxpayers, tribes, and States of royalty revenues. In addition, the wasted gas may harm local communities and

¹ Office of Natural Resources Revenue (ONRR), Statistical Information, <http://statistics.onrr.gov/ReportTool.aspx> using Sales Year—FY2014—Federal Onshore—All States Sales Value and Revenue for Oil, NGL, and Gas products as of December 2, 2015.

² The Energy Information Administration (EIA), Trends in U.S. Residential Natural Gas Consumption, http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtren/residcon/ngtrenresidcon.pdf (reporting that in 2009, U.S. residential consumption was approximately 74 Mcf per household with natural gas service).

surrounding areas through visual and noise impacts from flaring, and regional and global air pollution problems of smog, particulate matter, toxic air pollution (such as benzene, a carcinogen) and climate change. The primary constituent of natural gas is methane, and increases in gas wasted through venting, flaring or leaks contribute to increases in atmospheric methane levels. Methane is an especially powerful greenhouse gas (GHG), with climate impacts roughly 25 times those of CO₂, if measured over a 100-year period, or 86 times those of CO₂, if measured over a 20-year period.³ Thus, measures to conserve gas and avoid waste may significantly benefit local communities, public health, and the environment.

The BLM oversees oil and gas activities under the authority of a variety of laws, including the MLA, the Mineral Leasing Act for Acquired Lands of 1947 (MLAAL), the Federal Oil and Gas Royalty Management Act (FOGRMA), the Federal Land Policy and Management Act of 1976 (FLPMA), the Indian Mineral Leasing Act of 1938 (IMLA), the Indian Mineral Development Act of 1982 (IMDA), and the Act of March 3, 1909.⁴ In particular, the MLA requires the BLM to ensure that lessees “use all reasonable precautions to prevent waste of oil or gas developed in the land”⁵ This proposal would replace current requirements related to flaring, venting, and royalty-free use of production, which are contained in NTL–4A; amend the BLM’s oil and gas regulations at 43 CFR part 3160; and add new subparts 3178 and 3179. It would apply to all Federal and Indian (other than Osage Tribe) onshore oil and gas leases as well as leases and business agreements entered into by tribes (including IMDA agreements), as consistent with those agreements and with principles of Federal Indian law.⁶

Several oversight reviews, including reviews by the Inspector General of the Department of the Interior and the Government Accountability Office (GAO), have raised concerns about waste of gas, found that the BLM’s existing requirements regarding venting and flaring are insufficient, expressed concerns about the “lack of price flexibility in royalty rates,”⁷ and identified concerns about royalty-free use of gas. These reports recommended that the BLM update its regulations to address waste prevention, afford flexibility in rate setting, and clarify policies regarding royalty-free, on-site use of oil and gas. With respect to waste, the GAO found that “around 40 percent of natural gas estimated to be vented and flared on onshore Federal leases could be economically captured with currently available control technologies.”⁸ The GAO recommended that the BLM reduce venting and flaring of gas by revising its regulations “to make it clear that technologies should be used where they can economically capture sources of vented and flared gas, including gas from liquid unloading, well completions, pneumatic valves, and glycol dehydrators.”⁹ The GAO further recommended that the BLM consider expanded use of infrared cameras to identify opportunities to minimize lost gas.¹⁰

This proposed rule would align the BLM’s royalty rate for new competitive Federal oil and gas leases with the regime envisioned by the MLA, which specifies “a rate of *not less than* 12.5 percent in amount or value of the production removed or sold from the lease.”¹¹ In addition, the proposed rule would update the BLM’s existing NTL–4A requirements related to venting, flaring, and royalty-free use of natural gas from onshore Federal and Indian leases. Under NTL–4A, operators must apply to the BLM on a case-by-case basis for approval to flare royalty-free, based on economic criteria. We propose to reduce the need for case-by-case applications by clarifying when flared

or vented natural gas is subject to royalties. Further, with respect to venting and flaring of natural gas, we propose to: Prohibit venting, except in certain limited circumstances; limit the rate of routine flaring at development oil wells;¹² require operators to detect and repair leaks; and mandate reductions in venting from: Pneumatic controllers and pneumatic pumps that operate by releasing natural gas; storage vessels; activities to unload liquids from a well; and well drilling, completion, and testing activities. Finally, the proposed rule would require operators to submit gas capture plans with their Applications for Permits to Drill new wells.

The BLM has engaged in substantial stakeholder outreach in the course of developing this proposal. In 2014, the BLM conducted a series of forums to consult with tribal governments and solicit stakeholder views to inform the development of this proposed rule, with public meetings (some of which were livestreamed) in Colorado, New Mexico, North Dakota, and Washington, DC.¹³ For each forum, we held a tribal outreach session in the morning and a public outreach session in the afternoon. We also accepted informal comments generated as a result of the public/tribal outreach sessions. Since those meetings, we have continued to consult with stakeholders throughout the rule development process, including numerous meetings and calls with State representatives, individual companies, trade associations, and non-governmental organizations (NGOs). We have also received and considered many reports, peer-reviewed studies, and letters from stakeholders providing information and views on what the BLM should propose.

The BLM conducted additional outreach with States where there is extensive oil and gas production from BLM-administered leases. We have carefully reviewed State regulations and guidance and consulted with State regulatory bodies that oversee aspects of oil and gas production to discuss their requirements and practices. The BLM intends to continue close interaction with State and tribal regulators.

The BLM is not the only entity to recognize the need to reduce flaring and

³ See Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis, Chapter 8, *Anthropogenic and Natural Radiative Forcing*, at 714 (Table 8.7), available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.

⁴ Mineral Leasing Act, 30 U.S.C. 188–287; Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351–360; Federal Oil and Gas Royalty Management Act, 30 U.S.C. 1701–1758; Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701–1785; Indian Mineral Leasing Act of 1938, 25 U.S.C. 396a–g; Indian Mineral Development Act of 1982, 25 U.S.C. 2101–2108; Act of March 3, 1909, 25 U.S.C. 396.

⁵ 30 U.S.C. 225.

⁶ Key statutes underpinning this proposed regulation contain exceptions for the Osage Tribe. Specifically, the Osage Tribe is exempted from the application of both the Indian Mineral Leasing Act and the Federal Oil and Gas Royalty Management

Act, 25 U.S.C. 396f; 43 U.S.C. 1702(3), 1702(4). The leasing of Osage Reservation lands for oil and gas mining is subject to special Bureau of Indian Affairs regulations contained in 43 CFR part 226.

⁷ GAO, Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment, GAO–08–691, September 2008, 6.

⁸ GAO, Federal Oil and Gas Leases: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases, GAO–11–34, (Oct. 2010), 2.

⁹ *Ibid.* at 34.

¹⁰ *Ibid.* at 34.

¹¹ 30 U.S.C. 226(b)(1)(A) (emphasis added); *see also* 30 U.S.C. 352 (applying the MLA’s leasing provisions to leases on acquired land).

¹² “Development oil well” or “development gas well” means a well drilled to produce oil or gas, respectively, from an established field in which hydrocarbons have been discovered and from which they are being produced at a profit or expected profit.

¹³ Further information can be found at the BLM oil and gas program’s outreach-events page: http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.html.

Attachment 3

Senate Discussion of Congressional Review Act Resolution on Waste Prevention Rule, 163 Cong. Rec. S2851 (May 10, 2017) (excerpts)



United States
of America

Congressional Record

PROCEEDINGS AND DEBATES OF THE 115th CONGRESS, FIRST SESSION

Vol. 163

WASHINGTON, WEDNESDAY, MAY 10, 2017

No. 81

House of Representatives

The House was not in session today. Its next meeting will be held on Thursday, May 11, 2017, at 2 p.m.

Senate

WEDNESDAY, MAY 10, 2017

The Senate met at 9:30 a.m. and was called to order by the President pro tempore (Mr. HATCH).

PRAYER

The Chaplain, Dr. Barry C. Black, offered the following prayer:

Let us pray.

Almighty God, You are our strength and always ready to help us. Uphold our lawmakers with Your powerful hands. Lord, let Your presence be felt by them as You guide them in these challenging times.

Give them the wisdom to do Your will, finding nourishment and reassurance in their fellowship with You. Help them to do their best in life's daylight, for the night comes when no one can work.

Empower our Senators to grow in grace and in a deeper knowledge of You. May they continue to prosper and be in health, even as their souls prosper. Inspire them to be strong and full of courage, ever confident in Your grace and mercy.

We pray in Your strong Name. Amen.

PLEDGE OF ALLEGIANCE

The President pro tempore led the Pledge of Allegiance, as follows:

I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

RECOGNITION OF THE MAJORITY LEADER

The PRESIDING OFFICER (Mr. PAUL). The majority leader is recognized.

LEGISLATIVE SESSION

PROVIDING FOR CONGRESSIONAL DISAPPROVAL OF A RULE OF THE BUREAU OF LAND MANAGEMENT—MOTION TO PROCEED

Mr. MCCONNELL. Mr. President, I move to proceed to H.J. Res. 36.

The PRESIDING OFFICER. The clerk will report the motion.

The legislative clerk read as follows:

The Senator from Kentucky [Mr. MCCONNELL] moves to proceed to H.J. Res. 36, a joint resolution providing for congressional disapproval under chapter 8 of title 5, United States Code, of the final rule of the Bureau of Land Management relating to "Waste Prevention, Production Subject to Royalties, and Resource Conservation."

Mr. MCCONNELL. Mr. President, I ask unanimous consent the Democratic leader and I be allowed to give our leader remarks at this time.

The PRESIDING OFFICER. Without objection, it is so ordered.

WELCOMING KENTUCKY VETERANS TO OUR NATION'S CAPITAL

Mr. MCCONNELL. Mr. President, today it is my privilege to welcome a distinguished group of Kentuckians to our Nation's Capital. Because of the incredible work of the Honor Flight Program, over 80 World War II, Korea, and Vietnam veterans from across my home State will travel to Washington.

Here they will see the memorials built to honor their service.

The Bluegrass Chapter Honor Flight has brought hundreds of veterans, most of them Kentuckians, to Washington for this purpose. Despite the significant logistical and financial planning that goes into these trips, Honor Flight works to make sure veterans have the opportunity to travel at no cost to themselves.

The program organizes travel and food for these veterans, many of whom would never be able to visit our Nation's Capital or see the memorials at all without Honor Flight.

The national monuments built on the Mall pay tribute to those who sacrificed for the cause of freedom. I wish to add my voice to those who welcome these veterans and thank them for their service to our country.

HEALTHCARE LEGISLATION

Mr. MCCONNELL. Mr. President, on another matter, I am glad to see many of our Democratic friends here with us today. Yesterday they sent me a letter indicating they want to participate as we work on legislation that can bring relief from ObamaCare. In that letter, they acknowledged the need to "improve and reform the health care system."

After 8 years of defending this failing law and its higher costs, reduced choices, and dropped coverage, I am glad to hear that Senate Democrats are finally willing to concede that the status quo is simply unsustainable. I appreciate their willingness to acknowledge that ObamaCare hasn't lived up to its promises.

• This "bullet" symbol identifies statements or insertions which are not spoken by a Member of the Senate on the floor.



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S2851

If Mr. Rosenstein is true to his word, that he believes this investigation must be “fair, free, thorough and politically independent,” if he believes, as I do, that the American people must be able to have faith in the impartiality of this investigation, he must appoint a special prosecutor and get his investigation out of the hands of the FBI and far away from the heavy hand of this administration.

Mr. Rosenstein has the authority to appoint a special prosecutor right now. He needs no congressional authorization. This would simply be a step that he could take, as outlined in the Department of Justice guidelines and in a law passed after Watergate, to get an independently minded prosecutor who would be insulated from various pressures.

A special prosecutor is not subject to day-to-day supervision by the Attorney General or anyone else at the Justice Department. That means the special prosecutor would have much greater latitude in whom he can subpoena, which questions they can ask, and how to conduct an investigation. The special prosecutor can only be removed for good cause, such as misconduct, not to quash the investigation.

Third, there is built-in congressional oversight. Congress is notified whenever a special counsel is appointed, removed, or has finished with the investigation. The appointment of a special prosecutor would be a welcome step in the right direction, but it is not the only action that should be taken.

There are a great many outstanding questions about the circumstances of Director Comey’s dismissal, the status of the executive branch investigation into the Trump campaign ties to Russia, and what the future holds for these investigations.

So I will be requesting that the majority leader call a closed, and if necessary, classified, all-Senators briefing, with the Attorney General separately at which, and the Deputy Attorney General separately, at which they can be asked questions.

Some of the questions: Why was Attorney General Sessions, who had recused himself from the Russia investigations, able to influence the firing of the man conducting the Russia investigation? Did Deputy Attorney General Rosenstein act on his own or at the direction of his superiors or the White House? Are reports that the President has been searching for a rationale to fire the FBI Director for weeks true? Was Director Comey’s investigation making significant progress in a direction that would cause political damage for the White House? Why didn’t the President wait for the Inspector General’s investigation into Director Comey’s handling of the Clinton email investigation to conclude before making his decision to fire him? Was this really about something else?

No doubt, we will have an opportunity to question Mr. Comey, now a

private citizen, about what happened, but we need to hear from this administration about what happened and why, and what is going to happen next. That is why, again, I am requesting that the majority leader call a closed, and if necessary, classified, all-Senators briefing with the Attorney General and the Deputy Attorney General separately, at which they can be asked these questions.

I hope the majority leader agrees with me that we need to get to the bottom of this and get a handle on all the facts so that we can grapple with them. I remind him and my Republican friends that nothing less is at stake than the American people’s faith in our criminal justice system and the integrity of the executive branch of our government.

I yield the floor.

The PRESIDING OFFICER. The question is on agreeing to the motion to proceed.

Mr. McCONNELL. Mr. President, I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second?

There appears to be a sufficient second.

The clerk will call the roll.

The legislative clerk called the roll.

The result was announced—yeas 49, nays 51, as follows:

[Rollcall Vote No. 125 Leg.]

YEAS—49

Alexander	Flake	Portman
Barrasso	Gardner	Risch
Blunt	Grassley	Roberts
Boozman	Hatch	Rounds
Burr	Heller	Rubio
Capito	Hoeven	Sasse
Cassidy	Inhofe	Scott
Cochran	Isakson	Shelby
Corker	Johnson	Strange
Cornyn	Kennedy	Sullivan
Cotton	Lankford	Thune
Crapo	Lee	Tillis
Cruz	McConnell	Toomey
Daines	Moran	Wicker
Enzi	Murkowski	Young
Ernst	Paul	
Fischer	Perdue	

NAYS—51

Baldwin	Gillibrand	Murphy
Bennet	Graham	Murray
Blumenthal	Harris	Nelson
Booker	Hassan	Peters
Brown	Heinrich	Reed
Cantwell	Heitkamp	Sanders
Cardin	Hirono	Schatz
Carper	Kaine	Schumer
Casey	King	Shaheen
Collins	Klobuchar	Stabenow
Cooms	Leahy	Tester
Cortez Masto	Manchin	Udall
Donnelly	Markey	Van Hollen
Duckworth	McCain	Warner
Durbin	McCaskill	Warren
Feinstein	Menendez	Whitehouse
Franken	Merkley	Wyden

The motion was rejected.

The PRESIDING OFFICER (Mr. COTTON). The majority leader.

EXECUTIVE SESSION

EXECUTIVE CALENDAR

Mr. McCONNELL. Mr. President, I move to proceed to executive session to consider Calendar No. 52, Robert

Lighthizer to be United States Trade Representative.

The PRESIDING OFFICER. The question is on agreeing to the motion.

The motion was agreed to.

The PRESIDING OFFICER. The clerk will report the nomination.

The senior assistant legislative clerk read the nomination of Robert Lighthizer, of Florida, to be United States Trade Representative, with the rank of Ambassador Extraordinary and Plenipotentiary.

The PRESIDING OFFICER. The majority leader.

UNANIMOUS CONSENT REQUEST—AUTHORITY FOR COMMITTEES TO MEET

Mr. McCONNELL. Mr. President, I have 13 requests for committees to meet during today’s session of the Senate. They include the Armed Services Committee briefing on capabilities to counter Russian influence in cyberspace, a Banking Committee hearing on North Korea, and a Homeland Security Committee hearing on cyber threats facing America. These committees and all the other committees are doing important work; therefore, I ask unanimous consent that the 13 committees be allowed to meet.

The PRESIDING OFFICER. Is there objection?

Mr. DURBIN addressed the Chair.

The PRESIDING OFFICER. The assistant Democratic leader.

Mr. DURBIN. Reserving the right to object, because of the decision last night of the President of the United States to terminate the Director of the FBI and the questions that has raised, we gathered together—the Democratic Senators—on the floor and listened as our leader at least suggested a path for us to follow as an institution facing this constitutional question. We believe it is timely, and as a result of that, I object.

The PRESIDING OFFICER. Objection is heard.

The Senator from Washington.

CONGRESSIONAL REVIEW ACT RESOLUTION

Ms. CANTWELL. Mr. President, I come to speak against the Congressional Review Act resolution to over-run an important rule that has been put in place to protect the American taxpayer and to protect the health of American citizens.

For almost 100 years, the Federal Government has regulated undue waste in oil and gas fields. The story of oil and gas waste is as old as the story of oil and gas.

Early oil gushers, like Spindletop in Texas, revealed two things about oil as an emerging source of energy: First, there was a huge amount of it. Second, without rules in place, it could be easily wasted. That is why, way back in 1915, Attorney General Thomas Gregory issued a report to the public about this issue. Gregory wrote that the law at the time allowed oil companies to “occupy and operate any number of tracts of public oil land without restraint upon the quantities of oil produced or the methods of production and

without rendering to the . . . government anything in return.” One can imagine that concern. Gregory went on to point out that “the incentives to speculative occupation, negligent and wasteful operation, and excess production become obvious.”

Some of my colleagues who are not on the Energy and Natural Resources Committee may not be familiar with the law Congress passed after Attorney General Gregory put his finger on the waste problem. The Mineral Leasing Act of 1920 established our modern leasing program for oil and natural gas. More than anything else, the leasing act enshrined the principle that the public should benefit from mineral production on public lands. This seems like a no-brainer today, but it took over a decade of debate to pass the leasing act.

One of the main parts of the leasing act was a requirement to avoid wasting oil and gas. There are many environmental reasons to avoid wasting this resource, but let's be clear: It was dollar signs that led to the waste provision. Overproduction would glut the market and damage the oil reserves, and wasted oil provided no return to the owners—the taxpayers.

The leasing act is still the law, and the law says that oil and gas operators must “use all reasonable precautions to prevent waste of oil or gas developed in the land.” The law says that Federal leases must include “a provision that such rules . . . for the prevention of undue waste as may be prescribed by [the] Secretary shall be observed.” The BLM's methane rule is entirely in keeping with that history. The rule says that the outdated 1979 version of this rule needed to be updated.

The rule was put in place before the fracking took place that revolutionized the industry, before the shale plays opened, and before infrared imaging became commonplace. What has not changed since 1920 is that oil and gas companies cannot waste public resources on public lands.

When equipment is leaky or old, oil and gas producers vent natural gas directly to the sky. If they do capture the gas but have nowhere to send it, the gas just gets burned on site. This venting and flaring causes a big problem. This photograph shows that actual problem happening.

I am sure there are many citizens across the United States who have witnessed this and have been concerned about what pollutants might be entering the atmosphere. The hazardous health impacts of this are tremendous—benzene, which causes cancer—and I will talk more about that in a minute.

The amount of venting that is happening is enough gas to supply 6.2 million American households for a year. According to more recent research, even higher estimates are coming in. That is enough gas to supply every home in the interior West—Idaho, Montana, Wyoming, Colorado, Utah, Ne-

vada, Arizona, New Mexico—with gas left over for the Dakotas. Every home. The amount of gas we waste every single year on Federal lands would be enough to supply Tennessee forever, and there could be some left over for West Virginia.

On Federal lands, operators have more than doubled how much gas they have flared and wasted between 2009 and today, and that is the practice we are trying to stop. Under the old 1979 rule, operators had to apply to BLM every time they wanted to vent or flare. In practice, BLM, because they did not have a new rule in place, basically just had a “yes” or “no” answer. In 2014, the Bureau of Land Management received 25 times more applications to vent or flare than in 2005.

What was happening was that we as a Federal Government were failing in our responding and updating the act to make sure producers were living up to the intent of that earlier law, so government watchdogs got on the issue and started calling for a solution.

The Government Accountability Office and the Interior Department's inspector general concluded that the Bureau of Land Management needed to change these rules. The Government Accountability Office concluded in 2010 that about 40 percent of wasted natural gas on Federal leases could be economically captured with existing technology.

Some States had already taken action into their own hands. In Colorado, the State passed a strong venting and leak detection regulation, which really became the model for the national Bureau of Land Management, and oil and gas production has since increased.

There was a notion that in making sure that waste was not promulgated—that it somehow was going to slow down the industry, but it has been just the opposite. In fact, some of my colleagues and some ranchers and others in these areas have talked about how the United States should lead the way on new technology to stop the leakage and to prevent these flarings as a way for the industry to show technology leadership.

Also, in North Dakota, a Republican administration passed flaring restrictions after years of there being uncontrolled flaring in the Bakken. States took action, and various watchdog groups and investigators here in Washington said the Bureau of Land Management needed to act. The BLM finally acted, and its final rule is similar to the North Dakota approach. So States have already been leaders on this methane issue. But this patchwork of State rules is not what we need; we need a Federal baseline.

It is bad enough that wasted natural gas will never have an economic use. Making the issue worse is that every cubic foot that is vented or flared is another cubic foot we have to produce somewhere else. What does that mean for our wallets? Research by ICF International shows that \$330 million of nat-

ural gas is wasted intentionally on Federal lands every year. Over time, the public is losing billions of dollars. Over a decade, the lost royalties that have been calculated by the Government Accountability Office on wasted gas will add up to \$230 million. While the final amount, of course, depends on the price of natural gas, we cannot afford to give up this revenue.

A vote for disapproving the resolution will let the oil and gas industry roll back the clock to 1979. This resolution lets people continue avoiding giving the taxpayers their fair share. It is another example of special interests trumping the public interest.

Even worse than the taxpayer issue, though, is that wasted natural gas harms public health. That is why those States took action. One of the most prevailing problems on this issue is in the Four Corners States, and my colleague from New Mexico will be talking about this shortly.

When one looks at the entire United States on a map that shows the amount of waste of flaring, one can see all of this yellow coloring in the Midwest—in Ohio—and in other States, but one can see the hotspot in the Four Corners area. The Four Corners States have tried to take action—places like Colorado and New Mexico, with, obviously, Arizona and Utah being affected—because wasted natural gas basically releases a volatile organic compound. It creates ozone and smog. It also can make people sick. This pollution worsens asthma, emphysema, and increases the risk of premature death. It releases toxins, like benzene, that cause cancer. And the methane, the main constituent of the natural gas, is 25 times more powerful at trapping heat than carbon dioxide.

That is why a recent analysis by the Clean Air Task Force found that over 9 million people are exposed to these dangerous levels of air pollution from oil and gas production. That is why my colleague Senator BENNET of Colorado has been such an outspoken advocate of keeping this rule in place. It is because that corner of Colorado has faced so many impacts that they want to make sure their citizens are protected.

With the rolling back of this Federal rule, basically what one would be saying is that it is OK to continue this level of pollution—an anathema to what the people of Colorado have been asking for.

Oil and gas pollution can make rural areas seem like the middle of a city. A few years ago, NASA scientists discovered a massive cloud of methane over the Four Corners region. This is the highest concentration of methane in the Nation. After aerial surveys, NASA found that over half of the methane is from natural gas equipment, including tanks, wells, pipelines, and processing plants. The ozone pollution in the Four Corners is almost as bad on some days as in the city of Los Angeles—a city with 300 times as many people.

As bad as methane waste is on Federal land, this rule only targets 10 percent of that wasted by the oil and gas industry because we are targeting Federal land. It only affects a small minority of the oil and gas production. Ninety-five percent of that production is in other areas. But this rule is important to put in place because we cannot ignore the impacts on pollution, and we cannot ignore the costs to our Federal lands.

The Bureau of Land Management compared the costs and benefits of this rule without factoring in the reductions in ozone, particulate matter, or smog, and the BLM ignored the value of reducing carcinogens. We know that this particular conservative analysis shows a net benefit of between \$46 million and \$204 million each year. This makes economic sense to implement.

Under the very obsolete 1979 regulation that the methane rule replaces, oil and gas operators had to apply to the BLM whenever they wanted to vent or flare natural gas. The old rules also had no specific equipment requirements in place.

As I said earlier, the world has changed dramatically since 1979 when it comes to oil and gas production. The new rule takes commonsense approaches to stepping up our attempts to reduce this waste and prohibit the venting, except in emergencies and in some circumstances. They estimate that it will cut the venting by 35 percent. It also sets capture targets for flaring, allowing operators flexibility on how to meet those targets. The BLM estimates they will reduce flaring by 49 percent.

The rule requires operators to inspect their wells and their equipment. People may have heard unbelievable stories from California about a huge methane leakage that caused unbelievable amounts of damage. We know that we want the best equipment, that we want the best detection, and that we want a strong rule in place to stop wasting this natural gas, give the taxpayers a fair deal, and protect the American people from harmful levels of pollution. That is why we want this rule to stay in place.

With America's increased natural gas production, now is not the time to take a very solid rule off the books—a rule that protects the American people. The technology to conduct these inspections already exists. Infrared imaging and other technology has been sold commercially for decades. What we are really saying is that people just do not want to spend the money to implement them.

Fourth, the rule requires operators to replace leaky equipment, like the pneumatic controllers and pumps, and it is trying to make sure that we eliminate the methane waste.

So the final rule is in step with what the Government Accountability Office told us 7 years ago—that about 40 percent of the waste can be captured economically. BLM took those best prac-

tices and State examples, as I mentioned, including North Dakota and Colorado, and implemented a new rule.

It includes Colorado's venting and inspection and retrofitting requirements, and regulation 7. It includes North Dakota's capture targets for flared gas in it, and it includes Wyoming's venting and inspection requirements in the Upper Green River Basin.

Not only did the Bureau of Land Management adopt the best practices of States, but it also included a variance provision in the final rule. Any State or Tribe with equally effective regulation in place can minimize their methane waste and can apply for a variance from the Department of the Interior. There is a lot of flexibility there, I would say, for States that are trying to lead the way. But based on this careful approach, the final rule and its benefits are estimated, as I said earlier, to be \$204 million a year.

So the public in these States that are most affected certainly want this rule. As more Americans understand the level of natural gas production and the wasteful venting that continues to take place, they want this rule in place as well.

Passing the resolution just after a few hours of debate and trying to undermine this rule would go against the 330,000 public comments that were collected during the process of establishing this rule. So we certainly don't want to overturn what was a very long and elaborate process to put this very important rule in place.

Proposing more waste is not going to solve our economic challenges. Proposing more pollution is not a solution. We know that in the most recent annual poll by Colorado College, western voters said that 81 percent of them supported making sure that the Bureau of Land Management had strong methane rules. My colleagues appear not to understand how much the public wants to get this implemented. I hope my colleagues will continue to support the effort to turn down the Congressional Review Act resolution and instead keep this very, very important public health and economic taxpayer solution on the books.

As Mark Boling, an executive with Southwestern Energy, a major natural gas producer, said, this resolution and trying to turn back the rule is "a huge mistake." He pointed out that it could have "unintended consequences for oil and gas technology."

So I want to make sure this rule stays in place. Let's keep a strong rule on the books, as I said, for the health of the American people and to make sure that taxpayers get a fair deal with these companies that are producing on Federal lands.

I thank the Chair.

I yield to my colleague from New Mexico, who has been outspoken on this issue in making sure that Congress addresses the flaring and leakage of natural gas.

The PRESIDING OFFICER (Mr. YOUNG). The Senator from New Mexico.

Mr. UDALL. Mr. President, if I sound a little hoarse, it is because my allergies are acting up, but I feel just fine.

Let me start out by thanking Senator CANTWELL. Her leadership on the Energy and Natural Resources Committee is pretty incredible.

For this Congress, I think this is the very first CRA that has been turned down. We have been voting on many of them since the Congress came back in session in January. This is the very first victory we have had on denying the CRA.

When we talk about what a CRA does, it is a very blunt instrument that has only been used once until this Congress, and what it does is just blow out an entire area of the law. So if you talk about this BLM methane rule and you have a part of the law that says the government shall try to prevent waste, well, if you blow that provision of the law out, the agency can do nothing until we get to the point that the Congress acts again, and sometimes we move very slowly.

So I really appreciate the leadership of Senator CANTWELL, and I want to thank her so much and all of the members of her committee, in particular, Senator HEINRICH. Senator HEINRICH serves on that committee and has been very outspoken on this rule, and I believe his leadership has always been acknowledged by Senator CANTWELL as well.

This issue that we are debating and that we had this good vote on is about three things. First of all, it is about the waste of a natural resource that the public and the Tribes own. Let's talk about the resource here for a second. We are talking about, to start with, natural gas. So when we think of natural gas, as many people know, what we are talking about is when you turn on your stove, and it is a natural gas stove, that is how we cook our food. Many houses run and heat on natural gas, and we know now that many of our powerplants are converting over to natural gas because it is a very good fuel in terms of lowering carbon emissions. So natural gas is a big part of our energy economy. It is actually going up as coal is going down.

Look at this photograph which shows more than \$330 million of natural gas wasted. This just shows us the huge power of natural gas. What was happening is that natural gas was being flared. This depicts the top at one of these oil and gas operations. They are just burning that up. So rather than that energy being used at home or used in industry, it is just being wasted. On top of that, we know it has a massive climate impact.

This was a very commonsense rule. I think the thing people should understand is that several Western States, including Colorado and Wyoming, passed an almost identical rule to deal with this issue. All BLM tried to do was to use that common sense from the West, where it had already happened in several States, and put it in place for

the Nation. So this is a good, solid rule, and it is a commonsense rule, and I think it prevents waste, just like it was laid out to do.

The second point is that when we talk about this issue, it is about job creation. What we are talking about here is, when you have this kind of waste, how do you prevent the waste? Well, the thing we have seen in New Mexico that occurs is that many of these oil and gas industries reach out to people who maybe haven't been in business, and they say: How do we prevent this waste? Well, actually, we use infrared to focus on the oil and gas operations and all of their pipes, and we can detect the natural gas waste, and then we can go about actually fixing it at all the various fittings and places where that happens. Guess what. A lot of jobs are created in that process. This is growing in New Mexico, growing in Colorado, and with this rule in place, over time, it is going to continue to grow. So this is going to create some small businesses. It has already created small businesses, and it is going to be pretty dramatic on that front.

The third thing that we are here about has to do with public health. Obviously, if you are venting all of this—and as Senator CANTWELL showed, you have a methane cloud the size of Delaware over the Four Corners area; so it is really impacting New Mexico, Colorado, Utah, and Arizona—what is the impact in terms of methane? Well, we know there are serious public health impacts. We know that asthma is impacted by this, as well as other respiratory diseases—the kinds of things that occur on a regular basis as we have that kind of methane pollution that goes into the air. As I mentioned just a little bit earlier, methane is a very, very powerful and potent greenhouse gas. So we know that by releasing it—the flaring that we talked about—we are wasting it and we are putting that methane into the atmosphere. We are also adding to the greenhouse gases, which are warming the planet and creating, in the Southwest, as we know, catastrophic forest fires, extreme weather events, impacts on water, and impacts on agriculture. So we know that it is here now and that the Western States are in the bull's-eye.

So let me just say that these are three commonsense things that we have done today by asserting this rule. We are preventing waste, we are moving job creation, and we are acting on the part of public health.

When we have a victory like this, there are just so many people that should be congratulated—people that pulled together. First of all, just to start, Senator CANTWELL just finished, and she is our ranking member on the committee. Senator BENNET, I think, was actually the 51st, and I hope he tweeted that out. When he came over, we were at 50, and it went to 51. So he and all of the Democrats hung together on this—every single one of the Demo-

crats. It just shows that when we get Democratic unity—and with our Independents—we come right up on about 48 votes. If we get a couple of Republicans—if we work in a bipartisan way—to come with us, we can have a big impact. Who are the Republicans who voted with us? They should be called out and congratulated for having courage, for having common sense, and for stepping forward. I would just like to say about my three friends on the Republican side—Senator MCCAIN, Senator COLLINS, and Senator GRAHAM—thank you so much for stepping forward and seeing the commonsense nature of this issue and standing to make sure that we didn't head in the wrong direction on this.

Thinking a little bit about some of the groups that voted with us and worked with us and helped us and advised us out in the field, the groups that stood with us shoulder to shoulder include the Environmental Defense Fund, the Wilderness Society, and the Ceres business group. We had a lot of businesses—understanding that this is a business issue and a job creator—like Taxpayers for Common Sense. We don't always see them weigh in on regulations like this. The Center for Methane Emissions Solutions, and so many environmental and public health groups, including Earth Justice, the National Parks Association, the League of Conservation Voters, the Sierra Club, and many, many others, including the Western Environmental Law Center, are also a part of that.

I thought we should talk for a second about—in addition to all of those groups—some other groups that joined us, and they are these medical and public health groups that abhor natural gas waste. Look at all of these groups in addition to the ones I mentioned. These are people who have real expertise in public health: Allergy & Asthma Network, American Lung Association, American Public Health Association, Center for Climate Change and Health, and Physicians for Social Responsibility. I have always been impressed by that group. Here you have docs who are stepping up, wanting to be socially responsible on things. There are many wonderful physicians like that in New Mexico and across the Nation, and they have organized themselves as PSR. We also have the Public Health Institute and the National Medical Association.

So we have a lot of these medical and public health groups that have stepped forward and said: We are not going to waste natural gas. Let me thank them.

Also, the Western Environmental Law Center, which is in New Mexico and works on this issue, has been a pretty incredible group, hard-working, headed up by a gentleman by the name of Doug Meiklejohn, and Doug really makes a difference on all of these issues in New Mexico and, in particular, really helped us out here.

I would be remiss if I didn't mention some of the groups that have pulled together—groups of ranchers, Tribes, and

public health groups. We just talked about the public health groups. But there is one rancher in New Mexico whose sole focus has been this issue. His name is Don Schreiber. He appeared at a press conference yesterday here in Washington with Senator BENNET and Senator CANTWELL. I was at my own press conference, and more or less as a Senator there, speaking out on methane. I know if Don is ever at a press conference, he is going to say what I would have said on this methane issue, which is that we have to prevent waste. Don Schreiber is his name. He is a rancher from Northwestern New Mexico. He is actually up under that methane cloud, and he talks about his family and his ranching operation and what the impact is.

We also have Tribes in that area. I want to congratulate and thank President Begaye of the Navajo Nation. He sent in a very persuasive statement and made a very strong statement against wasting natural gas.

We also had the Western Organization of Resource Councils. This is another group that has been very active in the West. They stepped forward on this natural gas waste issue, and we are incredibly thankful to them.

Also, we never get anything done around here on the Senate floor without our wonderful staff. I want to thank Jonathan Black, who has worked on this issue for many years. Jonathan actually worked for Senator Bingaman on the Energy and Natural Resources Committee, so he brought a lot of that expertise. We have a young man from the office sitting here with me on the floor, Sean MacDougall, helping me with these charts. Sean is a congressional fellow in our office on loan from the Bureau of Land Management, and he has brought a lot of knowledge to the table.

Mr. President, to reiterate, I oppose H.J. Res. 36—the Congressional Review Act resolution to disapprove the Bureau of Land Management's methane and waste prevention rule. BLM's rule prevents the unnecessary waste of a public resource and makes sure New Mexicans—and all American taxpayers—get fair value in return for commercial use of that public resource.

The rule requires oil and gas facilities operating on public and Indian lands to prevent unnecessary flaring, venting, and leaking of methane. Rigorous analysis shows that the overall benefits to the American public far outweigh the costs, and technology to implement the rule is readily available and cost-effective to industry.

The current BLM rules on natural gas waste are over 35 years old, issued in 1979. Federal watchdog agencies have been issuing reports for almost a decade—recommending that the BLM update its rules and prevent waste wherever possible.

With new technologies like horizontal drilling, the amount of gas wasted in recent years has increased significantly. From 2009 to 2013, the total

amount of natural gas flared on BLM land doubled.

We throw the phrase “common sense” around a lot these days when we talk about laws or regulations we like, but the BLM’s waste prevention rule really is a commonsense rule.

Over the past 4 months, Congress has repealed 13 Federal rules using CRA authority. These regulations involved years of work by the agencies and were developed transparently through the public notice and comment process. Congress overturned these rules without public input, hearings, or debate.

I understand repeal of “burdensome” Federal regulations is a strong rallying cry, and I wholeheartedly agree that Federal regulations should not be overly burdensome.

The BLM’s waste prevention rule is good for the American public, and the cost to industry is de minimus. In fact, there is benefit to industry from increased production and the resulting increase in revenues. The BLM’s rule is one rule that should not get swept up in the political tide of CRA repeal.

Congress has spoken loud and clear that the BLM has an obligation to prevent waste of oil and gas on public and tribal lands starting with the 1920 Mineral Leasing Act.

That act—governing leases on BLM lands—requires every lease to contain provisions for “the prevention of undue waste. . . .”

Federal law obligates the BLM to make sure the public gets a fair return from profits generated by oil and gas leases on public lands. The 1976 Federal Lands Policy and Management Act requires that “the United States receive fair market value of the use of the public lands and their resources. . . .”

The 1982 Federal Oil and Gas Royalty Management Act obligates these same oil and gas companies to pay the Federal Government “royalty payments on oil or gas lost or wasted.”

Congress has determined that oil and gas companies extracting resources on public lands can’t waste the resource, and, if they do, they must pay fair market value to the American public.

Despite Congress’s prohibition against waste, tremendous volumes of oil and gas under BLM lease are wasted each year through flaring, venting, and leaks.

Operators do not always use best practices when they flare and vent. Some even abuse the practice. As a result, operators vent and flare significant amounts of oil and gas that are economically recoverable.

Natural gas is colorless and odorless, so you can’t see leaks with the naked eye. Operators do not always use best practices to detect and prevent leaks either, but we now have readily available technology, like infrared cameras, that quickly and easily identify leaks. We don’t let leaky pipes in our homes go unattended. For-profit companies shouldn’t be given a free pass to let gas leak on public lands.

Oil and gas operators under BLM leases reported flaring and venting 462

billion cubic feet of natural gas from 2009 through 2015. That is enough gas to supply over 6.2 million households for one year. That is every household in the States of New Mexico, Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

An independent study by ICF International estimates that, in 2013 alone, 65 billion cubic feet of gas was wasted. That includes over 18 billion cubic feet from tribal lands, with an estimated loss to the American public of \$27 million in royalties.

The amount of oil and gas waste is rising dramatically. Oil and gas operators report flaring has increased over 1,000 percent between 2009 and 2015. The number of applications to vent or flare royalty free has gone from 50 in 2005 to 622 in 2011 to 1,246 in 2014.

The BLM’s outdated rules and the loss of royalties caught the attention of the Government Accountability Office years ago.

A 2010 GAO report estimated that approximately 128 billion cubic feet of natural gas was vented or flared from Federal leases in 2008 and that approximately 50 billion cubic feet was economically recoverable. That recoverable gas represented \$23 million in lost royalties in 1 year.

The 2010 GAO report highlighted real world experiences, where operators made money by putting in technologies to recover gas instead of venting or flaring. One large producer in the San Juan Basin installed equipment that reduced venting by 99 percent. That same company reported increased revenues of \$5.8 million, from a \$1.2 million investment in technology to reduce emissions during well completion. That is money well spent.

The San Juan Basin is one of the oldest and most productive gas-producing areas in the United States. It lies in the Four Corners area, where my home State of New Mexico touches Arizona, Colorado, and Utah.

That area is home to a methane “hot spot,” with the highest concentration of methane in the Nation.

In 2010, the GAO pointed out what was obvious, that the BLM’s decades-old guidance did not take account of current technology to reduce venting and flaring. The GAO recommended that the BLM update its regulations to address the avoidable loss of gas on public lands.

There are other GAO reports, but I will talk about one more.

In 2016, the GAO issued a report entitled, “Interior Could Do More to Account for and Manage Natural Gas Emissions.” It detailed the BLM’s highly inconsistent practices approving royalty-free venting and flaring incidents.

Looking at a random sample of operator requests to vent or flare from fiscal year 2014, the GAO found that fully 90 percent had inadequate documentation, but, despite the bad documentation, the BLM approved 70 percent of the requests, almost half of which were

for royalty-free venting or flaring. That is a lot of Federal, State, and tribal royalties lost based on incomplete records.

The GAO is charged with helping Congress make sure Federal agencies are doing the best job they can for the American public. We should not disregard repeated GAO recommendations—spanning almost a decade—for the BLM to modernize its oil and gas royalty program.

If we pass this disapproval, the BLM is foreclosed from updating these rules. In the face of the GAO report after another telling us that the BLM must do better, that would be just irresponsible to taxpayers.

Secretary Zinke has been charged to review the BLM rule as part of the President’s “Energy Independence” Executive order. If, after review, the Secretary concludes that the BLM rule should be modified, the Department of the Interior can proceed to amend the rule through the public rulemaking process, but, when we have been told time and time again that there is unnecessary waste and the BLM rules need updating, Congress should allow the DOI review to go forward and not permanently prevent DOI from considering how to prevent unnecessary waste by oil and gas facilities.

Let’s not forget that half the royalties from Federal leases go to State treasuries. States use these royalties for schools, roads, and infrastructure projects.

My home State of New Mexico has the second highest number of acres under BLM lease in the country, after Wyoming—over 4.6 million acres—and the second highest number of BLM oil and gas leases—over 8,000.

New Mexico has a lot at stake in the BLM’s waste prevention rule.

ICF International estimates that the natural gas in New Mexico that could have been captured and marketed under the BLM’s rule between 2009 and 2013 would have been worth more than \$100 million a year and would have produced \$43 million in royalty payments for our State.

In New Mexico, those royalty payments are used in part for educational materials in the public schools. That is textbooks, digital materials, science supplies, art supplies, and accessible materials for students with disabilities. That \$43 million would have gone a long way for New Mexico schoolkids.

Many of you may be aware of the methane “hot spot” over the Four Corners area that I talked about earlier. The hot spot covers about 2,500 square miles—the size of the State of Delaware.

This single cloud comprises nearly 10 percent of all methane emissions from natural gas in the United States. The San Juan Basin is ranked No. 1 in per capita methane pollution in the U.S.

Scientists have been researching the sources of this methane plume. When the hot spot was discovered, oil and gas companies claimed the high concentrations were caused by “natural”

sources, but researchers have found out this is wrong. They have identified 250 sources—the majority of which are oil and gas operations and include gas wells, storage tanks, pipelines, and processing plants.

Of the four States, only Colorado has robust rules to prevent methane emissions. Colorado's rules are proving successful, and the BLM incorporated provisions from those rules.

It is important for my State that the BLM's waste prevention rule stay on the books. We don't need that methane hot spot in our backyard and New Mexico sorely needs the royalty payments owed.

The BLM's rule is also important for tribes. As vice-chair of the Senate Committee on Indian Affairs, I work to make sure the Federal Government upholds all its trust responsibilities. One of those responsibilities is making sure tribes get the royalties they are entitled to from private oil and gas companies operating on Indian lands.

Tribes receive 100 percent of the royalties from the oil and gas leases on their lands. The BLM estimates tribes will get up to \$12 million more in royalties over 10 years under the rule. That is money we have a trust responsibility to make sure tribes get.

The BLM estimates the rule would reduce emissions of volatile organic compounds, or VOCs, by 310,000 tons over 10 years on tribal lands. Reducing VOC emissions means cleaner air for tribes.

The Federal Government will not be upholding its trust responsibility if the BLM rule is repealed.

I have a statement from the Navajo Nation president, Russell Begaye, detailing the reasons the tribe supports the BLM's rule. President Begaye states, "It would be contrary to BLM's trust responsibility to allow Navajo Nation resources to be unreasonably wasted, particularly when best practices can be cost-effectively employed and are not overly burdensome to industry."

A really important cobenefit of the rule is protection of public health. Toxic chemicals like benzene—harmful to the public, carcinogenic—are emitted with methane. Reducing methane emissions will reduce these toxic emissions.

Similarly, other VOCs—that contribute to ozone or smog—are emitted with methane. Reducing methane emissions will reduce smog formation. Smog irritates the respiratory system, reduces lung function, and aggravates asthma—among other public health problems.

Without the Rule, not only do we lose royalties for hospitals, schools, and roads, but citizens pay more for their hospital visits and healthcare.

Industry arguments against the rule do not hold up.

Industry argues the rule costs too much and will kill jobs.

That is not true. Here are the facts.

First, the rule will result in increased production and increased reve-

nues, and the technologies and practices to prevent waste are economically feasible.

In fact, many oil and gas operations will see a net benefit. Like the company in the San Juan Basin that got almost a fivefold return on its investment.

The BLM conducted an exhaustive cost-benefit analysis of the rule.

Looking at the average cost to a company to implement the rule, the BLM found that profits would be reduced by only 0.15 percent, a bit over one-tenth of 1 percent. That is minimal.

That cost does not even count the savings to industry from increased production and increased revenues.

In fact, the BLM found that net economic benefits to industry could be as much as \$47 million per year—taking into account the savings from increased revenues.

If the benefits of reducing methane are included, the overall net benefit is huge—up to \$204 million annually.

That number does not even count the public health benefits from reduced ozone and hazardous pollutants.

Opponents have exaggerated the costs to industry, and they have not taken into account the benefits to States, tribes, and the public.

Finally, there is no evidence anywhere that the rule will cost even one job.

In fact, the Bureau of Labor Statistics has recorded 2,700 new jobs since November 2016, while the price of oil has stayed flat. This month, the Baker Hughes rig count showed 300 more rigs drilling for oil and gas since the BLM rule came into effect. This is an increase in production of over 50 percent.

Colorado issued the most comprehensive rules to date to decrease methane emissions, and not only have no jobs been lost, but jobs have been gained as new companies and technologies focused on inspection, monitoring, and compliance have opened. These are good American jobs.

In New Mexico, we have at least 11 new companies in the methane mitigation business, and I want to see that number grow.

Even if the rule were to force an operator to shut down, that company would be eligible for exemption from the requirements.

So job loss is not an issue.

Second, we hear that the BLM's rule is duplicative and unnecessary, that the EPA's methane rule is adequate, and that States are already regulating methane.

Here are the facts.

The EPA's rule only applies to new and modified oil and gas operations. The BLM's rule applies also to existing facilities. This is a big difference between the rules. Making sure all current operations prevent waste is critical to making sure taxpayers get the benefit owed.

The BLM's rule covers areas not covered by other Federal or State rules, like wasteful routine flaring.

Not all States have passed methane waste prevention rules. My home State of New Mexico has not. New Mexico needs to reduce methane emissions.

Also, States and tribes may get a variance if they have similar rules that achieve the same results.

The BLM worked with the EPA and States to ensure the rule works for them and does not impose conflicting or redundant requirements.

Just last week, the EPA announced a 90-day delay on its own methane control rule based on industry's objections to regulation. More concerning, the EPA withdrew its information request from industry that was intended to help EPA determine how to address methane emissions from existing oil and gas sources. These EPA actions mean the BLM rule is needed more than ever to reduce natural gas waste and the proper collection of royalties.

Third, we hear that the BLM lacks the authority to regulate methane waste.

In January of this year, the U.S. District Court of Wyoming denied a preliminary injunction to block the rule. The court found that the rule "unambiguously" was within the BLM's authority.

The Congressional Review Act is a blunt tool, and it is the wrong tool for Congress to use to change provisions in BLM's methane waste prevention rule. Disapproval under the CRA would permanently block the BLM's authority to reform outdated rules, reforms that the GAO began recommending almost a decade ago.

The BLM should not be prevented from making sure the Federal Government meets its obligations to States, tribes, and taxpayers—the obligation not to waste public resources and to make sure the public gets a fair return on the for-profit use of public resources.

For these reasons, I oppose the CRA to disapprove the BLM's waste prevention rule.

Just as a final word to summarize why we are here and why this victory was so important and why we need to hang tough on this: This could be changed if they decide to do another vote or if they try to do another piece of legislation or something. The core of this needs to be protected. We are here because we don't want to waste our natural resources, which belong to the people of America and belong to the Tribes. We want to create jobs, which is what this BLM methane waste prevention rule does. It creates jobs, and it protects the public health.

I believe we are going to have a couple other speakers. I know Senator HEINRICH is going to be here.

Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. MORAN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MORAN. Mr. President, I ask unanimous consent to speak as in morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

AUTHORITY FOR COMMITTEES TO MEET REQUEST

Mr. MORAN. Mr. President, all of us, every Member of the U.S. Senate, all 100 of us, whether we are Republicans or Democrats, want the U.S. Senate to function. We ought to want the Senate to be able to accomplish its work. It is a challenge all the time but learning what transpired this morning on the Senate floor, in my view, reaches another low for the Senate.

It is hard to explain, but it takes unanimous consent for committees to meet while the Senate is in session, and that is a request that is made on an ongoing basis when the Senate convenes, and it happened again this morning. Almost without exception, it is routine. The rules require that 2 hours after the Senate convenes, no committee can then meet unless there is agreement. So the majority leader today requested that the unanimous consent be granted, just like in almost every other day in the Senate, but what was different today was an objection was raised by the minority whip, and apparently the explanation is it is because of the firing of the Director of the FBI last night.

Now, how the Senate is functioning or not functioning seems to me to be unrelated to what transpired last night relating to the Director of the FBI. So in this place, where we are trying to do the people's work and make decisions and do good for America, the spillover over partisan politics, the spillover about playing a political game, highlighting a point has now caused the Senate to not be able to conduct hearings today. In fact, the minority Members of the Senate were instructed, requested, on their own volition—all left the hearings that were already being conducted this morning in protest over what transpired last night.

I am of a view that this is a diverse country. I am of a view that people of the U.S. Senate represent folks from across the country with different philosophies, different political parties, different people, different backgrounds. We all bring to the Senate a set of characteristics that are different, one from another, but I have great regard and respect for every Senator's point of view, and I would say that every Senator ought to have the ability to express their views on behalf of their constituents, but we can only do that if we allow the Senate to function.

I was on the Senate floor not long ago praising the fact that we finally were successful in the appropriations process; that we passed the fiscal year 2017 appropriations bill. For too long, the appropriations process has been broken down, and we have conducted business in the United States by continuing resolution. I thought we were

back on a path in which there was enough agreement, respect among Members, enough setting aside of partisan differences to actually accomplish legislation. I was pleased that we did that, but today we fall back into the pattern of when something happens we want to make a political point. We then obstruct the ability of others in the Senate to conduct their work, to express their opinion, to gather the information they need.

This came to my attention—what transpired today—because this afternoon at 2:30 was scheduled a hearing by the Senate Veterans' Affairs Committee. That hearing has absolutely nothing to do with the FBI. We have the new Secretary of the Department of Veterans Affairs scheduled to testify about the Department's plan for modifications to a program called Choice that is important to me, my constituents, and to the veterans of Kansas. I was so pleased the hearing had been scheduled, and I was looking forward to the questioning and having a conversation with the Secretary of the Department of Veterans Affairs about how to make this system of Choice work for veterans who live in Kansas, from the rural side of our State to the suburban and urban side of our State, but because of a pique of anger, political posturing, and partisanship, the hearing is apparently no longer able to take place. The hearing this morning, which could only last for an hour and a half and which I guess the minority members walked out—seemed to me, at least sounded like, to be things that would be very important for us to pursue.

The Armed Services Subcommittee on Emerging Threats and Capabilities was to have a closed briefing this morning. The Homeland Security Committee was to examine cyber threats facing America, focusing on an overview of the cyber threat landscape. The list is significant in the things that we ought to be paying attention to, and yet, because of an objection, those hearings will not take place or were shortened or disrupted by only one party's participation.

I am not here trying to create further partisanship between Republicans and Democrats. I am here trying to remind ourselves that there is value in allowing cooperation between the minority and majority, not for our own benefits but for the benefit of the country and the citizens we represent. Everything does not have to be partisan. Everything does not have to be political.

Today we see the Senate sliding back into the habit of making things that we have really nothing to do with and weren't the cause of taking place—apparently to make a political point and perhaps to score votes for support in a political way. We ought to all, as U.S. Senators, respect the opinions, values, and the positions of others, but we do that in a setting in which we all come together, not in which we cancel meet-

ings as a result of a political statement.

I appreciate the opportunity to express my concerns about what has transpired and to ask for us to go back to the time in which we worked together on a daily basis and we don't use an excuse to shut down the committee hearing process.

With that, Mr. President, I yield the floor.

I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant bill clerk proceeded to call the roll.

Mr. KING. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

AMERICAN HEALTH CARE ACT

Mr. KING. Mr. President, I rise to speak briefly about the American Health Care Act that was passed last week in the House of Representatives. I thought a lot about this bill over the past few days and over the weekend. I talked to friends, I read about it, and I did as much analysis as I possibly could, given the fact that we don't have a Congressional Budget Office analysis of this complicated and important piece of legislation. I have concluded that it is the most ill-conceived, damaging, and downright cruel piece of legislation that I have ever seen a legislative body pass in my adult life.

It drastically cuts support for Americans' ability to obtain health insurance. In Maine—again, as near as we can tell, because we don't have the final analysis—the preliminary numbers are this. Maine, under the Affordable Care Act, through the payments to individuals and other support, is receiving about \$354 million a year coming via the Affordable Care Act. After this bill, it appears that the number is \$80 million a year—\$364 million to \$80 million. That is almost an 80-percent cut. No one can tell me the people of Maine are going to have better healthcare with an 80-percent cut in the funds going to support their ability to do so. It just doesn't make sense.

The way this bill works is, it is a tax on the elderly. Under the Affordable Care Act, there is a rule that policies for older people, 50, 55, 60, cannot exceed three times the rate of policies for younger people. We all know that younger people's policies do in fact cost somewhat less because they tend to be healthier, but the rule was no more than 3 to 1. Under the bill that was passed by the House last week, it is now 5 to 1. That is an elder tax, and Maine happens to be the most elder State in the United States. If they had taken a blank sheet of paper and said: We want to write a bill to harm the people of Maine, it would have been this bill.

There also is a massive cut to Medicaid—\$880 billion—and the sponsors to this bill claim that they are helping the deficit. How are they doing it? By

Attachment 4

Clean Air Task Force et al., **Comments:** Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements (Nov. 6, 2017)

BUREAU OF LAND MANAGEMENT

**Waste Prevention, Production
Subject to Royalties, and
Resource Conservation; Delay
and Suspension of Certain
Requirements**

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Docket ID No. BLM-2017-0002-0001

*Via regulations.gov
November 6, 2017*

We submit these comments on behalf of Clean Air Task Force, Center for Biological Diversity, Citizens for a Healthy Community, Earthjustice, Earthworks, Environmental Defense Fund, Environmental Law and Policy Center, Montana Environmental Information Center, Natural Resources Defense Council, San Juan Citizens Alliance, Sierra Club, Western Environmental Law Center, Western Organization of Resource Councils, Wilderness Workshop, and Wyoming Outdoor Council (together, “Joint Environmental Commenters”). On behalf of our millions of members across the nation, who are deeply concerned about the waste of natural gas and its associated harmful air pollution, we strongly oppose the Bureau of Land Management’s (“BLM”) proposal to suspend duly-promulgated, commonsense waste prevention measures on public and tribal lands. We respectfully urge BLM to withdraw this misguided action.

I. Introduction

In November of 2016, in response to the urgent and widely-documented problem of wasted natural gas on public and tribal lands, BLM adopted the final rule entitled Waste Prevention, Production Subject to Royalties, and Resource Conservation (“Waste Prevention Rule” or “Rule”), 81 Fed. Reg. 83,008 (Nov. 18, 2016). The Rule was the product of an extensive public process, which included stakeholder engagement hearings and over 330,000 public comments. In response to this input, BLM updated its decades-old waste prevention guidance by requiring operators to use low-cost, widely-available technologies to help capture wasted natural gas—best practices that had long been reflected in certain state standards and used by leading companies.

BLM projected that these much-needed updates would deliver significant benefits, reducing wasteful venting of natural gas by 35%, reducing flaring by 49%, and preventing harmful air pollution. On account of these substantial benefits, recent bipartisan surveys found that over 80% of Westerners support the Waste Prevention Rule, which includes support from state and local elected officials, faith communities, the sporting community, investors, health and environmental groups and others. Colorado College State of the Rockies Project, *2017 Western*

States Survey 18 (2017), <https://www.coloradocollege.edu/other/stateoftherockies/conservationinthwest/2017/2017WesternStatesInterviewSchedule.pdf>.¹

BLM has now proposed to suspend or delay the requirements in the Waste Prevention Rule. 82 Fed. Reg. 46,458 (Oct. 5, 2017) (“Suspension Proposal”). The Suspension Proposal is, in every way, the opposite of the statutorily-grounded, carefully considered, transparent, and inclusive process that led to the adoption of the Waste Prevention Rule. And, as BLM itself recognizes, the Suspension Proposal will result in significant waste of natural gas and additional emissions of harmful air pollution. Our comments describe in greater detail the Suspension Proposal’s pervasive legal and technical flaws, including the following key deficiencies:

- BLM lacks either implicit or explicit legal authority to suspend standards for the purpose of reconsidering them (Section III, pp. 5-7).
- While BLM can reconsider its past policy decisions, any regulatory revision must be grounded in the statute and set forth good reasons supporting the change. In contravention of its statutory authority under the Mineral Leasing Act, the Suspension Proposal would increase waste and BLM has not (and could not) provide good reasons supporting this unlawful action (Section III, pp. 7-12).
- BLM’s process upends administrative law rules and undermines the very purpose of notice-and-comment rulemaking by seeking to suspend standards now while purporting to consider and explain the reasons for halting the Rule later. (Section III, pp. 13-15).
- The Suspension Proposal represents the third time Secretary Zinke has attempted to suspend or invalidate the Waste Prevention Rule, underscoring that the proposal lacks the fair mindedness and objectivity required to account for the full spectrum of costs and benefits demanded of federal rulemakings that should advance the public interest. (Section III, pp. 15-18).
- BLM has arbitrarily and unlawfully assessed the cost and benefits of its proposal, using flawed metrics including an “interim” social cost of methane (Section VI, pp. 22-25), and otherwise adopting an analytical framework that arbitrarily undervalues the benefits of the Waste Prevention Rule (Section V, pp. 25-32).
- BLM has violated the National Environmental Policy Act by predetermining the outcome of its assessment, failing to consider a reasonable range of alternatives,

¹ This document, and all subsequently cited documents, have been submitted as exhibits to BLM, via hand-delivery to BLM’s Washington Office, 20 M Street SE., Room 2134 LM, Washington, DC 20003. Due to their voluminous size, it was not possible to submit the exhibits via Regulations.gov. However, Joint Environmental Commenters fully intend for BLM to consider and include all of these documents in the Administrative Record for this rulemaking. A full list of exhibits is included as Appendix 1 to these comments.

failing to complete an Environmental Impact Statement, and failing to take a “hard look” at the impacts of its proposal (Section VI, pp. 32-51).

The sections below set forth each of these flaws in greater detail.

II. The Waste Prevention Rule Addresses the Severe Problem of Waste of Publicly-Owned Resources and Attendant Pollution, and the Suspension Proposal Will Have Substantial Costs for the American Public.

Under the Mineral Leasing Act (“MLA”), BLM has a duty to ensure that oil and gas companies developing publicly-owned natural resources “use all reasonable precautions to prevent waste of oil or gas.” 30 U.S.C. § 225. Pursuant to this provision and other statutory mandates, BLM has long regulated venting and flaring of natural gas produced on public lands and determined when operators must pay royalties to the federal government for wasted gas. *See* 81 Fed. Reg. at 83,017 (discussing BLM regulation under Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases (“NTL-4A”), 44 Fed. Reg. 76,600 (Dec. 27, 1979)).

In 2008 and 2010, the Government Accountability Office (“GAO”) acknowledged the pervasive problem of preventable natural gas waste and associated air pollution on public and tribal lands and an outdated royalty system in need of “comprehensive reassessment.” 81 Fed. Reg. 83,008, 83,010 (Nov. 18, 2016) (citing GAO, Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment, GAO-08-691, September 2008; GAO, Federal Oil and Gas Leases: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases, GAO-11-34, (Oct. 2010) (“GAO 2010”)). BLM had not updated its regulations addressing natural gas waste and royalty payments in more than three decades. 81 Fed. Reg. at 83,017. Meanwhile, technology has advanced: new drilling and gas capture technologies fundamentally have changed the amount of gas that can be cost-effectively captured and put to use. *Id.*

BLM estimates that federal oil and gas lessees vented or flared more than 462 billion cubic feet of natural gas on public and tribal lands between 2009 and 2015. *Id.* at 83,015. This wasted gas is vented or flared from wells and associated equipment—sometimes by design, but also often due to improper functioning. And that figure does not even account for the significant amount of gas that leaks from wells and storage site equipment. *Id.* Much of this wasted gas could be captured or avoided using proven technologies and sold to consumers. *Id.* at 83,009–11. Doing so would save millions of dollars in lost royalty revenues for federal, state, and tribal governments that could be used for schools, health care, and infrastructure. *Id.* at 83,014.

Venting, flaring, and leaking natural gas into the air also harms human health and the environment. Natural gas is composed of methane, a powerful greenhouse gas, as well as other smog-forming volatile organic compounds (“VOCs”) and carcinogenic hazardous air pollutants, which cause serious negative public health effects. *Id.* at 83,009, 83,014–15. In addition to preventing waste, BLM also has an obligation to account for these harms under the Federal Land Policy and Management Act (“FLPMA”), which directs BLM to manage public lands “in a manner that will protect ... environmental, [and] air and atmospheric ... values,” 43 U.S.C.

§ 1701(a)(8), and to “take any action necessary to prevent unnecessary or undue degradation” of public lands, 43 U.S.C. § 1732(b).

In 2014, BLM commenced a rulemaking process to study and address wasteful venting, flaring, and leaking of natural gas on public and tribal lands. 81 Fed. Reg. at 83,010. After soliciting extensive stakeholder feedback from states, tribes, companies, trade organizations, non-governmental organizations, and citizens, BLM issued a proposed rule in early 2016. *Id.* BLM held public meetings and tribal consultations on the proposed rule in Farmington, New Mexico; Oklahoma City, Oklahoma; Denver, Colorado; and Dickinson, North Dakota, and considered more than 330,000 public comments before finalizing the Waste Prevention Rule on November 18, 2016. *Id.* The Rule became effective on January 17, 2017. *Id.* at 83,008.

Among the Rule’s requirements, operators must capture and sell natural gas that would otherwise be vented or flared, based on a phased-in capture target that tightens from 85% in January 2018 to 98% by 2026. *Id.* at 83,082 (discussing 43 C.F.R. § 3179.6(b)). Operators also must comply with specific performance standards to reduce waste from some types of equipment, like storage tanks and pneumatic controllers, periodically inspect their facilities for leaks, and promptly repair any leaks identified. *Id.* at 83,010–11.

BLM estimated that the Rule would reduce wasteful venting of natural gas by 35% and wasteful flaring by 49%, and increase royalties by up to \$14 million per year. *Id.* at 83,014. BLM found that the Rule would significantly benefit local communities, public health and the environment by increasing royalty revenues, reducing the visual and noise impacts associated with flaring, protecting communities from smog and carcinogenic air toxic emissions, and reducing greenhouse gas pollution. *Id.* BLM concluded that the Waste Prevention Rule’s benefits outweighed its costs “by a significant margin,” with “net benefits ranging from \$46 million to \$199 million per year.” *Id.* at 83,104. These gains are large compared to the modest average annual compliance costs, which average out to just \$55,800 per year for even the smallest companies, or only around 0.15% of per company profits. *Id.*

The Suspension Proposal, by contrast, fails to fulfill BLM’s obligations, pursuant to the MLA and FLPMA, to responsibly oversee oil and gas drilling on public lands and to serve the public interest by preventing the waste of natural gas and its associated harmful pollution. Instead of preventing waste, BLM’s Suspension Proposal will enable it, reducing royalties received by the federal, state, local, and tribal governments. BLM itself acknowledges that the Suspension Proposal will allow a significant waste of natural gas—around 9.0 billion cubic feet (bcf) during the year that the Rule is delayed; and a corresponding reduction in royalties of \$2.61 million during that time. BLM, Regulatory Impact Analysis for the Proposed Rule to Suspend or Delay Certain Requirements of the 2016 Waste Prevention Rule (“2017 RIA”) at 40, 42 (Sep. 27, 2017).

This wasted natural gas will have harmful impacts on public health and the environment, with BLM projecting additional emissions of 175,000 tons of methane and 250,000 tons of VOCs during the year of the Suspension Proposal. *Id.* at 31. Methane is a powerful short-term climate forcer with over 80 times the global warming potential of carbon dioxide on a mass basis over the first 20-years after it is emitted, or over 36 times the global warming potential of carbon

dioxide on a mass basis over 100 years. The methane emissions associated with BLM's Suspension Proposal are the climate equivalent of adding 850,000 passenger vehicles at the 100-year global warming potential. VOCs react with nitrogen oxides to form ground-level ozone, or smog, which causes respiratory and cardiovascular illnesses, exacerbates asthma, and can result in premature death. Other hazardous air pollutants emitted by oil and gas sources include benzene, a known human carcinogen.

While BLM's Suspension Proposal will have broad negative impacts on public welfare through wasted natural gas, diminished royalties, and harmful impacts for public health and the environment, it will have little impact on the oil and gas industry. Indeed, BLM concluded that the suspension would not "substantially alter the investment or employment decisions of firms." *Id.* at 44.

III. BLM's Suspension Proposal is Unlawful.

Although BLM claims the Suspension Proposal is "straightforward" and "narrow," that is not the case. 82 Fed. Reg. at 46,460. BLM's Suspension Proposal would substantively amend the Waste Prevention Rule by rescinding regulations that are already in place and delaying significant, future compliance deadlines for one year. It would allow for waste of public natural gas, decrease royalty payments to states, tribes, and local communities, and pollute the air. It also represents a dramatic change in position from BLM's prior conclusion that the suspended requirements represent "reasonable precautions to prevent waste of oil or gas," 30 U.S.C. § 225, as required by the MLA.

Furthermore, BLM concedes that the delay is a critical step in its plan to rescind or revise the Waste Prevention Rule. Yet, the extent of BLM's explanation for this substantive revision is that "it is currently reviewing the [Rule] and wants to avoid imposing temporary or permanent costs on operators for requirements that may be rescinded or significantly revised in the near future." 82 Fed. Reg. at 46,458. BLM has no explicit or inherent authority to suspend a rule solely for the purpose of reconsidering it. While BLM can, of course, revise its regulations, the agency must act in a manner consistent with the statute, and BLM has not provided a justification for the Suspension Proposal grounded in the MLA or required by the Administrative Procedure Act ("APA") to amend the Waste Prevention Rule in this manner.

A. BLM Has No Explicit or Inherent Authority to Suspend a Rule while It Reconsiders It.

BLM attempts to change the compliance dates for the Waste Prevention Rule long after its effective date, but fails to cite any explicit grant of statutory authority for doing so. Nor does the agency have the "inherent" authority to act in this manner. Agencies are creatures of Congress; "an agency literally has no power to act . . . unless and until Congress confers power upon it." *Louisiana Pub. Serv. Comm'n v. FCC*, 476 U. S. 355, 374 (1986); *see Am. Library Ass'n v. FCC*, 406 F.3d 689, 689 (D.C. Cir. 2005) ("It is axiomatic that administrative agencies may issue regulations only pursuant to authority delegated to them by Congress."). BLM's Suspension Proposal makes clear that it seeks to suspend the Waste Prevention Rule pending the agency's reconsideration of the Rule. *E.g.*, 82 Fed. Reg. at 46,458, 46,461 (seeking to "prevent

operators from being unnecessarily burdened by regulatory requirements that are subject to change”). Yet, BLM points to no authority in the APA or any of its governing statutes to suspend a final rule while the agency is reconsidering it, and that is because there is none. Likewise, as the D.C. Circuit recently reaffirmed, an agency has no “inherent authority” to suspend a lawfully issued final rule while it reconsiders it. *Clean Air Council v. Pruitt*, 862 F.3d 1, 9 (D.C. Cir. 2017) (quoting *Natural Res. Def. Council v. Abraham*, 355 F.3d 179, 202 (2d Cir. 2004)).

BLM does not cite to the APA as providing authority for the suspension, nor could it: the APA provides only limited authority for agencies to suspend not-yet-effective regulations pending judicial review where “justice so requires.” 5 U.S.C. § 705; *California v. BLM*, No. 17-cv-3804-EDL, 2017 WL 4416409 (Oct. 4, 2017) (holding that BLM did not satisfy the prerequisites for a stay of the Waste Prevention Rule under section 705 of the Administrative Procedure Act). Indeed, the fact that Congress provided one specifically-delineated pathway for suspending final rules in the APA supports the position that it did not grant agencies carte-blanche authority to suspend regulations whenever they so desire.

Nor do any of BLM’s substantive statutes authorize the agency to suspend a duly promulgated final rule because the agency is reconsidering it (or, for that matter, for any reason). Where Congress has intended to authorize such suspensions, it has expressly provided that authority and in carefully delineated terms. *See* 42 U.S.C. § 7607(d)(7)(B) (granting EPA authority to stay a rule for 90 days during a statutorily defined reconsideration proceeding). Accordingly, BLM lacks explicit or inherent authority to suspend a duly promulgated regulation in order to reconsider it.

BLM attempts to rely on its general statutory authority to “promulgate such rules and regulations as may be necessary to carry out the statutes’ various purposes” and to “promot[e] the development of Federal and Indian oil and gas resources for the financial benefit of the public and Indian mineral owners.” 82 Fed. Reg. at 46,460 (citing *California Co. v. Udall*, 296 F.2d 384, 388 (D.C. Cir. 1961)). Based on this general statutory authority, BLM conflates the suspension of the Rule with a reconsideration of it, claiming that it has “inherent authority to reconsider the 2016 final rule,” and that the Suspension Proposal is “part of” this reconsideration. 82 Fed. Reg. 46,460 (citing *Ivy Sports Med., LLC v. Burwell*, 767 F.3d 81, 86 (D.C. Cir. 2014)). However, BLM’s action to delay the compliance deadlines is a *separate* action from BLM’s reconsideration of the Rule. Because there is no specific authority authorizing the Suspension Proposal, BLM may only suspend or revise compliance dates by complying with the relevant legal procedures, including considering whether the change is authorized under its statutory authorities, offering good reasons for its changed position, and building an administrative record to support the change. Here, BLM attempts to bypass these required procedures, but lacks any statutory authority for doing so.

There are good reasons for limitations in administrative law on quickly suspending rules: they give certainty both to the regulated community and the public. The hasty exercise of authority to suspend promulgated rules during reconsideration disturbs the settled expectations of the regulated industry and public alike. *See Abraham*, 355 F.3d at 197 (“It is inconceivable that Congress intended to allow such unfettered agency discretion to amend standards . . . such a result would completely undermine any sense of certainty on the part of manufacturers as to the

required energy efficiency standards at a given time.”); *cf. Motor Vehicle Mfrs. Ass’n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 41 (1983) (A “settled course of behavior embodies the agency’s informed judgment that, by pursuing that course, it will carry out those policies committed to it by Congress. There is, then, at least a presumption that those policies will be carried out best if the settled rule is adhered to.”).

A deliberative, reasoned, and informed rulemaking helps to ensure that agencies do not change policies without a thorough review, that they have adequately explained why the new policy is consistent with the statute, and that there are good reasons for the change with support in the record. A hasty rulemaking to suspend a duly promulgated regulation, based principally upon a new Secretary’s desire to rethink the regulation—*without* thorough study, input, and explanation—undermines the whole premise of ensuring that standards are amended only after a deliberative process. *See Consumer Energy Council of Am. v. FERC*, 673 F.2d 425, 446 (D.C. Cir. 1982), *aff’d sub nom. Process Gas Consumers Grp. v. Consumer Energy Council of Am.*, 463 U.S. 1216 (1983) (“The value of notice and comment prior to repeal of a final rule is that it ensures that an agency will not undo all that it accomplished through its rulemaking without giving all parties an opportunity to comment on the wisdom of repeal”).

Regulatory certainty on the part of both the regulated industry and the public depends on agencies enforcing duly promulgated regulations until they are duly revised or revoked. Shortcuts to revising or repealing a rule on the simple premise that the rule is being “reconsidered” create uncertainty. If BLM may delay for one year key provisions of the Waste Prevention Rule merely so that it can “reconsider” them, then there is no reason that—should BLM ultimately rescind the Waste Prevention Rule’s requirements—a future BLM could not simply delay that rescission itself so that it could “reconsider” it, quickly putting the Waste Prevention Rule’s requirements back into effect. This cannot be what Congress had in mind when it required agencies to undergo a deliberative process to promulgate and revise rules.

So while it is true that BLM may reconsider the Waste Prevention Rule, and may seek to revise the Rule so long as it allows for meaningful public input, explains how the revision is lawful under its governing statutes, and gives good reasons for the revisions based in the record, that, as explained above, is *not* what BLM is doing here. It cannot circumvent those procedures by purporting to find “suspension” authority that it does not have.

B. BLM Has Failed to Justify the Change in Compliance Dates that it Now Proposes.

In effect, what BLM attempts to do here is to *substantively revise* the Waste Prevention Rule by suspending provisions that are already in effect and delaying future compliance deadlines for one year (and—as it has suggested—likely for far longer). *See Council of So. Mountains, Inc. v. Donovan*, 653 F.2d 573, 580 (D.C. Cir. 1981) (“[T]he December 5 order was a substantive rule since, by deferring the requirements that coal operators supply life-saving equipment to miners, it had ‘palpable effects’ upon the regulated industry and the public in general.”); *id.* at 582 n.40 (“[T]he December 5 order . . . was an amendment to a mandatory safety standard.”). But absent any explicit statutory shortcut that would allow BLM to stay the rule as discussed above, BLM has not gone through the proper procedure to make a substantive

revision to an already-effective rule prescribed in *FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 514-16 (2009).

When an agency seeks to substantively revise a rule, such revisions must be permissible under the statute and be accompanied by “good reasons” that are supported by the agency’s record. *Id.* (agency changing course must show “[1] that the new policy is permissible under the statute, [2] that there are good reasons for it, and [3] that the agency *believes* it to be better,” and must offer a “reasoned explanation . . . for disregarding facts and circumstances that underlay or were engendered by the prior policy”); *State Farm*, 463 U.S. at 57 (“[A]n agency changing course must supply a reasoned analysis.”); *Am. Petroleum Inst. v. EPA*, 862 F.3d 50, 66 (D.C. Cir. 2017) (changes to agency rules must be “justified by the rulemaking record” (citing *State Farm*, 463 U.S. at 42). As the basis for reversing course, an agency may not offer a justification “that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *State Farm*, 463 U.S. at 43. When an agency does make new factual findings to support a new policy, if those findings contradict the prior record, the agency faces a higher burden in demonstrating that the change is reasoned. *Fox Television*, 556 U.S. at 515. An agency may not “disregard contrary or inconvenient factual determinations that it made in the past, any more than it can ignore inconvenient facts when it writes on a blank slate.” *Id.*

The scant reasoning provided by BLM to depart from the rigorously-supported Waste Prevention Rule—that it wishes to reconsider the Rule and does not want industry to have to incur compliance costs in the meantime (a reason that could be used to suspend *any* regulation)—fails to meet this reasoned decision-making threshold.

1. The Suspension Proposal is Not Permissible Under BLM’s Statutory Mandates.

BLM adopted the Waste Prevention Rule specifically to fulfill its legal mandates under the Mineral Leasing Act (“MLA”) and other statutory frameworks. The MLA directs the Interior Department to require “all reasonable precautions” to prevent waste. 30 U.S.C. § 225. Likewise, the MLA requires that each federal lease “shall contain provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in the operation of said property . . . and for the prevention of undue waste.” *Id.* at § 187. BLM is empowered to “prescribe necessary rules and regulations” and “do any and all things necessary” to carry out these purposes. *Id.* at § 189.

Preventing companies that profit from the development of publicly-owned oil and gas from wasting that oil and gas is a central part of the MLA’s statutory goals. *See* 81 Fed. Reg. 6,616, 6,629 (Feb. 8, 2016). BLM has acknowledged it has a “responsibilit[y] under the MLA . . . to ensure that lessees ‘use *all reasonable precautions* to prevent waste of oil or gas developed in the land.’” 2016 Rule EA at 7 (quoting 30 U.S.C. § 225) (emphasis added). The MLA’s use of “all” to modify the term “reasonable precautions” shows that Congress intended BLM to aggressively control waste. Thus, the agency may not forego reasonable and effective measures limiting venting, flaring and leaks for the sake of administrative convenience or to enhance the bottom lines of operators. *See Halliburton, Inc. v. Admin. Review Bd.*, 771 F.3d 254, 266 (5th Cir. 2014) (ruling that statutory term “all relief necessary” authorized broad remedies against

defendant because “we think Congress meant what it said. All means all.”) (internal quotation omitted); *Cty. of Oakland v. Fed. Housing Fin. Agency*, 716 F.3d 935, 940 (6th Cir. 2013) (“a straightforward reading of the statute leads to the unremarkable conclusion that when Congress said ‘all taxation,’ it meant *all* taxation.”) (emphasis original)).²

BLM issued the Waste Prevention Rule in 2016 to carry out these statutory obligations. *See generally* 81 Fed. Reg. 83,008 (Nov. 18, 2016). The Rule updated the agency’s waste prevention requirements, replacing the outdated notice to lessees (NTL-4A) that had been issued in 1980. *Id.* BLM determined that NTL-4A needed to be replaced for three primary reasons: (1) it did “not reflect modern technologies, practices, and understanding of the harms caused by venting, flaring, and leaks of gas,” 81 Fed. Reg. at 83,015; (2) it was not “particularly effective in minimizing waste of public minerals,” as demonstrated by the GAO reports and other studies, *id.* at 83,017; and (3) it was “subject to inconsistent application,” *id.* at 83,038; *see also* GAO (2010), *supra* pp. 3. To remedy these problems, and based on an extensive record and explanation, BLM adopted the provisions of the Waste Prevention Rule as “reasonable precautions” necessary to prevent waste. *See* 81 Fed. Reg. at 83,009 (stating that the Rule sets forth “economical, cost-effective, and reasonable measures that operators can take to minimize gas waste”).³

The Suspension Proposal allows the waste targeted in the Waste Prevention Rule to continue unabated for another year. As BLM concedes, the Suspension Proposal “would temporarily suspend or delay almost all of the requirements in the 2016 final rule that . . . generate benefits of gas savings or reductions in methane emissions.” 82 Fed. Reg. at 46,464. As BLM has already determined in the extensive findings made during the rulemaking process for the Waste Prevention Rule, this constitutes unreasonable waste under the MLA.

Notably, the Suspension Proposal would suspend compliance dates without offering a substitute mechanism to prevent waste, despite the fact that BLM continues to propose and

² BLM also is mandated to consider and mitigate the environmental impacts of operations utilizing public lands under the MLA and FLPMA. BLM’s failure to do so in the Delay Proposal violates these statutory obligations. For example, the MLA instructs BLM “to prescribe necessary and proper rules and regulations” to “insur[e] the exercise of reasonable diligence, skill, and care in the operation of [leased] property,” and to “protect[] . . . the interests of the United States and . . . safeguard[] . . . the public welfare.” 30 U.S.C. §§ 187, 189. Likewise, FLPMA requires BLM “by regulation or otherwise” to “take any action necessary to prevent unnecessary or undue degradation” of public lands. 43 U.S.C. § 1732(b). Under FLPMA’s multiple use mandate, *see id.* § 1702(c), “BLM must strike a balance that avoids ‘permanent impairment of the productivity of the land and the quality of the environment.’” *Utah v. U.S. Dep’t of Interior*, 535 F.3d 1184, 1187 (10th Cir. 2008) (quoting 43 U.S.C. § 1702(c)). “It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses.” *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009).

³ Because the complete Administrative Record supporting the Waste Prevention Rule is therefore relevant to BLM’s current decisionmaking process, the Joint Environmental Commenters have attached it as an Addendum to these comments. The Addendum was submitted via hand-delivery to BLM’s Washington Office, 20 M Street SE., Room 2134 LM, Washington, CO 20003, on a USB Drive, and also sent via overnight delivery.

approve new oil and gas leases and drilling permits and that existing equipment continues to emit large quantities of methane. Because the Waste Prevention Rule superseded NTL-4A, *see* 82 Fed. Reg. at 46,459, and the Suspension Proposal suspends and delays BLM's new waste prevention measures, the effect of BLM's proposal is to create a new regulatory regime devoid of any requirements that operators take *any* reasonable precaution to minimize waste—let alone take *all* reasonable precautions. Such action would violate the MLA.⁴

At a minimum, BLM has an obligation to explain its view that authorizing additional waste is permissible under its statutory authorities, and allow for public comment on that view. *Fox Television*, 556 U.S. at 514-16. But the Suspension Proposal is devoid of such analysis. Despite the fact that BLM adopted the Waste Prevention Rule for the express purpose of preventing unreasonable waste, reducing associated pollution, and ensuring safety,⁵ BLM proposes to suspend and delay those obligations without any evaluation of how a suspension fulfills its statutory obligation with respect to waste, air pollution, or safety.

2. BLM fails to demonstrate that there are good reasons for the Suspension Proposal or adequately explain its change in position.

BLM's Suspension Proposal represents a significant change in the agency's position with respect to waste. But BLM fails to provide even the most minimal explanation for this change in position or support in the record, rendering its decision arbitrary and capricious. *Fox Television*, 556 U.S. at 514-16; *State Farm*, 463 U.S. at 57.

BLM has failed to provide any support for the need for the Suspension Proposal. According to BLM, its current review process was triggered by a finding that the Waste Prevention Rule “appears to be inconsistent with the policy in section 1 of the Executive Order 13783, [entitled “Promoting Energy Independence and Economic Growth”].” 82 Fed. Reg. at 46,459. Specifically, BLM claims that it “found that some provisions of the rule appear to add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.” 82 Fed. Reg. at 46,459. As a result, BLM is currently reconsidering the 2016 Regulatory Impact Analysis (RIA) that it used to support adoption of the Waste Prevention Rule. But even without the results of that reconsideration, BLM claims that the 2016 RIA “indicates that the rule poses a *substantial burden* on industry.” 82 Fed. Reg. at 46,459 (emphasis added). This conclusion represents a dramatic change in position, without *any* explanation or support in the record.

BLM previously determined that the Waste Prevention Rule set forth “economical, cost-effective, and reasonable measures that operators can take to minimize gas waste.” 81 Fed. Reg.

⁴ BLM argues that waste will not be unregulated as a result of the proposed stay because of existing EPA and state requirements. *See* RIA at 17-18; *see also* EA at 12-13. But BLM has already determined that these existing regulations are insufficient to ensure that operators are taking all reasonable measures to control waste. *See* 81 Fed. Reg. at 6,634; 81 Fed. Reg. at 83,010, 83,018. BLM has provided no evidence to dispute its prior finding.

⁵ *See* 81 Fed. Reg. at 83,049 (“the requirement to flare rather than vent associated gas is justified as a safety measure under the MLA”); 30 U.S.C. § 187 (“such rules for the safety and welfare of the miners...as may be prescribed by said Secretary shall be observed”).

at 83,009. Even for the smallest companies, the compliance costs represent only about 0.15% of annual, average profits. *Id.* at 83,013–14. As BLM acknowledges in the Suspension Proposal, the 2016 RIA “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.” 82 Fed. Reg. at 46,465. In addition to these modest compliance costs, the 2016 RIA recognizes that there are provisions exempting operators from compliance if such costs would force the operator to stop developing the resource. *Id.* Most of the substantive provisions BLM proposes to stay include such exemptions. *See* 43 C.F.R. §§ 3179.8(a) (creating exemption for § 3179.7); 3179.201(b)(4); 3179.202(f); 3179.203(c)(3); 3179.303(c). Additionally, in opposing industry’s request for a preliminary injunction against the Waste Prevention Rule, BLM argued that the Rule entails only “modest compliance costs,” which are justified based on the many benefits of the Rule. Fed. Opp’n at 66, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285 (D. Wyo. Dec. 15, 2016), ECF No. 70.

Relying on the same evidence, BLM now summarily concludes that the costs to industry pose a “substantial burden.” BLM’s failure to offer any explanation or factual support for its dramatic change in position regarding the Rule’s costs casts doubt on the claims and renders the decision arbitrary and capricious. In fact, BLM relies on the findings in the 2016 RIA to conclude that the impacts of the Suspension Proposal on employment and small businesses are relatively small. *See* 82 Fed. Reg. at 46,465–66. But these conclusions entirely undercut BLM’s stated need for the proposed rule.

BLM also claims that it “attempted to tailor the proposed rule so as to target the requirements of the 2016 final rule for which immediate regulatory relief appears to be particularly justified.” 82 Fed. Reg. at 46,460. As explained further below, *infra* Section IV, no such regulatory relief is necessary or justified. And BLM offers no explanation for why the Suspension Proposal would suspend provisions that BLM itself acknowledges pay for themselves in a short period of time. *E.g., id.* at 46,462 (acknowledging that BLM estimate the pneumatic controller requirement would impose costs of about \$2 million per year and generate cost savings from product recovery of \$3 to \$4 million per year); *id.* at 46,463 (acknowledging that BLM estimates that the liquids unloading provisions would impose costs of about \$6 million per year and would generate cost savings of \$5 to \$9 million per year); *infra* at 19 (explaining that 2016 RIA found that value of gas saved outweighed the cost of the capture targets in the first two years that the targets apply). Staying these provisions does not even support BLM’s claimed rationale for the Suspension Proposal.

And even if avoiding compliance costs (without any explanation for its change in position or examination of whether those compliance costs are reasonable in light of its statutory mandate and the record facts) could form the rationale for the delay, which we do not concede here, it is still arbitrary and capricious. That is because BLM has not explained why changing the status quo while BLM reviews the Rule to alleviate operators of these compliance costs should weigh so much more heavily than maintaining the benefits to the public in the form of reduced waste and pollution from retaining the status quo during BLM’s review.

Beyond costs, BLM’s only rationale for the Suspension Proposal is the uncertainty regarding whether the Waste Prevention Rule will be changed through its review process. 82

Fed. Reg. at 46,458. As an initial matter, BLM appears to exclude the possibility that after its review it might decide to retain the Waste Prevention Rule. If it did, the Suspension Proposal would simply enhance regulatory uncertainty, all while wasting additional publicly-owned minerals and causing significant pollution. Indeed, keeping the Rule in place would assist BLM's review because BLM could then gather data on how effective the Waste Prevention Rule is at fulfilling the statutory waste prevention mandate and that data could inform BLM's thinking on how the Rule might be revised, if at all, to better serve that mandate through actual experience. BLM's failure to even consider this possibility renders the Suspension Proposal arbitrary and capricious.

In the end, BLM cannot give "good reasons" based in the record for the Suspension Proposal because it has not considered its statutory mandate to prevent waste, the prior rulemaking record demonstrating how the Waste Prevention Rule prevents waste, or the extent of benefits foregone by the Suspension Proposal. The agency must offer a justification for staying the compliance deadlines "*before* engaging in a search for further evidence." *State Farm*, 463 U.S. at 151 (emphasis added); *Pub. Citizen v. Steed*, 733 F.2d 93, 98 (D.C. Cir. 1984) (striking down agency's decision to suspend its program while it "further studied" an alleged problem). The agency's plan to stay now and look at the record and give reasons later renders it unable to give any "good reasons" for staying the compliance deadlines. *See Public Citizen*, 733 F.2d at 102 ("Without showing that the old policy is unreasonable," for an agency to say that "no policy is better than the old policy solely because a new policy might be put into place in the indefinite future is as silly as it sounds.").

If permitted, BLM's abbreviated rulemaking approach would allow agencies to regularly circumvent administrative law requirements to upend the status quo and put their preferred policy result in place *before* engaging with the statute, the facts, or the public on that result. Because the reasoning is based entirely on the agency's mere desire to rethink the regulation and avoid imposing compliance costs or using its own resources to enforce the regulation, it could be used to suspend *any* regulation so long as the agency claimed a desire to rethink it. There is also no reason to think it could not be used to preliminarily put a regulation *into effect* on an interim basis and pending further administrative review. It is difficult to distinguish this suspension rule from an abbreviated notice and comment rulemaking putting a regulation into effect on an interim basis while the agency goes through the process of engaging with the public on the substance of the regulation and explaining how the regulation is consistent with the statute and the facts, based solely upon the fact that it has good reasons to think the regulation would likely ensure the prevention of waste and benefit the public once the agency has been through that process. *Cf.* 82 Fed. Reg. at 46,460 (proposing suspension "to ensure that the development of Federal and Indian oil and gas resources will not be unnecessarily hindered by regulatory burdens").

C. BLM's Proposal Defeats the Purposes of Notice and Comment Rulemaking

BLM's attempt to quickly delay the Waste Prevention Rule's compliance deadlines through an abbreviated "notice-and-comment" rulemaking undermines the purposes of meaningful notice and the opportunity for public participation that administrative law guarantees.

The purposes of the Administrative Procedure Act's ("APA") notice-and-comment provisions are "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review." *Int'l Union, United Mine Workers of Am. v. Mine Safety & Health Admin.*, 407 F.3d 1250, 1259 (D.C. Cir. 2005). The APA requires that an agency's notice, and the corresponding information supporting the proposed action, "must disclose in detail the thinking that has animated the form of a proposed rule and the data upon which that rule is based." *Home Box Office*, 567 F.2d at 35 (citations omitted). Thus, an agency's notice-and-comment process must be accompanied by a detailed statement and all relevant data underlying the proposal in order to allow all affected parties the opportunity to provide specific evidence in the rulemaking record to support their views on the rule, and the agency must be open to accepting public input throughout the process. BLM has failed on all accounts here.

The fundamental flaw with BLM's hasty "notice-and-comment" rulemaking is that BLM attempts to suspend the provisions of the Waste Prevention Rule now, and only later consider its statutory mandate and the record facts, seek public comment on whether to retain, revise, or repeal the Waste Prevention Rule, and explain how its ultimate decision is consistent with the statute and record facts. This "leap before you look" approach renders meaningful comment impossible, precludes the public from developing evidence to counter BLM's proposal, and all but guarantees that BLM will not retain an open-mind towards public feedback.

1. BLM's hasty notice and comment precludes the ability to provide meaningful comments.

BLM has not given any details regarding which provisions of its statutory authority the agency relies upon in promulgating the Suspension Proposal, nor the record facts that support the Suspension Proposal, so the public cannot comment on those threshold issues. *See id.* at 35–36 ("The notice required by the APA ... must disclose in detail the thinking that has animated the form of a proposed rule and the data upon which that rule is based.... [A]n agency proposing informal rulemaking has an obligation to make its views known to the public in a concrete and focused form so as to make criticism or formulation of alternatives possible."). And BLM has characterized this suspension as just a step towards an ultimate repeal or rescission of the Waste Prevention Rule, yet it does not provide any information or record facts to support such a revision or repeal.

Without this basic information, commenters who object to a suspension and/or repeal of the Waste Prevention Rule are unable to provide meaningful comments. They cannot substantively comment on the Secretary's rationale—that he wishes to rethink the Rule. And public commenters should not be required to convince an agency not to *review* a rule in order to avoid a suspension of that rule. Agencies constantly review their rules; that does not mean that anytime an agency undergoes a review, it may suspend the regulation that it is reviewing. BLM also claims to want to avoid imposing temporary or permanent costs on industry and avoid expending scarce agency resources on implementation while it reviews the Waste Prevention Rule. But these costs and uncertainty are completely derivative of its own decision to reconsider. Moreover, like the Secretary's desire to review the Waste Prevention Rule, these reasons could

be given for *any* suspension, creating a massive loophole in the limited authority Congress granted agencies to suspend final rules.

Indeed, even if it were fair to require commenters to convince the agency that it should not review a rule to avoid its suspension, the Secretary does not even give substantive content to his wish to undergo that review process in order “to ensure that the development of Federal and Indian oil and gas resources will not be unnecessarily hindered by regulatory burdens,” 82 Fed. Reg. at 46,460, nor explain how the suspension or repeal will promote that wish, in a manner that commenters can address. He has refused to release to the public the report required by Secretarial Order 3349, Section 5(c)(ii)—the principal document upon which this concern is purportedly based, *see* Letter from Nada Culver, The Wilderness Soc’y, to BLM (Apr. 25, 2017); Letter from Sara Kendall, W. Org of Res. Councils, to BLM (May 1, 2017); Letter from Laura King, W. Env’tl. Law Ctr., to Ryan Witt, BLM (Apr. 25, 2017)—and has not included *any* documents or data supporting this claim in the Suspension Proposal docket. Indeed, if anything, the RIA accompanying the Suspension Proposal suggests that the one-year suspension of the Rule will have a *negative* effect on the development of Federal and tribal gas resources, and no effect on the development of oil resources. 2017 RIA at 40.

Without knowing how BLM proposes to interpret the Mineral Leasing Act’s waste prevention mandate and associated Federal Land Policy and Management mandates, and what record facts it believes support a suspension or repeal, the public cannot meaningfully engage with or try to persuade BLM not to delay the Waste Prevention Rule. *See Consumer Energy Council of Am.*, 673 F.2d at 445-46 (“The value of notice and comment prior to repeal of a final rule is that it ensures that an agency will not undo all that it accomplished through its rulemaking without giving all parties an opportunity to comment on the wisdom of repeal”). Because BLM’s reasoning for the delay is almost entirely based upon its desire to review the Waste Prevention Rule—a non-substantive reason that could be applied to any regulation—there is no substance or BLM reasoning to comment upon and commenters cannot “develop evidence in the record to support their objections to the rule.” *Int’l Union, United Mine Workers of Am.*, 407 F.3d at 1259.

The timing and length of the comment period also demonstrates that BLM is not seeking meaningful public input. BLM has already committed to issuing a final suspension by December 8, without even knowing what information commenters will provide and how those comments might influence the agency to either retain or alter its Suspension Proposal. The short 30-day comment period, as compared to the 74-days the agency allowed to comment on the rule in the first place, is insufficient to give commenters the necessary amount of time to analyze and offer evidence regarding BLM’s new Regulatory Impact Assessment and Environmental Assessment—assessments that provide the agency’s understanding of the Suspension Proposal’s impacts without providing the underlying rationale that the public has a right to review and critique.

Furthermore, in the Final RIA for the Waste Prevention Rule, BLM included a social cost of methane, whose methodology had undergone significant notice-and-comment, as part of its calculation of the Rule’s benefits. *See infra* Section V; *see also* 78 Fed. Reg. 70,586 (Nov. 26, 2013) (setting 60-day comment period); 79 Fed. Reg. 4359 (Jan. 27, 2014) (extending comment period for 30 days). Yet BLM now claims that a 30-day comment period is appropriate because

its proposal is “narrow” and only involves a “simple and temporary suspension and delay,” ignoring the Bureau’s adoption of a new “interim” social cost of methane that fundamentally changes the RIA. 82 Fed. Reg. at 46,460; 2017 RIA at 2. This change does not just impact the Suspension Proposal, but may impact countless proposals from other agencies. Thirty days is not sufficient time for the public to review and comment on this significant change.

2. The fact that the Secretary has already determined the outcome of the rulemaking defeats the principal that meaningful comment requires agencies to keep an open mind.

BLM’s efforts to suspend the Waste Prevention Rule fundamentally undermine the basic premise that agency decisionmakers “maintain[] a flexible and open-minded attitude towards its own rules.” *See United States v. Reynolds*, 710 F.3d 498, 517 (3d Cir. 2013). It is well established that an agency decisionmaker should be disqualified from participating in a regulatory decision where he or she has displayed an “unalterably closed mind on matters critical to the disposition of the proceeding.” *C & W Fish Co. v. Fox*, 931 F.2d 1556, 1565 (D.C. Cir. 1991). An agency official must often “engage in debate and discussion about the policy matters before him.” *Id.* at 1569. However, when “clear and convincing” evidence reveals that a decisionmaker has a closed mind on matters critical to the disposition of the proceeding, *id.*, courts have intervened to set aside such decisions. *See e.g., Nehemiah Corp. of America v. Jackson*, 546 F. Supp. 2d 830, 847-48 (E.D. Cal. 2008) (disqualifying the HUD Secretary from a decision after he made statements in the press indicating his preferred outcome).

For nearly his entire tenure, Secretary Zinke has been working single-mindedly to suspend or otherwise undo the Waste Prevention Rule. Secretary Zinke’s public statements make clear that he has predetermined the outcome of this rulemaking, compromising the integrity of the decisionmaking process and effectively removing public stakeholders from meaningful participation. For example, when asked about the Waste Prevention Rule, Secretary Zinke characterized it as “duplicative and unnecessary.” Charlie Passut, *Trump Picks Montana’s Rep. Zinke to Lead Interior Department*, Naturalgasintel.com, (Dec. 16, 2016) available at <http://www.naturalgasintel.com/articles/108737-trump-picks-montanas-rep-zinke-to-lead-interior-department>. Later, he answered “yes” when directly asked by a Senate committee whether he supported congressional efforts to repeal the rule through a Congressional Review Act resolution. Alleen Brown, *Interior Pick Ryan Zinke Vows to Review Obama’s Safeguards Against Fossil Fuel Extraction*, The Intercept, (Jan. 18, 2017) available at <https://theintercept.com/2017/01/18/interior-pick-ryan-zinke-vows-to-review-obamas-safeguards-against-fossil-fuel-extraction/>. These statements demonstrate an unalterably closed mind and should disqualify Secretary Zinke from participating in this proceeding. *See Nehemiah Corp.*, 546 F. Supp. 2d at 847-48 (finding that HUD Secretary had an unalterably closed mind when, according to a Bloomberg story, he indicated that he would ban the program at issue “over objections from nonprofit groups,” and had stated, “I’m very much against it. . . . I think it’s wrong. I don’t want to continue to be a partner in a program where so many people can’t afford to keep up their payments.”).

These unequivocal public statements undermine the objectivity of the decisionmaking process and discourage public engagement. As the court observed in *Nehemiah Corp.*,

“[a]llowing the public to submit comments to an agency that has already made its decision is no different from prohibiting comments altogether. Indeed, if the public perceives that the agency will disregard its comments, there may be a chilling effect that causes the public to refrain from submitting comments as an initial matter.” *Id.* at 847. In much the same way, BLM is deliberately disadvantaging those public interests advocating against repealing the Waste Prevention Rule. *See Sharon Steel Corp. v. EPA*, 597 F.2d 377, 381 (3d Cir. 1979) (“Provision of prior notice and comment allows effective participation in the rulemaking process while the decisionmaker is still receptive to information and argument. After the final rule is issued, the petitioner must come hat-in-hand and run the risk that the decisionmaker is likely to resist change.”).

That Secretary Zinke cannot be an objective decisionmaker is further underscored by his actions, which reflect a single-minded focus on eliminating the Waste Prevention Rule.

As described above, the Secretary publicly supported congressional efforts to invalidate the Waste Prevention Rule through the Congressional Review Act (“CRA”). When a majority of Senators voted against proceeding to disapprove of the Rule, the Secretary then attempted to suspend the Waste Prevention Rule on his own. On June 15, 2017, BLM published a notice—with no opportunity for public comment and no analysis of the impacts the suspension would have on the public—that it was postponing compliance dates for certain sections of the Waste Prevention Rule pursuant to section 705 of the APA, 5 U.S.C. § 705. Waste Prevention, Production Subject to Royalties, and Resource Conservation; Postponement of Certain Compliance Dates, 82 Fed. Reg. 27,430, 27,431 (June 15, 2017). Soon after the June 15, 2017 notice was published, BLM represented to the District of Wyoming that it had “developed a three step plan to propose to revise or rescind the Rule and prevent any harm from compliance with the Rule in the interim.” Fed. Resp’ts’ Mot. to Extend Briefing Deadlines at 3, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285-SWS (D. Wyo. June 20, 2017), ECF No. 129

The states of New Mexico and California, along with a coalition of citizen groups, challenged the postponement notice in the U.S. District Court for the Northern District of California, ultimately moving for summary judgment on claims that the postponement notice violated the APA. The court granted the summary judgment motions and vacated the postponement notice, holding, among other things, that the Secretary had unlawfully failed to seek public input on this suspension.

With the section 705 postponement notice vacated, BLM initiated the present notice and comment rulemaking proposing to suspend or delay certain of the Waste Prevention Rule’s requirements. 82 Fed. Reg. at 46,458. As in the postponement notice, BLM rationalized the Suspension Proposal by explaining it wanted to “avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future,” *id.* at 46,460, a rationale that assumes BLM has already determined to suspend the Rule and eventually to do away with its requirements altogether.

Shortly after issuing the Suspension Proposal, BLM filed a motion to extend the merits briefing deadlines in ongoing litigation concerning the Waste Prevention Rule in federal district court in Wyoming. In this motion, BLM stated:

The extension will provide sufficient time to [BLM] to complete a rule (“Suspension Rule”) suspending or delaying the majority of the provisions of the [Waste Prevention Rule], including the portions of the Waste Prevention Rule that would otherwise become effective on January 17, 2018. As BLM aims to complete the Suspension Rule by December 8, 2017 and is currently working on a second rulemaking (“Revision Rule”) to revise or rescind the Waste Prevention Rule . . . proceeding with the merits briefing at this time would be a waste of judicial resources and would undermine the administrative process.

Fed. Resp’ts’ Mot. for an Extension of the Merits Briefing Deadlines at 2, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285-SWS (D. Wyo. Oct. 20, 2017), ECF No. 155. BLM went on to say that “[o]nce the Suspension Rule is completed, it will provide the immediate relief sought by Petitioners—relief from the portions of the Waste Prevention Rule that would otherwise come into effect on January 17, 2018, as well as other provisions of the Waste Prevention Rule already in effect.” *Id.* at 4.⁶ Statements like these further underscore that BLM has already determined the outcome of the suspension rule, as well as the fate of the Waste Prevention Rule in the longer-term. The agency is publicly representing not that it is considering suspending the Rule, but that it *will* suspend the Rule.

Instead of engaging in a true notice and comment proceeding, the Secretary is simply trying another approach to secure the same outcome that he has already twice failed to achieve. Indeed, everything about the suspension proposal—from its rationale to its timing—suggests that the Secretary will suspend the standards such that companies need not comply, regardless of any comments received during the truncated comment period. The Secretary’s actions, administrative rationales, and statements in litigation make clear that he has an unalterably closed mind and no openness to consider outcomes other than his chosen outcome to suspend the Waste Prevention Rule.

IV. BLM’s Rationales for Suspending or Delaying Specific Provisions are Arbitrary and Capricious

BLM attempts to justify its suspension and delay of most substantive provisions of the Waste Prevention Rule by stating that BLM “wants to avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future.” 82 Fed. Reg. at 46,460. BLM also “wishes to avoid expending scarce agency resources on implementation activities . . . for such potentially transitory requirements.” *Id.* As discussed above, these general assertions do not provide a rational basis for the suspension or delay of the Waste Prevention Rule provisions. As discussed below, BLM also has provided no substantive rationale or explanation for why each specific provision should be suspended or delayed. Nor has BLM endeavored to explain the basis or factual support for the issues it now vaguely raises, given that the agency already extensively considered and made contradictory

⁶ It is unclear why BLM believes that finalizing the Delay Proposal by December 8, 2017 would relieve industry of compliance obligations before the January 17, 2018 compliance deadline. Under the Congressional Review Act, 5 U.S.C. § 804(2)(A), the Delay Proposal constitutes a “major rule,” and therefore cannot have an effective date less than 60 days from the date it is published in the Federal Register. *Id.* at § 801(a)(3).

factual findings on each issue in the context of the final Waste Prevention Rule. *See* Appendix 2 (documenting how the agency considered and addressed each of these issues in the Waste Prevention Rule).

A. Waste-Minimization Plans

BLM proposes to suspend the Waste Prevention Rule provision that requires operators submitting an application for a permit to drill to also submit a waste-minimization plan. *Id.* The only costs to operators from this requirement, however, are the administrative costs of preparing plans for new wells during the period of time before BLM finalizes any changes to the underlying provision. Despite the potential for this very low-cost requirement to yield a substantial reduction in waste, BLM arbitrarily fails to evaluate the quantified or unquantified benefits of keeping the requirement in place for the duration of the reconsideration rulemaking and whether those benefits would justify the very minimal expenditures required.

In addition, BLM makes no attempt to quantify, and does not even mention, the reduction in wasted gas and accompanying cost savings to operators associated with the requirement for waste-minimization plans. This is despite evidence in the rulemaking record that these plans are highly effective in reducing flaring and decreasing waste. 81 Fed. Reg. 6,616, 6,642 (Feb. 8, 2016) (“North Dakota regulators have identified the requirement for gas capture plans as a highly effective element of their requirements to reduce flaring.”); *see also* Appendix 2.

Additionally, BLM has now had over eight months of experience implementing this provision, yet the proposal provides no information on how the requirement has worked to date. BLM should consider, make public, and provide an opportunity for public comment on the Suspension Proposal in light of the following information that is now available to BLM concerning the operation of the waste-minimization plan requirement: the number of plans that have been submitted, whether in fact those plans are “lengthy” as described in the proposal, and whether operators have used the option BLM referenced in the final rule that would allow them to submit any gas capture plans they had already prepared pursuant to state requirements (e.g., in North Dakota), supplemented as necessary with any additional information required by the Waste Prevention Rule. In addition, BLM should provide information from the actual experience of field staff regarding the degree to which, like North Dakota regulators, they have found this requirement “highly effective” in reducing waste. Failure to consider this information, which is already in BLM’s possession, is quintessentially arbitrary and capricious.

B. Gas Capture Requirement

BLM proposes to delay the compliance dates for the requirement for operators to capture a certain percentage of the gas they produce. 82 Fed. Reg. at 46,461. To justify the Suspension Proposal, BLM explains that it is considering whether the requirement is unnecessarily complex and whether it will be an improvement on the requirements of NTL-4A. *Id.* But BLM does not explain why it deems this suspension to be necessary, nor does it account for the contradictory findings in the final Waste Prevention Rule, in which BLM already addressed both of these issues when establishing the gas capture requirement. *See* Appendix 2.

Additionally, the 2016 RIA found that the direct quantified benefits to operators that would result from capturing gas that would otherwise have been wasted outweighed the costs of the capture targets in the first two years that those targets apply (2018 and 2019). *Compare* BLM, Regulatory Impact Analysis for: Revisions to 43 C.F.R. § 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations) Additions of 43 C.F.R. § 3178 (Royalty-Free Use of Lease Production) and 43 C.F.R. § 3179 (Waste Prevention and Resource Conservation) at Table 81 (2016) (“2016 RIA”) Table 8-1 *with id.* at Table 8-2(a). Thus, under the original analysis, there were no net costs to operators from these provisions in 2018 or 2019. There is no information in the 2017 RIA supporting BLM’s Suspension Proposal that explains how or why this analysis might have changed. The 2017 RIA does state, however, that the estimated reduction in compliance costs in Year 1 (i.e., in 2018) of the delay of the compliance date for the gas capture requirement is *zero*. 2017 RIA at 28. BLM’s own analysis finds that there is no compliance cost to operators from leaving this provision in place, making the proposal to delay the provision arbitrarily and utterly irrational.

C. Measuring and Reporting Volumes of Gas Vented and Flared from Wells

BLM proposes to delay the compliance date for the requirement for operators to estimate or measure all flared or vented gas. 82 Fed. Reg. at 46,461. BLM claims this delay is needed to allow it to consider whether the additional accuracy associated with the requirement justifies the burden it would place on operators. *Id.*

The purpose of the measuring and reporting requirements, as stated in the final rule, was to provide more accurate information of the volumes of venting and flaring from large volume flares. *See* 81 Fed. Reg. at 83,049, 83,053. While it is not possible to translate the benefits of data and information into dollar values, it is widely recognized that a first step to addressing a concern, such as BLM’s statutory responsibility to limit the waste of gas, is to understand the magnitude and characteristics of the problem. The rulemaking record contains extensive discussion (including critiques from the Government Accountability Office) of BLM’s inadequate data on the quantities of gas lost through venting and flaring. *See, e.g.,* BLM, Responses to Public Comments on Final Rule - Waste Prevention, Production Subject to Royalties, and Resource Conservation, BLM-2016-0001-9130, at 56-61 (Nov. 2016) (“(BLM RTC”) (summarizing and responding to comments regarding lost gas volumes); GAO 2010 at 10 (“Available estimates of vented and flared natural gas on federal leases vary considerably, and we found that estimates based on data from MRM’s OGOR data system likely underestimate these volumes . . .”). It seems that accurate information on the quantities of gas lost through flaring would be particularly valuable to BLM at this time, since it is reconsidering the final rule’s provisions to limit such flaring. In addition, accurate measurement is critical for accurate assessment of royalties.

Despite these significant benefits, BLM makes no attempt in the proposal to discuss or assess the adequacy of the data already available to it, or to weigh the value of better data to its ongoing rulemaking and other activities against the costs of measurement and reporting. There is simply no reasoned basis in the proposal for suspension of this requirement.

D. Determinations Regarding Royalty-Free Flaring

BLM's Suspension Proposal would extend a provision of the Waste Prevention Rule that allows prior approvals of royalty-free flaring from a well to continue in effect for an additional year, beyond the transition year that BLM already provided. This approach makes no sense on its face. Further, BLM does not provide any explanation of why requiring flaring that occurs from January 18, 2018 on to be potentially subject to royalties under the current regulations would be "premature and disruptive" and would "introduce needless regulatory uncertainty" as the proposal claims.

In the Waste Prevention Rule, BLM adopted section 3179.4, which clarifies when the loss of oil or gas is considered unavoidable or avoidable, and thus when the lost gas is subject to royalties or is royalty-free. The rulemaking record contains extensive discussion of the lack of clarity, burdensome requirements for case-by-case analyses, and backlogs in royalty-free flaring approvals that had resulted under the previous approach to determining the royalty status of flared gas. Appendix 2. The new royalty-free flaring provisions came into effect on January 17, 2017, and presumably BLM has been implementing them. The Waste Prevention Rule provided an exception, however, for flaring that occurred from January 17, 2017 through January 17, 2018, at a well that had already received an approval for royalty-free flaring prior to the effective date of the Rule. The purpose of this provision, as explained in the Rule, was to provide a reasonable transition period for operators from the old requirements to the new ones.

The Suspension Proposal provides no explanation, let alone evidence, of why BLM now believes that a year-long transition period is inadequate and should be extended for an additional year. The Suspension Proposal also provides no information on the effect of such an extension, and specifically, how much royalty revenue would be lost. Nor does the Proposal consider the equitable concerns about applying royalties or not applying royalties to similarly situated flared gas that is distinguishable only by the date on which the flaring began. The Proposal also fails to explain why or how failing to change a rule that has been in effect for almost a year would introduce "regulatory uncertainty." Unlike the previous case-by-case approach, the new provisions regarding when wasted gas is considered unavoidable make it clear whether or not flaring is subject to royalties in a given situation, and industry has had almost a year of operating under these new provisions already for all other flaring. BLM provides no reason for delaying application of the new substantially improved provisions.

E. Well Drilling

BLM proposes to suspend section 3179.101, which specifies how operators may avoid venting of gas from well drilling operations. 82 Fed. Reg. 46,461–62. The 2017 RIA does not estimate any capital costs to operators associated with this provision, the 2016 RIA did not identify capital costs or administrative burden to operators from the provision, and the provision has been in effect since January 17, 2017. In the Suspension Proposal, BLM does not explain how the provision imposes any burden on operators, stating only that it "may" "impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas." *Id.*; but see Appendix 2 (noting that Waste Prevention Rule well drilling disposal provisions included

exceptions for safety and technical infeasibility tailored to address such concerns). What such a regulatory constraint might be is not specified, nor its scope or effect. And BLM states that outside of those exceptional circumstances, operators typically dispose of gas consistent with the Rule. *Id.* In short, BLM arbitrarily fails to provide any reason why the provision should be suspended. Nor does the agency acknowledge the reasons for the provision laid out in the final rule, which include the safety benefits of avoiding venting through the use of alternative practices. 81 Fed. Reg. at 83,055.

F. Well Completion and Related Operations

Section 3179.102 specifies how operators may avoid venting gas that reaches the surface during well completions and related operations. As with section 3179.101, the 2017 RIA does not estimate any capital costs to operators associated with this provision, the 2016 RIA did not identify administrative burden to operators from the provision, and the provision has been in effect since January 17, 2017. BLM proposes suspending this provision and attempts to justify suspension on the basis that it “may . . . generate confusion about regulatory compliance during well-drilling and related operations.” 82 Fed. Reg. at 46,462. But BLM provides no information suggesting this is actually the case. BLM also suggests that the provision may be unnecessary because “most” operations that would be subject to the provision are covered by EPA requirements instead and because operators “typically” act in accordance with its requirements. *Id.* BLM fails to recognize, however, that the purpose of the requirements is to ensure that operators always, not just typically, follow these best practices to minimize waste. And by stating that operators typically comply with section 3179.102’s requirements, BLM defeats its own claim that the requirements are confusing, further undermining its Suspension Proposal.

G. Equipment Requirements for Pneumatic Controllers

BLM proposes to delay the compliance deadline for section 3179.201, which requires pneumatic controller equipment upgrades in certain situations. 82 Fed. Reg. at 46,462. BLM believes this delay is appropriate because it is reconsidering section 3179.201 in light of analogous EPA regulations and “the fact that operators are likely to adopt more efficient equipment in cases where it makes economic sense for them to do so.” *Id.* But BLM’s Proposal also repeats the 2016 RIA’s finding that the cost savings to operators from compliance with the pneumatic controller requirements would substantially exceed the costs of compliance. *Id.* Nonetheless, BLM proposes to delay the compliance deadline for this provision on the basis that “the BLM does not believe that operators should be required to make equipment upgrades to comply with §3179.201 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking.” BLM does not present any rationale whatsoever for this “belief.”

H. Downhole Well Maintenance and Liquids Unloading

BLM’s proposal repeats the 2016 RIA’s finding that the costs of compliance with this provision would be partially or more than fully offset by the cost savings from the captured gas, which suggests that the cost burden on operators would be small or nonexistent. BLM proposes to suspend the Waste Prevention Rule’s requirements for venting and flaring during downhole

well maintenance and liquids unloading. 82 Fed. Reg. at 46,463. BLM provides no rationale for suspension, other than BLM's belief that operators "should" not be "burdened with the operational and reporting requirements" of this provision until BLM has had an opportunity to review and revise them. This is so vague as to be essentially no rationale at all, and it is wholly inadequate to justify suspending requirements that have already been in effect for nearly a year. *See* Appendix 2 (explaining how BLM considered and responded to these concerns in establishing the Waste Prevention Rule provisions).

I. Requirements for Pneumatic Diaphragm Pumps, Storage Vessels, and Leak Detection and Repair Requirements

BLM proposes delaying the compliance deadlines for the Waste Prevention Rule's requirements for pneumatic diaphragm pumps, storage vessels, and leak detection and repair. 82 Fed. Reg. at 46,462-64. BLM's stated rationale for delaying these provisions is again its belief that operators "should" not be required to make upgrades to equipment, or incur operational costs for leak detection, until BLM has completed a rulemaking to reevaluate the requirements. As discussed in detail above, this is not how notice-and-comment rulemaking under the APA works. Agencies are not allowed to suspend or delay regulatory requirements currently in effect simply on the basis that the agency thinks that it would like to change those requirements in the future and does not want the regulations to apply in the interim. But that is exactly what BLM is trying to do in the Suspension Proposal.

V. BLM's Analysis of the Impacts of its Suspension Proposal is Arbitrary and Incomplete

In support of the Suspension Proposal, BLM has issued 2017 RIA, which suffers from numerous critical analytical flaws. Any attempt to justify or support the Suspension Proposal based on the deeply flawed 2017 RIA would be arbitrary and capricious. The most significant errors in the 2017 RIA relate to BLM's flawed, and artificially low calculation of the dollar value of harm from climate change impacts driven by a given quantity of methane emissions. In addition, several flaws in the 2017 RIA's methodology for estimating the costs and benefits of the Suspension Proposal further discredit the analysis and results.

A. BLM's 2017 RIA Uses Fundamentally Flawed Estimates of the Harm from Methane-Driven Climate Change.

BLM includes in its proposal a new calculation of the costs and benefits of the provisions of the Waste Prevention Rule that BLM proposes to suspend or delay. The new calculation dramatically alters BLM's previous benefits calculation, which was completed less than a year ago, and it slashes the Waste Prevention Rule's projected benefits by 87% or 78%, depending upon the discount rate applied.⁷

⁷ *See* 2017 RIA at Table 4.2d; 2016 RIA 8-2a.

Table 1

Estimated Social Benefits of the 2016 Final Waste Prevention Rule (\$ in million)											
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026

BLM produces these results primarily by assuming away almost all of the damages from climate change. Specifically, BLM makes two critical “interim” changes to the federal government’s prior standardized estimates of the cost of climate change – the “social cost of carbon” (“SCC”) or “social cost of methane” (“SCM”) estimates, which are expressed as dollars per ton of CO₂ or methane emitted to the atmosphere in a given year.⁸ BLM’s revised estimates represent a fundamental change in how a federal agency evaluates and monetizes the harm caused by release of a given quantity of greenhouse gases. This change has subsequently been reflected in other proposals to weaken safeguards issued by the Environmental Protection Agency.

These changes to the methodology for calculating the SCC and SCM erroneously make it appear that even the most cost-effective measures for reducing the impacts of climate change or preparing for it are not worth the cost. The changes also are contrary to widely accepted economic theory, the bulk of the peer-reviewed literature on climate science and cost-benefit assessment, recent recommendations on the SCC from the National Academies, and the approach taken in numerous other countries. A comment period of at least 90 days would be needed to provide an adequate opportunity for the public to provide feedback on these consequential, highly technical and exceedingly controversial changes apparently adopted (in sharp contrast to the prior SCC and SCM) hastily with little analysis and no peer-review.

The federal government’s estimate of the social cost of carbon, and its subsequent estimate of the social cost of methane, were developed through a multi-year inter-agency effort that has included extensive opportunities for public comment and peer review. This effort began in 2009 with the establishment of the Interagency Working Group on Social Cost of Carbon (“IWG”). Twelve federal agencies participated in the IWG, including the Council of Economic Advisors, the National Economic Council, the Office of Management and Budget (“OMB”), the Department of the Treasury, the Department of the Interior, the U.S. EPA, and the Office of

2016 RIA	3% discount	\$189	\$190	\$207	\$208	\$209	\$227	\$227	\$246	\$246	\$247
2017 RIA	3% discount	\$26	\$27	\$27	\$28	\$29	\$30	\$31	\$32	\$33	\$34
	7% discount	\$8	\$8	\$9	\$9	\$9	\$10	\$10	\$11	\$11	\$11

⁸ See Interagency Working Group on Social Cost of Greenhouse Gases, U.S. Government, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*, (Aug. 2016), https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf (“2016 SCC TSD”); Interagency Working Group on Social Cost of Greenhouse Gases, U.S. Government, *Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide* (Aug. 2016), https://www.epa.gov/sites/production/files/2016-12/documents/addendum_to_sc-ghg_tsd_august_2016.pdf.

Science and Technology Policy.⁹ The IWG issued its first set of estimates in 2010.¹⁰ These estimates underwent public comment through their use in multiple rulemakings, and the IWG formally updated the estimates in 2013, 2015 and 2016 (the last update included values specifically calculated for methane).¹¹ In 2015, the IWG asked the National Academies of Sciences, Engineering, and Medicine to review and make recommendations on the methodology for estimating the SCC. In 2016, in accordance with a first set of recommendations from the National Academies, the IWG retained the prior estimates while making some changes in the discussion of uncertainty around the estimates.¹² The National Academies issued its final report in 2017, which made recommendations for more comprehensive and longer-term updates to the methodology.¹³

Notably, in its two extensive and detailed reports on updating the methodologies, the NAS did *not* recommend the changes BLM now seeks to make on an “interim” basis: a shift from global to domestic estimates and the use of a higher discount rate (let alone a 7% rate). In fact, the NAS final report critiques previous efforts to calculate a social cost of carbon based solely on U.S. damages, and concludes that an accurate assessment of domestic-only impacts is not possible using the existing integrated assessment model methodologies because they are not designed to produce global estimates and do not model all relevant interactions among regions.¹⁴ The NAS further emphasized that effects that occur internationally may also have significant spill-over effects on the United States, which must be taken into account in any attempt to estimate domestic only impacts.¹⁵ In short, the IWG’s 2016 estimates represent the U.S. government’s best estimate to date of the costs of climate change.

Nonetheless, in the Proposed Rule, BLM develops and uses a new estimate of the social costs of methane. BLM used the IWG’s methodology and relied on the same three integrated assessment models (IAMs), with two discrete changes that dramatically reduce the final values.

⁹ Interagency Working Group on Social Cost of Carbon, United States Government, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (Feb. 2010), https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf.

¹⁰ *Id.*

¹¹ Interagency Working Group on Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (May 2013, Revised July 2015), <https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc-td-final-july-2015.pdf>; 2016 SCC TSD, *supra* n. 8.

¹² Committee on Assessing Approaches to Updating the Social Cost of Carbon, Board on Environmental Change and Society, National Academies of Sciences, Engineering, Medicine, *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update* (2016).

¹³ Committee on Assessing Approaches to Updating the Social Cost of Carbon, Board on Environmental Change and Society, National Academies of Sciences, Engineering, Medicine, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* (2017).

¹⁴ *Id.* at 54.

¹⁵ *Id.*

BLM adjusted the cost estimates to attempt to exclude all harms from climate change that occur outside of the United States, and BLM applied a much higher “discount rate,” which is used to estimate the present value of costs and benefits that occur in the future. BLM’s approach is fundamentally flawed and the results are invalid.

With these changes, BLM reduced the estimated social cost of methane in 2030 from \$1,729 per metric ton (using a 3% discount rate) under the final rule to \$81 or \$230 per metric ton (using a 7% or 3% discount rate, respectively).¹⁶ Thus, the proposed rule erroneously eliminates 95% or 87% of the estimated cost of the harm from climate change associated with one ton of methane. It is worth noting that the IWG produced four sets of alternative estimates to account for alternative discount rates and the possibility of low-probability-high-cost damages, but BLM’s new estimates fall well below even the lowest value previously presented.¹⁷ The effect is to reduce the estimate of the baseline benefits of the rule in 2017 from the \$209 million that BLM estimated in 2016 to either \$27 million or \$45 million, a reduction of 78% or 87%.¹⁸

BLM utterly fails to provide any substantive explanation for these highly consequential and controversial methodological choices. Instead, BLM hides behind the bare assertion that Circular A-4 requires the use of a domestic social cost of methane and 7 percent discount rates. *See* 2017 RIA, at 25. As discussed in separate comments submitted by the Institute for Policy Integrity (“IPI comments”), this assertion is false: the IWG’s 2016 estimates were designed to be entirely consistent with Circular A-4. Indeed, BLM’s interim social cost of methane is inconsistent with Circular A-4 in many key respects. Moreover, Circular A-4 does not relieve BLM of the obligation to provide a well-reasoned, non-arbitrary explanation for its interim estimate of the social cost of methane. As discussed in IPI comments and in Appendix 3, BLM has not and cannot do so because its approach is fundamentally flawed.

B. BLM’s 2017 RIA Includes Other Unwarranted Assumptions and Lacks Transparency

In addition to the 2017 RIA’s problematic reliance on the interim domestic social cost of methane, discussed above, the 2017 RIA suffers from incorrect fundamental assumptions about the regulatory landscape if the Proposal were to be finalized that render the 2017 RIA structurally flawed; selective revisions to the Final Regulatory Impact Analysis for the Waste Prevention Rule (“2016 RIA”), designed to artificially lower the benefits estimates of the final Waste Prevention Rule, while ignoring additional information that suggests the costs of implementing the final Waste Prevention Rule are likely to be lower, and benefits are likely to be higher; and a lack of transparency concerning the methodology, data inputs, and assumptions in

¹⁶ *See* 2016 RIA at 36; 2017 RIA at 26. Note that these numbers are not completely comparable, as the more recent estimate is expressed as 2016 dollars, while the earlier is expressed as 2012 dollars. The Waste Prevention Rule also presented alternative estimates for the social cost of methane using different discount rates and damage estimates – 5% average; 3% average; 2.5% average and 3% 95th percentile. The resulting values for 2030 range from \$822/metric ton to \$4,540/metric ton. 2016 RIA at 36.

¹⁷ *See id.*

¹⁸ *See* 2016 RIA at 109; 2017 RIA at 31.

the 2017 RIA, resulting in significant, unexplained and unsupportable changes from the analysis in the 2016 RIA.

1. The 2017 RIA makes several incorrect fundamental assumptions about the regulatory landscape that would result if the Suspension Proposal is finalized.

The 2017 RIA uses a scenario for estimating the effects of the Suspension Proposal that is drawn from the baseline, no-change scenario in the 2016 RIA. The 2017 RIA then assumes that none of the costs or benefits of the Waste Prevention Rule previously estimated in the 2016 RIA will occur during what the RIA refers to as Year 1 (the year between January 17, 2018 and January 2017, 2019), and that the Rule will then go into full effect on January 17, 2019, so the costs and benefits estimated in the 2016 RIA will merely be shifted later by a year. 2017 RIA at 24. This analytical framework is fundamentally flawed and does not accurately reflect the true impacts of BLM's Suspension Proposal.

First, the 2016 RIA assumed that NTL-4A is in effect and the 2017 RIA assumes that BLM's suspension will result in a return to NTL-4A. This assumption is no longer valid because NTL-4A was withdrawn and superseded in its entirety by the Waste Prevention Rule, 81 Fed. Reg. at 38,043, and the Proposal did not suggest that NTL-4A would be reinstituted during the Suspension Proposal.¹⁹ Instead, BLM claims that the suspension or delay of requirements in the Waste Prevention Rule “would not *necessarily* leave these operations unregulated, as operators will still need to comply with other Federal regulations and requirements, State regulations, and tribal regulations, *where applicable*,” 2017 RIA at 2 (emphasis added), and then mentions EPA regulation of new and modified oil and gas sources (proposed to be suspended, 82 Fed. Reg. at 27,645), as well as varying state requirements in six states. 2017 RIA at 17-20.

However, BLM does not address the lack of uniform federal standards controlling waste of publically-owned resources on federally-managed land. As a result of this gap in regulation, with neither NTL-4A nor key provisions of the Waste Prevention Rule in place during the Suspension Proposal, fewer protections against waste will be in effect during the Suspension Proposal than assumed in the baseline scenario for the 2016 RIA. BLM's failure to account for the changed regulatory landscape in the 2017 RIA fails to capture the true impacts of the suspension and is arbitrary and capricious. It results in an underestimation in the 2017 RIA of the additional waste of natural gas, and associated lost royalties and social harms, which will occur under the Suspension Proposal. BLM must correctly quantify the impacts of this gap in regulation on emissions and royalties.

¹⁹ Because BLM has not proposed to reinstate NTL-4A or solicited comment on reinstating NTL-4A in this proceeding, such a reinstatement would raise its own substantive and notice concerns. See *Fox Television*, 556 U.S. at 514-16 (agency changing course must offer “a reasoned explanation ... for disregarding facts and circumstances that underlay or were engendered by the prior policy”); *Home Box Office*, 567 F.2d at 36 (agency must “make its views known ... in a concrete and focused form so as to make criticism or formulation of alternatives possible”).

Second, BLM's assumption in the 2017 RIA that benefits and costs of the Waste Prevention Rule will merely be shifted one year into the future is clearly invalid, in light of BLM's ongoing reconsideration and announced plan to "rescind or revise the entire Waste Prevention Rule." BLM Mot. Extend Briefing Deadlines, D. Wyo. No. 2:16-cv-285-SWS, at 3 (Oct. 20, 2017), ECF No. 155. As discussed above, BLM is effectively beginning rescission of the Rule in this rulemaking procedure, but is attempting to mask the harmful effects of that rescission on the public by claiming in the 2017 RIA that all of the benefits of the Rule will still accrue, just a year later. BLM must fully account for ongoing reconsideration and announced rescission or revision of the Rule in the RIA for the proposal by presenting the costs and benefits of a scenario in which the Rule never is effective again.

Finally, BLM erred by comparing the 2016 RIA's analysis of the effects of the Waste Prevention Rule over a ten-year period between 2016-2026 with a eleven-year period between 2016-2027 in the 2017 RIA. *See, e.g.* 2016 RIA at 109; 2017 RIA at 34. The 2017 RIA thus arbitrarily assumes that the Waste Prevention Rule would have no effects in 2027, when the analysis done in the 2016 RIA did *not* determine that the Rule would have no effects in 2027, but merely ended its ten evaluation period in 2026. 2016 RIA at 38. The effect of BLM's mischaracterization of 2027 impacts is to understate the effects of the Suspension Proposal.

2. BLM ignored information indicating that the costs of the Waste Prevention Rule would be lower or that benefits of the Rule would be higher when updating the underlying assumptions for the 2017 RIA, and improperly considered only monetized impacts.

BLM's "notable changes" to the 2016 RIA analysis all had the effect of artificially lowering the estimates of benefits and royalties attributable to the final Waste Prevention Rule. Notably, however, BLM did not consider information indicating that the costs of the Waste Prevention Rule are actually *lower* than estimated in the 2016 RIA, or that the benefits of the Waste Prevention Rule are actually *higher* than estimated in the 2016 RIA, and BLM neglected to analyze non-monetized impacts at all. BLM's suggestions that the agency should not consider or monetize climate benefits at all further underscore that this results-oriented analysis is arbitrary and that the Secretary has predetermined the outcome of this rulemaking based on his preferred course of action. BLM's failure to consider "important aspect[s] of the problem" render its actions arbitrary and capricious. *State Farm*, 463 U.S. at 42-43.

For instance, evidence from producer Jonah Energy in Wyoming shows declining inspection costs as LDAR methods are improved—from less than \$99 per inspection in the first year of Jonah's LDAR program to less than \$29 per inspection in the program's fifth year—indicating that the compliance costs from the Waste Prevention Rule will likely decline over time, as well as cumulative gas savings that more than offset LDAR program costs. Jonah Energy, Presentation at Wyoming County Commissioners Association Spring Meeting (May 8, 2015); *see also* FLIR Systems, *Comments on BLM's Proposed Waste Prevention Rule*, Docket ID BLM-2016-0001-9035 (April 22, 2016), available at <https://www.regulations.gov/document?D=BLM-2016-0001-9035>. Major operators are now in compliance with the Waste Prevention Rule, and are even taking additional steps to reduce

natural gas leakage, further indicating that the standards are cost-effective.²⁰ In the 2016 RIA, BLM likewise noted that the LDAR cost and gas savings data that it used to calculate the cost and benefits estimates for the Waste Prevention Rule “likely understate the benefits of the BLM provisions, and may substantially understate them.” 2016 RIA at 87.

BLM also neglected to analyze the loss of public health and safety benefits generated by implementing the Waste Prevention Rule due to the Proposal. *See id.* at 6-7; 81 Fed. Reg. at 83,014, 83,049. Public health benefits occur because the waste prevention requirements in the Rule also reduce air pollution from volatile organic chemicals, fine particulate matter and other hazardous air pollutants, resulting in significant benefits to public health. Dangerously, BLM also neglects to analyze the impacts of the Proposal for worker safety, one of the purposes of the Waste Prevention Rule. *See* 81 Fed. Reg. at 83,049 (“[T]he requirement to flare rather than vent associated gas is justified as a safety measure under the MLA.”).

Instead, in the 2017 RIA, BLM improperly considered only the monetized costs and benefits of the rule, failing to analyze the lost public health and safety benefits. This analysis violates Executive Order 12,866, which states an “agency shall assess both the costs and the benefits of the intended regulation and, *recognizing that some costs and benefits are difficult to quantify*, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs,” and is arbitrary and capricious. E.O. 12,866 Sec. 1(b)(6) (emphasis added); *see also* 2016 RIA at 9 (purpose of economic analysis under E.O. 12,866 is to determine that the “potential benefits to society justify the potential costs, *recognizing that not all benefits and costs can be described in monetary or even in quantitative terms* (emphasis added)). The 2017 RIA neglects to even mention, let alone discuss, the lost benefits for public health that will result from the Suspension Proposal, despite acknowledging the Suspension Proposal will cause “additional VOC emissions of 250,000 tons in Year 1.” 2017 RIA at 31.

Although it monetized climate impacts in the 2017 RIA (using an artificially discounted interim SCM, as discussed above and in the SCM Comment), BLM also suggested that it believes it is improper to consider societal benefits from lower GHG emissions under the MLA. 2017 RIA at 25. BLM also indicated that it considered an “alternative approach” of omitting *any* monetized estimation of climate impacts when calculating net benefits of the Suspension Proposal. 2017 RIA at 57. As an initial matter, Circular A-4 requires agencies to “look beyond the direct benefits and direct costs of your rulemaking and consider any important ancillary benefits and countervailing risks.” Circular A-4 § E.6.

²⁰ For example, XTO Energy, the production subsidiary of ExxonMobil, recently announced that “XTO is complying with recent EPA (New Source Performance Standards) and Bureau of Land Management (Waste Prevention) regulations intended to reduce methane and volatile organic compound emissions... XTO has established a methane emissions reduction program that both ensures compliance with applicable regulations and expends considerable effort beyond regulatory requirements.” XTO Energy, *Methane Emissions Reduction Program* (last visited Nov. 6, 2017) <http://www.xtoenergy.com/responsibility/current-issues/air/xto-energy-methane-emissions-reduction-program#/section/1-regulatory-requirements>.

More fundamentally, BLM's statement that "BLM does not consider the monetized benefits of avoiding GHG emissions as a statutory basis under the MLA for rulemaking in this area" because the MLA "does not include climate-related benefits from changes in GHG emissions as factors that BLM should consider in exercising" waste prevention authority is fundamentally incorrect and inconsistent with BLM's statutory obligations. 2017 RIA at 25. One of the purposes of the MLA is "safeguarding of the public welfare," which encompasses environmental harms. 30 U.S.C. § 187 (requiring lease terms for these purposes); *Natural Res. Def. Council v. Berkland*, 458 F. Supp. 925, 936 (D.D.C. 1978) (Section 187's public welfare goal gives BLM "broad authority to set lease terms to prevent environmental harm."). And under FLPMA, BLM must manage public lands for multiple use and "in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." 43 U.S.C. § 1701(a)(8), 1702(c); *see also* 43 U.S.C. § 1732(b) (BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands").

In analogous circumstances, courts have rejected arguments that federal agencies are unable to consider the benefits of greenhouse gas reductions when evaluating regulatory actions, and in many cases are *required* to do so. *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1203 (9th Cir. 2008) (holding that NHTSA was required to monetize the benefit of carbon emissions reduction in its analysis of the proper fuel economy standards); *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 677 (7th Cir. 2016) (rejecting industry argument that the Energy Policy and Conservation Act "does not allow DOE to consider environmental factors" and holding that in determining "whether an energy conservation measure is appropriate under a cost-benefit analysis, the expected reduction in environmental costs needs to be taken into account"); *see also Michigan v. EPA*, 135 S. Ct. 2699, 2709 (2014) (faulting EPA for not taking into account all relevant factors including both direct and indirect costs). BLM's statutory authorities likewise require the agency to analyze the impacts of its actions on the public welfare and the environment.

Similarly, BLM's "alternative approach" to a cost-benefit analysis that assigns *no monetized benefit* to reductions in climate-related harms, due to "uncertainty" in SCM models, is arbitrary. 2017 RIA at 57. As discussed more fully in the SCM Comment, it is deeply improper to assign a value of no benefit when there is a range of possible benefits. And as the Ninth Circuit recognized in *Center for Biological Diversity*, the value of greenhouse gas emissions reductions is "certainly not zero." 538 F.3d at 1200.

3. BLM Improperly Disregards Impacts Associated with Lost Royalties.

While BLM acknowledges that "[i]n the short-term, the rule is expected to decrease natural gas production from Federal and Indian leases, and likewise is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners," it fails to address the impacts of reduced royalty revenues to state, local and tribal governments. In its analysis of royalty impacts, the 2017 RIA forecasts a reduction in royalties of \$2.61 million in

Year 1.²¹ BLM states that this is neither a cost nor a benefit of the rule, because “[r]oyalty 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.” 2017 RIA at 42.

However, BLM’s treatment of royalties ignores a fundamental purpose of BLM’s statutory mandates—BLM’s obligation to manage oil and gas development on public lands for the benefit of the public. *See supra* Section III.B.1.; *California Co.*, 296 F.2d at 388 (MLA is “intended to promote wise development of these natural resources and to obtain for the public a reasonable financial return on assets that ‘belong’ to the public.”).

BLM attempts to dodge any analysis of the impact of the Proposal on its ability to “obtain for the public a reasonable financial return on assets that belong to the public,” 296 F.2d at 388, in the 2017 RIA, merely stating that “[w]hile 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.*” 2017 RIA at 42 (emphasis added). While BLM follows the OMB Circular A-4 instruction that “[y]ou should not include transfers in the estimates of the benefits and costs of a regulation,” it entirely ignores the second part of the guidance—to “[i]nstead, address them in a separate discussion of the regulation’s distributional effects.” OMB Circular A-4. Office of Mgmt. & Budget, *Circular A-4, Regulatory Analysis* at 38 (Sept. 2003) (“Circular A-4”). No such description is forthcoming. This omission is particularly glaring, since BLM is obligated to consider royalty impacts not just as “distributional effects” under OMB guidance, but as one of its fundamental statutory obligations.

Changes in royalties due to the Proposal will also have significant impacts on state, tribal, and local governments. Natural gas royalties are an important source of revenues for state governments with significant natural gas production on Federal lands (see Table 2).²² States have different policies for sharing federal mineral royalties with local governments. BLM must consider and discuss the effect of lost royalty revenues to state, tribal, and local governments from the one-year Suspension Proposal.

Table 2

Natural Gas Royalties for Key Western States, FY 2015 (\$ millions)		
State	Royalty Payment	Percent of all federal royalties
Wyoming	\$199.9	22.4%
New Mexico	\$135.0	27.0%
Colorado	\$51.6	41.3%
Utah	\$40.8	34.8%

²¹ As discussed *infra* in Section VI.B.4, BLM’s calculation of royalty impacts in later years in the 2017 RIA is arbitrarily unexplained, and therefore unreliable.

²² *See* Headwaters Economics, Economics Profile System, *A Profile of Federal Land Payments, State Region: Wyoming; New Mexico; Colorado; Utah* (Nov. 2, 2017), <https://headwaterseconomics.org/tools/economic-profile-system/>

4. The 2017 RIA lacks transparency, resulting in unexplained and unsupportable changes from the 2016 RIA.

Although BLM claims the 2017 RIA “generally uses the underlying assumptions used by BLM for the RIA prepared for the 2016 final rule,” BLM acknowledges that it made “some notable changes” in the 2017 RIA. 2017 RIA at 24. BLM notes that it made changes to the estimation of the social cost of methane discussed above, as well as crude oil and natural gas price assumptions. *See* 2017 RIA at 25. BLM does not detail any other changes, “notable” or otherwise, that it has made from the 2016 RIA. For the changes that it does note, BLM does not disclose key assumptions or methodologies. This lack of transparency renders BLM’s analysis arbitrary, and forecloses opportunities for meaningful public comment.

For example, BLM has not even listed the oil and gas price assumptions it uses in the 2017 RIA, nor has it described in detail the “downward” adjustment methodology used or that downward adjustment’s impact on price. 2017 RIA at 25. BLM instead cites generally to an Energy Information Administration forecast, which shows similar price projections to those used in the 2016 RIA. 2017 RIA at n. 26. In contrast, in the 2016 RIA, BLM described specific price projections and the downward-adjustment methodology, and acknowledged that the methodology is very conservative. 2016 RIA Table 7-5.

It appears that this change in price assumptions has led to decreases in the estimates of cost savings and royalties attributable to the Rule in the 2017 RIA relative to the 2016 RIA. However, because BLM did not disclose its price assumptions in the 2017 RIA, it is impossible to evaluate the 2017 RIA analysis or understand why it differs from the 2016 RIA.

Table 3

Estimated Cost Savings from Natural Gas Recovery Under Waste Prevention Rule (\$ in million)										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2016 RIA	\$20	\$44	\$54	\$76	\$79	\$92	\$110	\$140	\$157	\$152
2017 RIA	\$19	\$41	\$54	\$77	\$80	\$90	\$99	\$124	\$138	\$142

2017 RIA at Table 4.2c; 2016 RIA at Table 8-2a.

This lack of transparency is particularly problematic with the royalty estimates in the 2017 RIA. The 2017 RIA incremental royalty estimates attributable to the Waste Prevention Rule do not match the incremental royalties predicted in the 2016 RIA. BLM acknowledges in the 2017 RIA that the Suspension Proposal will result in lost royalties of \$2.61 million over the one-year delay, and this “Year 1” estimate is generally in line with, although slightly lower than, the 2016 RIA’s estimate that the Waste Prevention Rule would secure additional royalties of \$2.7 million in its first year. 2017 RIA Table at 43; 2016 RIA Table 8-4b.

However, the 2017 RIA shows an incremental loss in royalties resulting from the Rule in later years whereas the 2016 RIA shows positive incremental royalties resulting from the Waste Prevention Rule in later years. The 2017 RIA does not provide details as to how the incremental

royalties were recalculated. Because the estimated incremental production resulting from the Waste Prevention Rule is the same between the 2016 RIA and 2017 RIA, and the forecasted oil and natural gas prices are similar, it should follow that the baseline incremental royalty as a result of the Waste Prevention Rule should be very similar. BLM’s analysis in the 2017 RIA is arbitrary and fails to explain the significant divergences from the agency’s previous analysis.

Based on this flawed analysis, the 2017 RIA calculates that a one-year suspension of the Waste Prevention Rule would result in a *net increase of royalties* over an eleven-year period: “We estimate a reduction in royalties of \$2.61 million in Year 1. However, over 11 years of implementation (2017-2027), we estimate an increase in royalties from the baseline of \$1.26 million (NPV using a 7% discount rate) or \$380,000 (NPV using a 3% discount rate).” 2017 RIA at 43. This “positive” effect of the one-year suspension is solely a result of the fact that the 2017 RIA now calculates that the Waste Prevention Rule would result in a reduction of royalties, and is a completely unexplained change from BLM’s royalty estimates in the 2016 RIA.

Table 4

Estimated Incremental Royalty Under Waste Prevention Rule (\$ in millions)										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2016 RIA	\$2.7	\$6	\$6.8	\$6.9	\$3.7	\$3.8	\$6.9	\$10.3	\$10.2	\$9
2017 RIA	\$2.61	\$4.72	\$4.95	(\$2.29)	(\$15.70)	(\$18.00)	(\$8.60)	(\$0.13)	(\$3.19)	(\$3.52)

2017 RIA Table 4.4b; 2016 RIA Table 8-4b.

VI. The Suspension Proposal Violates The National Environmental Policy Act.

As discussed above, BLM’s Suspension Proposal violates the MLA, the APA, and is arbitrary and capricious. BLM has no legal authority to suspend the Waste Prevention Rule. Moreover, BLM’s analysis required under the National Environmental Policy Act (“NEPA”) falls short of the statutory requirements. BLM’s Environmental Assessment (“EA”) for the Suspension Proposal violates NEPA because BLM predetermined the outcome, failed to consider a reasonable range of alternatives, prepared an EA rather than an environmental impact statement (“EIS”), and did not take a hard look at the impacts of suspending the Waste Prevention Rule.

A. BLM Unlawfully Predetermined the Outcome of this Proceeding.

BLM decided on its course of action—suspending the Rule while it reconsidered its requirements—months ago, and is only now producing an EA to retroactively justify its decision. NEPA requires agencies to “integrate the NEPA process with other planning at the earliest possible time.” 40 C.F.R. § 1501.2. This ensures that agencies conduct NEPA analysis “before any irreversible and irretrievable commitment of resources” is made. *Conner v. Burford*, 848 F.2d 1441, 1446 (9th Cir. 1998). When an agency prepares an EA only after committing to a course of action, it does so “too late in the decision-making process.” *Metcalf v. Daley*, 214 F.3d 1135, 1143 (9th Cir. 2000). BLM committed itself to both revising or rescinding the Waste

Prevention Rule, and to suspending the Rule while it settled on an exact course of action, prior to conducting any NEPA analysis.

BLM has committed to revising or rescinding the Waste Prevention Rule without undertaking any of the necessary NEPA analysis. As an outgrowth of this preordained assumption that the Waste Prevention Rule will be revised or rescinded, BLM predetermined that it would suspend the Rule to avoid imposing compliance costs during the reconsideration period. BLM also made this decision to suspend the Rule prior to conducting the necessary NEPA analysis. In March 2017, Secretary Zinke, without any supporting analysis, ordered BLM to draft a report on whether to revise or rescind the Rule. Secretary of the Interior Order No. 3349 at § 5(c)(ii) (Mar. 29, 2017). After this review—which was not provided to the public, let alone vetted through public review and comment—was completed, BLM unilaterally, without any public process, indefinitely stayed the Rule’s compliance dates, concluding that operators should not have to incur compliance costs during the ongoing administrative reconsideration process. 82 Fed. Reg. at 27,431. Around the same time, BLM represented to the District of Wyoming that it had “developed a three step plan to propose to revise or rescind the Rule and prevent any harm from compliance with the Rule in the interim.” Fed. Resp’ts’ Mot. to Extend Briefing Deadlines at 3. Step two of that plan is “to conduct notice and comment rulemaking to propose to suspend certain provisions of the Rule already in effect and extend the compliance dates of requirements not yet in effect BLM intends to publish this proposed rule for public notice and comment before the end of August 2017, and to publish a final rule in advance of the January 2018 compliance dates.” *Id.* at 3-4.

Consistent with this plan (although a few months behind schedule), BLM is now proposing to suspend or delay the Rule’s requirements until its administrative review is complete. 82 Fed. Reg. at 46,460. As discussed above, *supra* Section III.B.3, just a few days after proposing the suspension Rule, BLM committed to the federal court in Wyoming that it would finalize the suspension by December 8, 2017, and that the outcome was set: “[o]nce the Suspension Rule is completed, it will provide the immediate relief sought by Petitioners—relief from the portions of the Waste Prevention Rule that would otherwise come into effect on January 17, 2018, as well as other provisions of the Waste Prevention Rule already in effect.” Fed. Resp’ts’ Mot. for an Extension of the Merits Briefing Deadline at 4, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285-SWS (D. Wyo. Oct. 20, 2017), ECF No. 155. BLM’s multiple written commitments to a timeframe for suspending the Rule demonstrate that it made up its mind about the outcome of the NEPA process months before it even started its NEPA analysis, let alone sought public comment on the EA. This is deeply problematic; “[o]nce large bureaucracies are committed to a course of action, it is difficult to change that course—even if new, or more thorough, NEPA statements are prepared and the agency is told to ‘redecide.’” *Massachusetts v. Watt*, 716 F.2d 946, 952-53 (1st Cir. 1983) (imposing injunction on sale of offshore oil and gas leases for NEPA violations).

BLM “did not even consider the potential environmental effects of the proposed action until long after [it] had already committed in writing” to its proposed action. *Metcalf*, 214 F.3d at 1143. BLM “commit[ted] itself to a plan of action that is dependent upon the NEPA environmental analysis producing a certain outcome, before the agency has completed that environmental analysis—which of course is supposed to involve an objective, good faith inquiry

into the environmental consequences of the agency's proposed action." *W. Slope Colo. Oil & Gas Ass'n v. Jewell*, No. 14-cv-02764-CMA, 2017 WL 3530283, at *8 (D. Colo. Aug. 16, 2017). BLM predetermined the outcome of its analysis in violation of NEPA.

B. BLM Failed to Analyze a Full Range of Reasonable Alternatives.

BLM does not have explicit or inherent authority to suspend the Waste Prevention Rule. *See supra* pp. 5-13. Accordingly, the only alternative under consideration that fulfills BLM's legal duties is keeping the Rule fully in effect—the No Action Alternative—unless and until BLM undertakes the necessary analysis to change the rule in full compliance with the MLA and APA. The Joint Environmental Commenters therefore support the No Action Alternative. But, even under BLM's flawed interpretation of its legal authority, its decision to analyze just two alternatives, the No Action Alternative and suspending or delaying the Waste Prevention Rule for a year, violates NEPA. *See* EA at 4.

BLM's preordained decision to suspend the Rule while it considers revising or rescinding it artificially constrained its NEPA analysis, and as a result the agency failed to analyze several reasonable alternatives, including alternatives that BLM admits were, and are, under consideration. NEPA requires BLM to analyze in detail "all reasonable alternatives." 40 C.F.R. § 1502.14(a). "Reasonable alternatives . . . include alternatives that are technically and economically practical or feasible and meet the purpose and need of the proposed action." 43 C.F.R. § 46.420(b). The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *N.M. ex rel Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must identify multiple viable alternatives, so that an agency can make "a real, informed choice" between the spectrum of reasonable options. *Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024, 1039 (9th Cir. 2008). BLM has not done that here.

1. BLM Unreasonably Narrowed the Purpose and Need for the Proposed Action by Considering Only Private Interests and Ignoring Its Own Statutory Mandates.

"[A]gencies are not permitted 'to define the objectives [of a proposed action] so narrowly as to preclude a reasonable consideration of alternatives.'" *Wyoming v. U.S. Dep't of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011)) (alteration in original) (quoting *Citizens' Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1030 (10th Cir. 2002)). "A purpose and need statement will fail if it unreasonably narrows the agency's consideration of alternatives so that the outcome is preordained." *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1084 (9th Cir. 2013). Although agencies must at least acknowledge private objectives, this "is a far cry from mandating that those private interests define the scope of the proposed project." *Nat'l Parks & Conservation Ass'n v. BLM*, 606 F.3d 1058, 1070 (9th Cir. 2010). Accordingly, agencies violate NEPA when they "draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private objectives." *Id.* at 1072.

BLM has done exactly that here. Despite BLM's governing statutes—which plainly require BLM to consider the public interest—BLM has unreasonably narrowed its analysis by crafting a purpose and need statement that excludes alternatives that do not meet solely private objectives. BLM states that the purpose and need for its action is “to ensure that operators do not incur substantial and unnecessary compliance costs associated with regulatory requirements that may be revised or rescinded in the near future.” EA at 3. Reducing compliance costs while depriving federal, state, and tribal treasuries of royalties benefits only private interests, not the public interest. BLM's myopic focus on compliance costs preordains the outcome of this proceeding, artificially narrowing the purpose and need of BLM's action, and causing it to consider only alternatives that benefit private interests, instead of the public as a whole. *See Or. Nat. Desert Ass'n v. BLM*, 625 F.3d 1092, 1124 (9th Cir. 2010) (“[U]ncritical privileging of one form of use over another . . . violates NEPA.” (quotation omitted)).

In fact, BLM ignores its statutory obligations to prevent unreasonable waste and protect the environment altogether. Agencies are to determine the purpose of and need for their actions based on “the views of Congress, expressed, to the extent that the agency can determine them, in the agency's statutory authorization to act.” *Nat'l Parks & Conservation Ass'n*, 606 F.3d at 1070 (quotation omitted). Thus, “[w]here an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS.” *Alaska Survival*, 705 F.3d at 1084–85 (quoting *Westlands Water Dist. v. U.S. Dep't of the Interior*, 376 F.3d 853, 866 (9th Cir. 2004)). In other words, “an alternative is reasonable only if it falls within the agency's statutory mandate.” *N.M. ex rel. Richardson*, 565 F.3d at 709. Here, BLM has defined the purpose and need narrowly without consideration of its relevant statutory mandates, such as requiring operators to “use all reasonable precautions to prevent waste of oil or gas” under the MLA, 30 U.S.C. § 225, and taking “any action necessary to prevent unnecessary or undue degradation of the lands” under FLPMA, 43 U.S.C. § 1732(b). None of these directives instruct BLM to fixate on compliance costs to the exclusion of a broad range of public interest values that BLM must account for pursuant to the MLA and FLPMA.

Moreover, as discussed above, BLM has not identified an actual *need* for its proposed course of action. *See supra* pp. 10-12. Although BLM claims the compliance costs pose a “substantial burden” to industry, the evidence in the record points to the opposite conclusion. BLM has offered no contrary evidence to support its stated need for the proposed action. Indeed, BLM acknowledges that it has developed the purpose and need for its proposed action not based on an objective consideration of the facts before the agency in light of the relevant statutes, but rather based on directives in Executive and Secretarial orders. *See* EA at 3.

2. BLM Failed to Analyze Alternatives to Fill the Regulatory Void Created by Its Action.

Because BLM artificially constrained the purpose and need for the proposed action, it failed to analyze multiple reasonable alternatives. For example, by virtue of proposing to suspend compliance dates until 2019, BLM has created a regulatory void that abdicates its responsibilities to prevent waste. *See supra* p. 10. By not identifying and considering—let alone choosing—any action alternatives that would fill this void during the time period the Waste Prevention Rule's provisions are suspended, BLM violates NEPA's duty to assess reasonable

action alternatives that implement the agency's MLA and FLPMA duties to prevent natural gas waste.

The RIA claims that “[t]he temporary suspension or delay of certain requirements in the 2016 final rule would not leave the oil and gas operations on Federal and Indian leases unregulated with respect to the activities governed by the provisions being suspended or delayed.” RIA at 17; *see also* EA at 12 (“Where EPA and State regulatory overlap exists, the Proposed Action to delay the 2016 final rule’s requirements would not represent a change from the baseline environment.”). But BLM has previously concluded that these existing regulations are not sufficient to meet its statutory obligations to prevent waste and has provided no analysis sufficient to justify a change in position. *See infra* pp. 40-41, 47, 49. BLM, by not considering action alternatives that satisfy its MLA and FLPMA duties, thus fails to “sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14.

3. BLM Failed to Consider Suspending Leasing and Permitting Decisions While the Waste Prevention Rule Is Also Suspended.

In proposing to suspend the Waste Prevention Rule’s compliance dates, BLM failed to consider a reasonable action alternative: the temporary suspension of new decisions to issue new oil and gas leases and to approve new applications for permits to drill. Given that the proposed rule leaves a regulatory void during the time that the rule is suspended (other than existing state and federal requirements that BLM has determined are inadequate to prevent waste), if BLM is going to proceed with this approach, it must consider other alternatives that would mitigate this waste. A temporary suspension of decisionmaking involving the issuance of new oil and gas leases and the approval of new applications for permits to drill would help ensure that the agency, during the time period the Waste Prevention Rule’s provisions are suspended, satisfies its duty to prevent waste.

Critically, while this would address the risk of waste from new oil and gas leases and drilling permits, it would not prevent waste from ongoing, already-approved production operations—an important aspect of the Waste Prevention Rule, and a reason the Conservation Groups support the No Action Alternative. Nonetheless, even under BLM’s narrow purpose and need, it is a viable, reasonable alternative that BLM should consider through the NEPA process.

4. BLM’s Artificially Narrow Objective Caused It to Overlook Delaying Only Portions of the Rule With Future Compliance Dates.

Although BLM “initially considered . . . delaying only the portions of the 2016 final rule” with future compliance dates, it “eliminated [this alternative] from further consideration” because it “would leave intact requirements that appear to impose unnecessary burdens on operators.” EA at 8. By BLM’s own admission, “[a]s a result of [its] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives.” *Nat’l Parks & Conservation Ass’n*, 606 F.3d at 1072.

BLM did not quantify or support its assertion that requirements that have been in effect for nearly a year “appear to impose unnecessary burdens on operators.” BLM’s logic is circular. Because BLM did not actually analyze the alternative of delaying only provisions of the Rule with future compliance dates, it cannot say for certain whether provisions of the Rule that operators are already complying with actually impose unnecessary costs. As the Seventh Circuit has explained, “[a]lternatives might fail abjectly on economic grounds. But [agencies] and, more important, the public cannot know what the facts are until the [agency] has tested its presumption.” *Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664, 669 (7th Cir. 1997).

5. BLM Failed to Analyze the Impacts of a Six-Month Suspension, Even Though It Continues to Consider this Option.

Even under its flawed and overly-narrow focus solely on private interests, BLM violated NEPA by failing to analyze reasonable middle-ground options, such as suspending the Waste Prevention Rule for a shorter time period of six months. Agencies cannot willfully ignore plausible alternatives that present “potentially appealing middle-ground compromise[s] between the absolutism of [a high-impact proposed action] and no action alternatives.” *Wilderness Soc’y v. Wisely*, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007). Agencies violate NEPA when they ignore an alternative that goes farther than the no action alternative, but less far than the agency’s proposed action. *N.M. ex rel. Richardson*, 565 F.3d at 711.

In the EA, BLM acknowledged that it “considered the appropriate length of a proposed suspension or delay,” before “[u]ltimately . . . decid[ing] to propose a suspension or delay for one year.” EA at 8. Agencies must provide specific analysis about why they choose to reject an alternative. *See Colo. Envtl. Coal. v. Salazar*, 875 F. Supp. 2d 1233, 1249–50 (D. Colo. 2012). BLM’s conclusory explanation, without further reason, violates NEPA’s requirement that an agency provide a “reasonable explanation justifying” its selection of alternatives. *California v. Block*, 690 F.2d 753, 769 (9th Cir. 1982) (holding that agency violated NEPA by “overlook[ing] the obvious alternative” of taking a middle-ground approach which met its purpose and need).

Indeed, there is ample evidence that BLM is, in fact, still actively considering a six-month suspension. In the proposed rule, BLM also explained that it “considered alternative timeframes for which it could suspend or delay the requirements (*e.g.* 6 months and 2 years).” 82 Fed. Reg. at 46,465. The agency acknowledged that “[a] shorter suspension of [sic] delay of the same 2016 final rule requirements would result in a smaller reduction in compliance costs, smaller reduction in cost savings, and a smaller amount of foregone emissions reductions, relative to the proposal.” *Id.* BLM also solicited public comment about “the appropriate length of the proposed suspension and delays,” and “whether the period should be longer or shorter (*e.g.*, six months, 18 months, or 2 years).” *Id.* at 46,460.

In the RIA, BLM was even more explicit that it is still considering a six-month suspension. The RIA acknowledges that BLM initially considered other timeframes before settling on one year, but goes on to explain that BLM’s 1-year decision is still open to reconsideration, and the agency “may revise the length of the suspension or delay for the final rule.” 2017 RIA at 10. Throughout the RIA, BLM quantifies the costs and benefits of limiting the suspension to six months. *Id.* at 29–30, 33–34, 36–39, 41, 43, 48–49. In a section of the RIA

devoted entirely to analyzing the costs and benefits of the six-month suspension, BLM acknowledges that the shorter suspension would have “a smaller change in the value of emissions reductions” and quantifies the foregone methane emissions reductions. RIA at 48. The analysis in the RIA demonstrates that BLM continues to actively consider the six-month suspension option—but the purely economic analysis in the RIA is no substitute for an actual analysis of the environmental and public health impacts of suspending the Waste Prevention Rule for a shorter period of time. In order to meaningfully consider this option, and for the public to meaningfully comment on it, BLM needs to provide a side-by-side comparison of not only compliance costs and foregone gas capture, but also the reduced methane, VOC, and HAPs emissions from a shorter suspension. BLM’s failure to analyze the impacts of an alternative that remains under active consideration, especially an alternative with greater environmental benefits than the one alternative that the agency did analyze, also violates NEPA. *See ‘Ilio’ulaokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1098–99 (9th Cir. 2006).²³ While Joint Environmental Commenters reiterate that a suspension or delay for any amount of time is inappropriate, BLM is nevertheless obligated under NEPA to evaluate alternatives that fall between all and nothing.

BLM’s decision not to analyze the impacts of an alternative that remains under consideration violates the “rule of reason” for determining whether an agency assessed a reasonable range of alternatives. *Wyoming*, 661 F.3d at 1243–44. Agencies violate NEPA when they dismiss alternatives “in a conclusory and perfunctory manner that do[es] not support a conclusion that it was unreasonable to consider them as viable alternatives in the EA.” *Davis v. Mineta*, 302 F.3d 1104, 1122 (10th Cir. 2002). The only explanation that BLM gave for its choice not to consider the six-month alternative is that “BLM believes [one year] to be the minimum length of time practicable within which to review the 2016 final rule and undertake a notice-and-comment rulemaking to revise that regulation, if necessary.” EA at 8. BLM did not explain why reconsideration requires a year, rather than six months. Indeed, the agency soliciting public comment about the appropriate length of a stay demonstrates that it is uncertain about the appropriate amount of time for reconsideration. BLM’s conclusory explanation falls short of what NEPA demands. *Davis*, 302 F.3d at 1122.

C. BLM Must Prepare an Environmental Impact Statement Because Suspending the Waste Prevention Rule Has Significant Effects.

²³ Agencies need not consider “every conceivable permutation” or “alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences.” *Westlands Water Dist. v. U.S. Dep’t of the Interior*, 376 F.3d 853, 871–72 (9th Cir. 2004) (quotations omitted). But, as demonstrated by BLM’s own economic analysis in the RIA, there are meaningful distinctions—in terms of lost waste reduction benefits and increased methane emissions, as well as reduced compliance costs—between the no action alternative, suspending the Rule for six months, and suspending the Rule for a year. *See* RIA at 30, 33–34, 36–39, 41, 43, 48–49. BLM has analyzed only an action and no-action alternative, with no mid-range alternatives; analyzing the impacts of a middle ground alternative would foster informed decisionmaking and better public participation. *Cf. Mont. Wilderness Ass’n v. Connell*, 725 F.3d 988, 1004–05 (9th Cir. 2013).

BLM's cursory 21-page EA gives little insight into the significance of BLM's proposal to suspend or delay a nationally applicable regulation that prevents the waste billions of cubic feet of natural gas and of millions of dollars of lost royalties while simultaneously reducing emissions of hundreds of thousands of tons of dangerous pollutants. For a proposal of this magnitude, NEPA requires BLM to prepare an EIS in order to look before it leaps. *See Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, No. CV 16-1534 (JEB), 2017 WL 4564714, at *10 (D.D.C. Oct. 11, 2017). Yet BLM has not even conducted the analysis necessary to determine whether an EIS is necessary. Considering the relevant factors, it is clear that BLM must indeed prepare an EIS before it suspends the Waste Prevention Rule.

1. BLM Has Not Yet Conducted the Analysis Necessary to Determine Whether an EIS Is Necessary.

BLM has neither crossed the threshold step of determining whether an EIS is necessary, nor acknowledged that it must do so. EAs must “[b]riefly provide[] sufficient evidence and analysis for determining whether to prepare an [EIS].” *See Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004) (first and third alternations in original) (quoting 40 C.F.R. § 1508.9(a)). “If, pursuant to the EA, an agency determines that an EIS is not required under applicable [Council on Environmental Quality (CEQ)] regulations, it must issue a ‘finding of no significant impact’ (FONSI), which briefly presents the reasons why the proposed agency action will not have a significant impact on the human environment. *Id.* at 757–58 (citing 40 C.F.R. §§ 1501.4(e), 1508.13). Interior Department regulations provide that “[u]pon review of the environmental assessment by the Responsible Official, the environmental assessment process concludes with” one of several options, including a decision to complete an EIS, abandon the project altogether, or a FONSI. 43 C.F.R. § 46.325. BLM has not yet fulfilled this requirement.

Failing to provide a draft FONSI at the proposed rule stage is inconsistent with BLM's prior practices in nationally-applicable regulatory proceedings. Just a few months ago, BLM issued an EA for a different regulatory change—its proposal to rescind the Hydraulic Fracturing Rule. BLM, *Environmental Assessment: Rescinding the Hydraulic Fracturing on Federal and Indian Lands Rule*, DOI-BLM-WO-WO3100-2017-0001-EA (July 2017), www.regulations.gov/document?D=BLM-2017-0001-0003. That EA included a FONSI that considered the requisite factors for determining whether an EIS is necessary. *Id.* at 41–46. BLM also included a FONSI in the draft EA accompanying both of its proposed Hydraulic Fracturing Rules. *See* BLM, *Environmental Assessment: Proposed Hydraulic Fracturing Rule*, DOI-BLM-WO300-2012-XXX-EA at 42–43 (May 24, 2013), <https://www.regulations.gov/document?D=BLM-2013-0002-0003>; BLM, *Environmental Assessment: Proposed Well Stimulation Rule*, DOI-BLM-WO300-2012-XXX-EA at 23–24 (May 10, 2012), <https://www.regulations.gov/document?D=BLM-2012-0001-0002>. BLM's failure to provide a draft FONSI hinders the public's ability to comment on BLM's analysis of the significance factors.²⁴

²⁴ Notably, the Federal Register notice for the Suspension Proposal states that a draft FONSI has “been posted in the docket for the rule on the Federal eRulemaking Portal,” and solicits public comment on the draft FONSI. 82 Fed. Reg. at 46,473. But there is in fact no draft FONSI available in the e-docket of for the Rule on Regulations.gov. *See* Regulations.gov, *Docket Folder Summary: Proposed rule; Waste Prevention, Production Subject to Royalties, and Resource*

2. An EIS Is Necessary Under CEQ's Significance Factors.

Although BLM has performed the analysis, the relevant significance factors demonstrate that an EIS is indeed necessary. NEPA requires BLM to complete an EIS before undertaking any “major Federal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). Agencies need not be certain that significant effects will occur in order to prepare an EIS; rather, they must prepare an EIS if there are “substantial questions whether a project may have a significant effect on the environment.” *Anderson v. Evans*, 371 F.3d 475, 488 (9th Cir. 2004) (quotation omitted). CEQ's NEPA regulations define “[s]ignificantly” as requiring “considerations of both context and intensity.” 40 C.F.R. § 1508.27.

a. Context

Context requires analyzing impacts at a variety of scales, including national, regional, and local, and over both the short and long term. *Id.* § 1508.27(a). The types of actions that BLM's NEPA Handbook lists as requiring completion of an EIS include: approvals of resource management plans, regional coal leases, and mining operations of greater than 640 acres. BLM *National Environmental Policy Act Handbook H-1790-1* § 7.2(1), (3), (7) (2008), https://www.ntc.blm.gov/krc/uploads/366/NEPAHandbook_H-1790_508.pdf. Suspending or delaying nationally-applicable regulations governing thousands of oil and gas wells throughout the 700 million acres of lands that BLM manages is even broader in scale than any of these listed activities, and thus requires preparation of an EIS.

Moreover, even if BLM thinks that, in the aggregate, impacts may not be nationally significant, there may be locally significant impacts to specific places or communities, in particular communities proximate to federal oil and gas leases and drilling sites that must be accounted for through an Environmental Impact Statement and preclude BLM's reliance on an EA and Finding of No Significant Impact. *Anderson*, 371 F.3d at 490 (noting that “local effects” may provide “a basis for a finding that there will be a significant impact” even where regional impacts are not significant). Suspension of the Waste Prevention Rule's compliance dates may create locally disparate impacts, in particular because BLM's action, if completed, would create a regulatory void that provides no direction to operators of federal oil and gas resources in terms of how they must prevent methane pollution and waste in accord with the MLA and FLPMA. Instead, BLM is relying on a patchwork of other federal and state requirements that differ across states. *See* RIA at 17-20. BLM fails to account for these distinctive local contexts in taking a hard look at impacts of its proposed rule, and the prospect that the agency's actions could impact local places and communities in widely disparate fashion, in particular relative to public health. As a 2016 report details, state-level rules targeting methane fall short in satisfying BLM's mandate to prevent waste and are riddled by myriad differences and inconsistencies. *See* W. Env'tl. Law Ctr. & W. Org. of Resource Councils, *Falling Short: State Oil & Gas Rules Fail to Control Methane Waste* (2016), https://westernlaw.org/sites/default/files/2016StateMethaneWasteReport_0.pdf (Falling Short).

Conservation; Delay and Suspension of Certain Requirements (last visited Nov. 4, 2017), <https://www.regulations.gov/docket?D=BLM-2017-0002>.

For example, there is wide disparity in how—and even whether—states address specific methane emission sources pertaining to oil well completions, well liquids removal, gas capture planning, and penalties. Moreover, each state fails to adequately control some methane sources. *Id.* at 4, 6–7. This creates distinct, localized impacts that BLM must address in taking a hard look at impacts and in determining whether an EIS is required.

These disparate impacts may create inequities and injustices relative to certain particularly vulnerable communities. Colorado, for example, has a fairly strong set of rules to reduce methane emissions. But New Mexico does not, creating serious risk that communities—e.g., Navajo communities—living in New Mexico’s San Juan Basin will be harmed far more than similarly-situated communities in Colorado by federal oil and gas production operations as a result of BLM’s Suspension Proposal. Such disparate impacts warrant thoughtful consideration through an EIS.

b. Intensity

“[I]ntensity . . . refers to the severity of impact.” 40 C.F.R. § 1508.27(b). CEQ has developed a list of ten factors that should be considered when an agency is determining whether an action has sufficient intensity to be considered significant. *Id.* The presence of any “one of these factors may be sufficient to require preparation of an EIS in appropriate circumstances.” *Ocean Advocates v. U.S. Army Corps of Eng’rs*, 402 F.3d 846, 865 (9th Cir. 2005). For the Suspension Proposal, at least three of the ten significance factors require BLM to prepare an EIS.

i. Public Health and Safety

Increasing emissions of climate and air pollutants by hundreds of thousands of tons significantly impacts public health. A key factor in determining intensity is “[t]he degree to which the proposed action affects public health or safety.” 40 C.F.R. § 1508.27(b)(2). An action can be significant because of its public health and safety impacts even if it is not the only cause of the health or safety risk at issue. *See Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1222 (9th Cir. 2008) (*CBD v. NHTSA*) (setting vehicle emission standards had significant impact on public health even though it was not the sole cause of global climate change). According to BLM’s NEPA Handbook, this factor requires the agency to evaluate air quality in relation to public health and safety. BLM Handbook H-1790-1 § 7.3.

Emissions of ozone precursors, HAPs, and greenhouse gases affect public health. Courts have held that agency actions that have even relatively minor impacts on greenhouse gas emissions have an effect on public health and safety because of their climate change implications. *CBD v. NHTSA*, 538 F.3d at 1222. They have also recognized that oil and gas development on public lands contributes to ozone formation, and that “in sufficiently large concentrations, ozone can have a negative impact on public health.” *Amigos Bravos v. BLM*, No. 6:09-CV-00037-RB-LFG, 2011 WL 7701433, at *20 (D.N.M. Aug. 3, 2011).²⁵

²⁵ Another court acknowledged that oil and gas development’s air quality impacts could show significance under § 1508.27(b)(2), but focused its analysis on water quality impacts. *Ctr. for Biological Diversity v. BLM*, 937 F. Supp. 2d 1140, 1158 (N.D. Cal. 2013) (*CBD v. BLM*).

The emissions from suspending the Waste Prevention Rule for a year will exceed emissions from some of the largest BLM-approved oil and gas projects on federal leases that BLM has analyzed in recent years. As demonstrated in Table 5 below, the VOC and methane emissions from suspending or delaying the Waste Prevention Rule are orders of magnitude greater than VOC and methane emissions from these projects, which BLM deemed sufficiently significant to necessitate EISs. HAP emissions from suspending the Waste Prevention Rule are also greater than HAP emissions from any of these projects. Suspending the Waste Prevention Rule will thus have greater impacts on public health than projects for which BLM has previously prepared EISs.

Table 5, Emissions from BLM Oil and Gas Projects²⁶

Project	Annual CH₄ Emissions (tons)	Annual VOC Emissions (tons)	Annual HAPs Emissions (tons)
Suspending Waste Prevention Rule	175000	250000	1860
West Tavaputs	2629	12130	434
Monument Butte	12587	10361	1005
Normally Pressured Lance	6008	808	71
Bull Mountain Unit	n/a	80	20

The climate impacts of suspending or delaying the Waste Prevention Rule for a year will affect public health to a significant degree. BLM acknowledges that Alternative B will allow greenhouse gas emissions from existing sources to “continue more or less unabated until January 2019.” EA at 16. BLM quantifies the foregone methane emissions reductions between January 2018 and January 2019 at 175,000 tons, which is equivalent to 0.61% of total U.S. methane emissions in 2015. *Id.* The climate impacts of these emissions are significant. By comparison, the Ninth Circuit has held that there is a “substantial question” about whether a smaller, 0.2% decrease in U.S. carbon dioxide emissions may cause significant impacts “in light of the compelling scientific evidence concerning positive feedback mechanisms in the atmosphere.” *CBD v. NHTSA*, 538 F.3d at 1221 (quotations omitted).

²⁶ All values represent one year of emissions, based on quantified annual emissions, or the project year BLM identified as representative. EA at 16–17; BLM, *Final Environmental Impact Statement (EIS) for the West Tavaputs Gas Full Field Development Plan* at 4-17 (July 30, 2010); BLM, *Final Environmental Impact Statement for Newfield Exploration Corporation Monument Butte Oil & Gas Development Project in Uintah and Duchesne Counties, Utah, UT-G010-2009-0217* at 4-7 (2016) https://eplanning.blm.gov/epl-front-office/projects/nepa/62904/75396/83266/FEIS_2_Chapter_4_thru_Attachment_2.pdf; BLM, *Normally Pressured Lance Natural Gas Development Project Draft Environmental Impact Statement* at 4-21, 4-26, 4-57 (July 2017), https://eplanning.blm.gov/epl-front-office/projects/nepa/57654/111398/138955/NPL_DEIS_July2017web.pdf (using year-10 values); BLM, *Final Environmental Impact Statement for the Bull Mountain Unit Master Development Plan* at 4-46 (July 2016), https://eplanning.blm.gov/epl-front-office/projects/nepa/66641/81730/95952/Bull_Mtn_Final_EIS_July_2016_Vol_I_508_reduced.pdf (using year-5 values; greenhouse gas emissions for year 5 were quantified at 44,389 tons of CO₂e, rather than tons of methane).

The conventional air pollution impacts of suspending the Waste Prevention Rule will also significantly affect public health. BLM admits that Alternative B “would result in additional natural-gas losses in the short-term future, thereby increasing various air pollutants/pollutant precursors, HAPs, and GHGs.” EA at 17. And that “[n]atural gas contains VOCs, which are precursors to ozone and particulate matter, and various toxic air pollutants, such as benzene. These air pollutants affect the public health and welfare of humans. . . .” *Id.* This analysis demonstrates the significant health impacts from BLM’s proposed action, warranting preparation of an EIS.

Moreover, when considering the degree to which a proposed action impacts public health, courts have previously considered whether oil and gas sector emissions could contribute to an area being in nonattainment for ozone. *See Amigos Bravos*, 2011 WL 7701433, at *20–*21. BLM administers oil and gas development in several ozone nonattainment areas, including Colorado’s Denver-Boulder-Greeley-Ft. Collins-Loveland area. *See EPA, 8-Hour Ozone (2008) Nonattainment Area Area/State/County Report* (Sept. 30, 2017), www3.epa.gov/airquality/greenbook/hnca.html (Green Book); *see also* Ava Farouche, *Producing Wells on Public Lands Within the Nonattainment Area* (Oct. 26, 2017) (documenting 186 oil and gas wells on public lands within the Denver-Boulder-Greeley-Ft. Collins-Loveland nonattainment area). The Uinta Basin, which contains significant development on federal and tribal leases, also has severe ozone pollution problems, but the recommendations for designation as a nonattainment area have not been finalized by the Trump administration, in violation of the CAA. *See* Utah Dep’t of Env’tl. Qual., *Utah Area Designation Recommendations for the 2015 8-Hour Ozone National Ambient Air Quality Standard* at 554–57 (Sept. 2016), <https://www.epa.gov/sites/production/files/2016-11/documents/ut-rec-tds.pdf> (Utah 2015 NAAQS Designation Proposal); *see also* Letter from Am. Lung Ass’n et al., to Scott Pruitt, Adm’r, EPA, re: Notice of intent to sue under the Clean Air Act for failure to designate areas under the 2015 Ozone National Ambient Air Quality Standard as required by 42 U.S.C. § 7407(d)(1)(B)(i) (Oct. 3, 2017), https://www.epa.gov/sites/production/files/2017-10/documents/enviros_noi_10032017.pdf. Additional ozone precursor emissions in these areas can significantly impact human health.

ii. Controversy

Ongoing scientific debate, along with concerns raised by many governments and other public controversies warrant preparing an EIS. Another significance factor is “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4). An action “is highly controversial when there is a substantial dispute about the size, nature, or effect of the major Federal action rather than the existence of opposition to a use. Put another way, a proposal can be considered controversial if substantial questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor.” *Anderson*, 371 F.3d at 489 (alterations in original) (citations and quotations omitted). Similarly, BLM’s NEPA handbook explains that “[c]ontroversy in this context means disagreement about the nature of the effects Substantial dispute within the scientific community about the effects of the proposed action would indicate that the effects are likely to be highly controversial.” BLM Handbook H-1790-1 § 7.3.

Here, there is substantial controversy about whether the Waste Prevention Rule, and BLM's proposal to suspend its provisions, are significant in terms of mitigating climate change. For example, in their opening merits brief challenging the Rule in the District of Wyoming, Industry Petitioners argued that the Waste Prevention Rule reduces global methane emissions by "an insignificant amount." Br. in Supp. of W. Energy All. & Indep. Petroleum Ass'n of Am.'s Pet'n for Rev. of Final Agency Action at 5, *Wyoming v. U.S. Dep't of the Interior*, No. 2:16-cv-00285-SWS (D. Wyo. Oct. 2, 2017), ECF No. 142. By contrast, the Joint Environmental Commenters have provided substantial evidence demonstrating that the Waste Prevention Rule does, indeed, have significant climate benefits. Citizen Groups' Resp. to Mots. for a Prelim. Inj. at 48–49, *Wyoming v. U.S. Dep't of the Interior*, No. 2:16-cv-00285-SWS (D. Wyo. Dec. 15, 2016), ECF No. 69.

Another controversy is the appropriate scale for the social cost of methane. As discussed above, *see supra* Section V, BLM initially used the global social cost of methane. *See* 2016 RIA at 31. Now, BLM is using an interim value for the domestic social cost of methane that relies on different discount rates from the global metric. *See* RIA at 24–27. As some petitioners in the District of Wyoming recently explained, the social cost of methane is "a controversial calculation." Jt. Open. Br. of the States of N.D. & Tex. at 33, *Wyoming v. U.S. Dep't of the Interior*, No. 16-cv-00285-SWS (D. Wyo. Oct. 2, 2017), ECF No. 143. These significant controversies warrant the preparation of an EIS.

Additionally, "[a]lthough mere opposition to the project does not in itself create a controversy, the volume of comments from and the serious concerns raised by federal and state agencies specifically charged with protecting the environment may support a finding that an EIS is necessary." *CBD v. BLM*, 937 F. Supp. 2d at 1158 (quotation omitted). BLM received approximately 330,000 public comments prior to finalizing the Waste Prevention Rule. 81 Fed. Reg. at 83,010. A wide range of groups submitted comments in support of the Rule, including three U.S. Senators, four U.S. Congresspeople, two former BLM Directors, six New Mexico local governments, 41 current and former state and local elected officials in New Mexico, nine Colorado local governments, 26 current and former state and local elected officials in Colorado, and dozens of businesses and faith, environmental, public health, tribal, and sportsmen's groups. *See* Env'tl. Def. Fund, *List of Elected Officials, Groups, Businesses, and Individuals that Called for Action in Reducing Natural Gas Waste on Public and Tribal Lands* (2016). After the Rule was promulgated, numerous states, tribes, and local governments raised concerns with various attempts to repeal or stay the Rule. California and New Mexico successfully sued BLM when the agency unlawfully attempted to stay the Rule's compliance dates. *California v. BLM*, No. 17-cv-3804-EDL, 2017 WL 4416409 (Oct. 4, 2017). One hundred thirteen local elected officials, including mayors from Colorado, New Mexico, Idaho, Nevada, Wyoming, and Utah urged the U.S. Senate not to repeal the Waste Prevention Rule using the Congressional Review Act. Kellie Lunney & Geof Koss, *Repeal of BLM Methane Rule Will Pass Senate—Barrasso*, E&E News (Apr. 27, 2017), www.eenews.net/stories/1060053662. The Navajo Nation, Standing Rock Sioux Tribe, and the Mandan, Hidatsa, and Arikara Nation also asked Congress not repeal the Waste Prevention Rule. *Tribal Groups Press U.S. Senate to Keep BLM Methane Waste Rule*, Pub. News Serv. (May 8, 2017), www.publicnewsservice.org/2017-05-08/climate-change-air-quality/tribal-groups-press-u-s-senate-to-keep-blm-methane-waste-rule/a57587-1. Ultimately, the

Senate failed to rescind the Rule. Given the tremendous support for the Waste Prevention Rule, an EIS is warranted.

iii. Individually Insignificant but Cumulatively Significant

BLM must prepare an EIS because the Suspension Proposal is significant when considered alongside BLM's long-term efforts to revise the Rule, and EPA's efforts to revise its own methane regulations. An action can be significant if it "is related to other actions with individually insignificant but cumulatively significant impacts." 40 C.F.R. § 1508.27(b)(7). As BLM's NEPA handbook explains, this analysis overlaps with the cumulative impacts inquiry. *See* BLM Handbook H-1790-1 § 7.3. This factor is thus also addressed in the cumulative impacts section below. *See infra* pp. 47-49.

BLM's proposed action is cumulatively significant because it is just one step in BLM's broader reconsideration. CEQ regulations provide that "[s]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7). BLM has explained that its proposal to suspend the Rule is just one step in its long-term process of revising or rescinding the Rule. EA at 2–3. Indeed, this is BLM's second attempt to delay the Waste Prevention Rule's compliance dates; BLM's earlier attempt to do so without notice and comment was rejected as unlawful by a federal court. *California v. BLM*, No. 17-cv-3804-EDL, 2017 WL 4416409 (Oct. 4, 2017). Despite acknowledging that the Suspension Proposal is designed to buy time for a larger reconsideration process, BLM downplays the environmental impacts of the Suspension Proposal by emphasizing that it is only temporary. *See* EA at 4, 15, 17, 20. BLM must assess the full cumulative impacts of its plan to rescind or revise the Waste Prevention Rule.

D. BLM Has Not Taken a Hard Look at the Impacts of Its Proposed Action.

BLM's brief and conclusory EA does not provide the reasoned analysis that NEPA demands. NEPA "establish[es] procedural mechanisms that compel agencies . . . to take seriously the potential environmental consequences of a proposed action. [Courts] have termed this crucial evaluation a 'hard look.'" *Ocean Advocates*, 402 F.3d at 864 (quotation omitted). Agencies "cannot avoid preparing an EIS by making conclusory assertions that an activity will have only an insignificant impact on the environment." *Id.* "If an agency . . . opts not to prepare an EIS, it must put forth a convincing statement of reasons that explain why the project will impact the environment no more than insignificantly." *Id.* (quotations omitted). Agencies fail to take a hard look when they rely on "patently inaccurate factual contention[s]," and unsupported assertions without reasoned evaluation. *Id.* at 866. Agencies also fail to take a "hard look" when they jump to a conclusion that an impact will be minimal despite evidence demonstrating that harmful impacts are possible. *N.M. ex rel. Richardson*, 565 F.3d at 714–15. BLM has relied on irrational assumptions, failed to consider indirect impacts, and glossed over the cumulative impacts of its proposed action.

1. BLM Has Not Taken a Hard Look at the Direct Impacts of Its Proposed Action.

First, BLM quantified the direct impacts of the Suspension Proposal—increased emissions of methane, VOCs, and HAPs—but it did not consider what those increased emissions mean for human health and the environment. For example, there is no discussion of the impact of increased methane emissions on climate change. *See Mont. Env'tl. Info. Ctr. v. U.S. Office Of Surface Mining*, No. CV 15-106-M-DWM, 2017 WL 3480262, at *12 (D. Mont. Aug. 14, 2017). Furthermore, despite the significant increased VOC and HAP emissions, the EA contains no discussion of ozone pollution, *see Sierra Club v. U.S. Dep't of Transp.*, 962 F. Supp. 1037, 1045 (N.D. Ill. 1997), nor of the impacts of heightened exposure to HAP, *see S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 588 F.3d 718, 726 (9th Cir. 2009). This failure is particularly troubling because many areas under BLM jurisdiction have been, currently are, or soon will be designated in nonattainment with federal ozone standards.²⁷ Indeed, as BLM acknowledged in the 2016 EA, “exceedances of the ozone standards under the NAAQS have occurred in Northeastern Utah, where the BLM oversees numerous oil and gas operations from Federal and Indian leases.” BLM, Environmental Assessment: Waste Prevention, Production Subject to Royalties, and Resource Conservation 31 (2016) (2016 EA). The 2016 EA also explained the negative impacts of ozone on public health and on children in particular, as well as on vegetation and ecosystems. *Id.* at 30–31. Absent a similar discussion of health and environmental problems caused by releasing these pollutants, and whether the quantities released are likely to contribute to such impacts, BLM has failed to take a hard look at the impacts of its proposed action.

Second, BLM also failed to take a hard look at the disparate impacts of the proposed rule to distinct, local places and communities proximate to federal oil and gas leases and drilling sites—impacts that may implicate serious environmental justice concerns. *See infra* pp 40-41.

Third, BLM assumes that the impacts of suspending the Waste Prevention Rule will be “potentially modulated to some degree by State requirements and voluntary industry actions in some areas.” EA at 16; *see also* RIA at 17. But BLM neither discusses state regulations, nor quantifies the extent to which they will “modulate” the negative impacts of suspending the Rule. BLM has not provided sufficient evidence to justify this blanket assertion. *WildEarth Guardians v. BLM*, 870 F.3d 1222, 1235 (10th Cir. 2017) (holding that agencies must justify their choices with evidence “sufficient in volume and quality to sharply define the issues and provide a clear basis for choice among options,” rather than mere “blanket assertion[s]”). As for “voluntary

²⁷ Colorado’s Denver-Boulder-Fort Collins-Greeley area has been designated nonattainment with the 2008 NAAQS and is also slated to be designated nonattainment with the 2015 NAAQS. Colo. Dep’t of Pub. Health & Env’t, *Technical Support Document for Recommended 8-Hour Ozone Designations* at 51 (Sept. 15, 2016), <https://www.epa.gov/sites/production/files/2016-11/documents/co-rec-tds.pdf>. The same is true for Eastern Kern County, California. Cal. Air Res. Bd., *Recommended Area Designations for the 0.070 ppm Federal 8-Hour Ozone Standard: Staff Report* at 9 (Sept. 2016) <https://www.epa.gov/sites/production/files/2016-11/documents/ca-rec-enclosures.pdf>. Wyoming’s Upper Green River Basin was designated nonattainment with the 2008 NAAQS, *see* EPA, Green Book, although EPA later determined that it attained the NAAQS, 81 Fed. Reg. 26,697, 26,700–01 (May 4, 2016). The State of Utah has recommended that the Uinta Basin be designated as a nonattainment area. Utah 2015 NAAQS Designation Proposal at 55–57.

industry actions,” courts have held that agencies fail to take a “hard look” when they “rely on unsupported assumptions that future mitigation technologies will be adopted.” *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1197 (D. Colo. 2014).

BLM also states that new and modified sources will be covered by EPA regulations and therefore “not contribute to a deviation from the baseline.” EA at 16. But, as discussed, *see infra* p. 49, BLM did not consider that EPA has proposed to suspend and will likely propose to revise or rescind key components of its regulations. *See Ocean Advocates*, 402 F.3d at 864-66 (holding that agencies fail to take a “hard look” when their assessments include only conclusory assertions and do not discuss contrary evidence). Given that EPA is currently reconsidering its methane rule and has formally proposed to stay a number of its key requirements, BLM must account for the associated and reasonably foreseeable impacts to the environment from those actions. Furthermore, EPA’s rule covers only new and modified sources, so does not overlap with the BLM rule to the extent that the latter covers existing sources on Federal and Indian lands.

Finally, BLM failed to take a hard look at the impacts of increased flaring. BLM acknowledges that one of the benefits of the Waste Prevention Rule is reducing noise and light pollution from flares, which benefits residents, recreationists, and wildlife near oil and gas development. EA at 10, 14. But BLM only briefly discusses the impacts of increased flaring caused by suspending the Rule, cross-referencing its 2016 EA and noting that the suspension “is expected to have noise and light impacts on dwellings, residences, and recreation in the short-term future,” potentially affecting nearby communities, wildlife, night-sky resources, and recreation. EA at 18. This cursory list of impacts falls short of what NEPA requires. *See Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d 174, 194 (4th Cir. 2005) (“An agency’s hard look should include neither researching in a cursory manner nor sweeping negative evidence under the rug.”).

2. BLM’s Cursory Consideration of Cumulative Impacts Violates NEPA

BLM devotes only a half of one page to analyzing the cumulative impacts of suspending or delaying the Waste Prevention Rule’s requirements. EA at 20. “Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. “NEPA is, in large measure, an attempt by Congress to instill in the environmental decisionmaking process a more comprehensive approach so that long term and cumulative effects of small and unrelated decisions could be recognized, evaluated and either avoided, mitigated, or accepted as the price to be paid for the major federal action under consideration.” *Del. Riverkeeper Network v. Fed. Energy Reg. Comm’n*, 753 F.3d 1304, 1314 (D.C. Cir. 2014) (quotation omitted).

“NEPA always requires that an environmental analysis for a single project consider the cumulative impacts of that project together with ‘past, present and reasonably foreseeable future actions.’” *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 895 (9th Cir. 2002) (quoting 40 C.F.R. § 1508.7). According to BLM’s NEPA Handbook, a cumulative effects analysis

should consider scope, timeframe, and past, present, and reasonably foreseeable future actions. BLM NEPA Handbook § 6.8.3.2 to .4. The Handbook provides that “[f]or each cumulative effect issue,” BLM should “analyze the direct and indirect effects of the proposed action and alternatives together with the effects of the other actions that have a cumulative effect.” *Id.* § 6.8.3.5. This analysis should include describing the existing condition, the effects of other present actions, the effects of reasonably foreseeable actions, the effects of the proposed action and each alternative, the interaction of these impacts, and the relationship of these cumulative effects to any thresholds. *Id.*; see also *Grand Canyon Trust v. Fed. Aviation Admin.*, 290 F.3d 339, 345 (D.C. Cir. 2002) (providing a similar list).

BLM’s plan to revise or rescind the Waste Prevention Rule is a reasonably foreseeable future action with an impact on the same resources being considered in the EA, but BLM has failed to analyze the cumulative impacts of the two actions. When multiple reasonably foreseeable actions may impact the same resources within a short timeframe, agencies are required to analyze the cumulative impacts of all the actions. See *Native Ecosystems Council*, 304 F.3d at 897; *Kern v. BLM*, 284 F.3d 1062, 1078–79 (9th Cir. 2002). BLM’s Suspension Proposal is a first step towards BLM’s ultimate goal of revising or rescinding the Rule. EA at 2–3. BLM has committed in writing that the Suspension Proposal is just the second of three steps towards revising or rescinding the Rule. Fed. Resp’ts’ Mot. to Extend Briefing Deadlines at 3, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285-SWS (D. Wyo. June 20, 2017), ECF No. 129; Fed. Resp’ts’ Mot. for an Extension of the Merits Briefing Deadline at 4, *Wyoming v. U.S. Dep’t of the Interior*, No. 2:16-cv-285-SWS (D. Wyo. Oct. 20, 2017), ECF No. 155. Given that BLM has discussed the revision or rescission of the Rule in the EA itself, as well as numerous other documents, it is a reasonably foreseeable development that will clearly impact that the same resources impacted by the Suspension Proposal, and thus BLM must analyze the cumulative impacts of both the suspension and the possible rescission or revision of the Rule.

If BLM does not analyze the cumulative impacts of both the Suspension Proposal and the revision or rescission of the Rule, it will impermissibly segment its NEPA analysis. The purpose of requiring agencies to consider cumulative impacts is to prevent them from “dividing one project into multiple individual actions each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” *Del. Riverkeeper Network*, 753 F.3d at 1314 (quotation omitted). But that is exactly what BLM is doing here. Because the Suspension Proposal is not only reasonably foreseeable, but also inextricably linked with BLM’s ongoing administrative review of the Rule, BLM must analyze the cumulative impacts of both proposals (the temporary suspension and the permanent change) together. Its failure to do so violates NEPA.

BLM’s analysis further falls short of NEPA’s cumulative impact requirements because BLM does not identify a geographic scope, timeframe, or set of past, present, and future actions related to its action. Nor does BLM describe existing conditions, impacts of other actions, or how suspending the Waste Prevention Rule will interact with these actions. Instead, BLM states only that “in the short-term future, the BLM would anticipate additional GHG emissions which would have climate impacts and air quality impacts.” EA at 20. It then lists every potential benefit of suspending the Rule. *Id.* This cursory summary is not a cumulative impacts analysis. See *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005).

BLM also states that its “site-specific inspection and approval procedures would still apply to any surface-disturbing project, and would ensure evaluation and mitigation of site-specific adverse impacts.” EA at 20. This is the antithesis of a cumulative impacts analysis. BLM cannot dismiss impacts by asserting that they are disconnected and can be dealt with later. *See Del. Riverkeeper Network*, 753 F.3d at 1319. A cumulative impacts analysis must consider all impacts, whether they are site-specific or not. Moreover, these site-specific impacts are directly related to BLM’s decision to suspend the Waste Prevention Rule: if the Rule is in effect, then every oil and gas facility under BLM’s jurisdiction must comply with it. Only if the Rule is not in effect will BLM’s site-specific analysis become relevant.

Finally, BLM claims that “[w]here EPA and State regulatory overlap exists, the Proposed Action to delay the 2016 final rule’s requirements would not represent a change from the baseline environment,” and that, because EPA’s rule applies to new and modified sources, “overlap with EPA regulations is expected to grow over time,” and “the impact of the proposed delay of the 2016 final rule’s requirements is expected to decline over time.” EA at 12–13. But BLM also acknowledged that “EPA recently proposed to delay the fugitive emissions, pneumatic pumps at well sites, and professional engineer certification for close vent system requirements for two years.” *Id.* at 12. BLM did not mention that EPA has proposed a two-year stay of key regulatory provisions—including its LDAR program—in order to reconsider the rule in its entirety. *See EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Stay of Certain Requirements*, 82 Fed. Reg. 27,645, 27,646 (June 16, 2017). The fact that BLM has ignored this significant fact is unreasonable. Moreover, although BLM references overlap with state regulations, the only specific regulation it cites is Colorado’s LDAR program. EA at 12. BLM has not offered any basis to conclude that state regulations will reduce the impacts of BLM’s Suspension Proposal. BLM must consider the cumulative impacts of its actions, combined with all existing sources of methane waste, rather than assuming that other regulatory agencies will address the problem.

3. BLM Has Not Taken a Hard Look at the Social Cost of Methane.

BLM has failed to take a hard look at whether the interim domestic social cost of methane is truly the best means available to quantify the costs of suspending the Waste Prevention Rule for a year. NEPA requires agencies to take a “hard look at all aspects” of the issue under consideration. *See Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1149 (D. Idaho 2009). Although NEPA does not require a cost-benefit analysis, it is arbitrary and capricious for an agency to quantify benefits of its actions while ignoring available means of quantifying the costs of its actions. *High Country Conservation Advocates*, 52 F. Supp. 3d at 1191; *see also Michigan*, 135 S. Ct. at 2707 (agencies must consider the advantages *and* disadvantages of their decisions); *CBD v. NHTSA*, 538 F.3d at 1200 (holding it arbitrary to consider an artificially low cost to greenhouse gas emissions); *Hughes River Watershed Conservancy v. Glickman*, 81 F. 3d 437, 446–48 (4th Cir. 1996) (agencies cannot rely on inaccurate economic assumptions); *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (agencies must consider both costs and benefits of their actions); *California*, 2017 WL 4416409, at *11 (same). Yet that is exactly what BLM did here.

As discussed above, BLM has chosen to analyze the costs and benefits of its decision to suspend or delay the Waste Prevention Rule using an interim domestic value for the social cost of methane. *See* RIA at 25. But another means of quantifying the social cost of methane is available—calculating the global value of the social cost of methane. BLM relied on this global value when it initially promulgated the Rule. *See* 81 Fed. Reg. at 83,014, 83,068–69; 2016 RIA at 31–37. Courts have upheld the use of the global social cost of carbon, a similar measure, as a valid exercise of agencies’ regulatory authority. *See Zero Zone, Inc.*, 832 F.3d at 677. Yet BLM has now chosen to abandon the global value of the social cost of methane, based on instructions from an Executive Order. RIA at 25. BLM notes that the values it has used are merely “interim values” to be used only until “an improved estimate of the impacts of climate change to the U.S. can be developed.” *Id.* But it also claims that it “has estimated all of the significant costs and benefits of this rule to the extent that data and available methodologies permit, consistent with the best science currently available.” RIA at 26. These contrary explanations simply cannot be reconciled—BLM has not explained why its interim domestic estimates of the social cost of methane are indeed the best available science, when another protocol—the global social cost of carbon—is available and was used by the agency just a year ago, and has been upheld as a valid measure by a federal court.

BLM’s failure to do so violates NEPA. A court struck down an agency’s NEPA analysis under similar circumstances in *High Country Conservation Advocates*. There, the agency relied on the social cost of carbon in its draft EIS, but chose not to rely on it in its final EIS. *High Country Conservation Advocates*, 52 F. Supp. 3d at 1193. The court held that the agency choosing not to use the social cost of carbon despite initially relying on it, while offering a factually inaccurate justification for why its change of course, violated NEPA. *Id.* at 1191–93 (citing *N.M. ex rel. Richardson*, 565 F.3d at 704). Similarly, the District of Montana has held that it is arbitrary and capricious for an agency to quantify the benefits of an action without quantifying the costs, even though such an analysis is possible. *Mont. Env’tl. Info. Ctr.*, 2017 WL 3480262, at *13. BLM has provided a robust explanation of the reduced compliance costs from its proposed action, but it has not explained why it chose not to use an available tool that it had already used in the past—the global social cost of methane—to quantify the costs of its proposed action. BLM’s failure to explain and justify its changed position about the validity of the global social cost of methane violates NEPA.

Indeed, NEPA mandates that BLM consider all the impacts of its actions—regardless of whether those impacts are domestic or global. “[T]he fact that climate change is largely a global phenomenon that includes actions that are outside of the agency’s control does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.” *CBD v. NHTSA*, 538 F.3d at 1217 (quotations and alterations omitted). “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Id.*

Although NEPA does not extend to projects located entirely in another country, agencies acting domestically must analyze the impacts of their actions that occur outside the United States. *See Friends of the Earth, Inc. v. Mosbacher*, 488 F. Supp. 2d 889, 908 (N.D. Cal. 2007). BLM’s Suspension Proposal will impact the entire planet by increasing methane emissions, which contribute to global climate change. *See* EA at 16. BLM therefore must consider not only the

domestic, but also the global, impacts of its decisions. BLM's choice to consider only the domestic social cost of methane violates NEPA.

4. BLM Has Not Taken a Hard Look at the Impacts of Its Proposed Action on Tribal Lands.

BLM's NEPA analysis entirely ignores the unique public health impacts of suspending the Waste Prevention Rule on tribal lands. Although the EA frequently refers to impacts on "Federal and Indian oil and gas leases," *see, e.g.*, EA at 13, nowhere in the EA does BLM analyze impacts specific to Indian Country. BLM similarly overlooks the environmental and public health impacts of suspending the Rule in the Federal Register preamble, which simply notes that BLM estimates economic impacts for Indian leases and royalty implications for tribes in the RIA. 82 Fed. Reg. at 46,466; *see also* RIA at 45–46 (analyzing economic, but not environmental, impacts of the Suspension Proposal on tribal lands). BLM's oversight is significant because suspending the Rule *does* have disparate public health and environmental impacts on tribal lands. There are more likely to be residences, schools, and offices on tribal lands than federal lands where oil and gas is developed, elevating public health concerns about exposure to hazardous air pollutants, and exacerbating the negative noise and light pollution impacts of flaring.

BLM has also overlooked the environmental justice implications of suspending the Rule, which disparately impacts Native Americans who live on tribal lands. As BLM acknowledged in the 2016 EA, Executive Order 12,898 requires BLM to address disproportionate adverse human health or environmental effects of its actions on minority and low-income populations. 2016 EA at 36. BLM acknowledges that not suspending the Rule "would have a beneficial effect on [sic] minority and low-income population segment due to the reductions in air pollutants." EA at 15. But it nevertheless concludes that suspending the Rule "is not expected to have a significant impact on minority and low-income populations living near oil and gas operations" despite the increase in air pollution, because of the incidental reduction in other forms of air pollution from decreased truck traffic. *Id.* at 19. This is not consistent with BLM's own analysis, just a few pages earlier in the EA, which shows that the decrease in truck traffic-related pollution is orders of magnitude smaller than the increase in pollution from suspending the Rule. *Compare id.* at 17 (suspending the Rule increases VOC emissions by 250,000 tpy) *with id.* at 18 (reduction in truck traffic-related emissions decreases VOC emissions by 0.8 tpy, and NOx emissions by 20.29 tpy). Jumping to a conclusion that an impact will be minimal despite contrary evidence about harmful impacts violates NEPA's hard look mandate. *N.M. ex rel Richardson*, 565 F.3d at 714–15.

CONCLUSION

In conclusion, we urge BLM to withdraw the Suspension Proposal, and retain the Waste Prevention Rule in full.

Sincerely,

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APPENDIX 1: INDEX OF EXHIBITS

On November 6, 2017, the following exhibits were submitted to BLM, via hand-delivery to BLM's Washington Office, 20 M Street SE., Room 2134 LM, Washington, DC 20003, on a USB Drive. Due to their voluminous size, it was not possible to submit the exhibits via Regulations.gov. However, Joint Environmental Commenters fully intend for BLM to consider and include all of these documents, which are cited above, in the Administrative Record for this rulemaking. Also submitted via Hand Delivery on a USB is the Addendum to the Joint Environmental Commenters Comments. As noted above, the Addendum contains the Administrative Record for the 2016 Waste Prevention Rule.

Colorado College State of the Rockies Project, <i>2017 Western States Survey</i> (2017)
GAO, Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment, GAO-08-691, September 2008
GAO, Federal Oil and Gas Leases: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases, GAO-11-34, (Oct. 2010)
Fed. Opp'n, <i>Wyoming v. U.S. Dep't of the Interior</i> , No. 2:16-cv-285 (D. Wyo. Dec. 15, 2016), ECF No. 70
Letter from Nada Culver, The Wilderness Soc'y, to BLM (Apr. 25, 2017)
Letter from Sara Kendall, W. Org of Res. Councils, to BLM (May 1, 2017)
Letter from Laura King, W. Env'tl. Law Ctr., to Ryan Witt, BLM (Apr. 25, 2017)
Charlie Passut, <i>Trump Picks Montana's Rep. Zinke to Lead Interior Department</i> , Naturalgasintel.com, (Dec. 16, 2016)
Alleen Brown, <i>Interior Pick Ryan Zinke Vows to Review Obama's Safeguards Against Fossil Fuel Extraction</i> , The Intercept, (Jan. 18, 2017)
Fed. Resp'ts' Mot. to Extend Briefing Deadlines, <i>Wyoming v. U.S. Dep't of the Interior</i> , No. 2:16-cv-285-SWS (D. Wyo. June 20, 2017), ECF No. 129.
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Appendix 2: Table Comparing Questions Raised Regarding Technical Standards with Existing Findings Regarding Same Standards

The following table identifies various reasons BLM has set forth for reconsidering (a separate action from suspending) technical standards in the Suspension Proposal, as well as BLM's existing record findings and analysis supporting those standards. As is demonstrated from the table, BLM has already fully considered and responded to all of the purported issues raised in the Suspension Proposal in its final Waste Prevention Rule, and BLM here does not purport to make any contrary factual findings, but rather lists questions and concerns that it may at some future point reassess.

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
Waste-Minimization Plans. 43 C.F.R. § 3162.3–1(j).	Is burden necessary and can it be reduced? 82 FR 46460.	BLM determined that the requirement is a reasonable, low cost, and effective way to reduce waste; BLM streamlined the final rule to narrow information required in response to comments. 81 FR 83042.
	Information is possessed by midstream companies. 82 FR 46460.	Final rule requires information “to the extent that the operator can obtain it.” BLM RTC p.172; 81 FR 83078.
	Compliance with state plans should suffice. 82 FR 46461.	Operator may submit same plan as submitted to state if state plan meets most or all of requirements of BLM plan. 81 FR 83042.
Gas Capture Requirement. 43 C.F.R. § 3179.7.	Is final rule unnecessarily complex? 82 FR 46461.	BLM developed capture target approach in order to provide greater flexibility to industry in response to concerns that the proposal was overly prescriptive, expensive and technically infeasible. 81 FR 83024–25; BLM RTC p.115–16. Final rule approach is based on ND approach, which ND and operators developed and strongly support. 81 FR 83025; BLM RTC p.115–16.

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
	Is final rule a significant improvement over NTL-4A? 82 FR 46461.	BLM determined that requiring operators to obtain individual flaring authorizations is not efficient or effective. RTC p. 113.
	Could market-based incentives such as royalty obligations improve capture in a more straightforward and efficient manner? 82 FR 46461.	BLM rejected this approach as ineffective in the final rule. BLM noted that BLM NM office already does this, but it has not reduced flaring to any significant degree. 81 FR 6644; BLM RTC 148–49. BLM determined that increasing capture rates is the most effective way to reduce flaring. 81 FR 83011. The final rule provides flexibility to operators in how to meet gas capture requirements. 81 FR 83050–51.
Measuring and Reporting Volumes of Gas Vented and Flared from Wells. 43 C.F.R. § 3179.9.	Should this be imposed only on a case-by-case basis? 82 FR 46461.	BLM determined that this provision should apply to all volumes of vented or flared gas in order to provide a complete understanding of wasted gas and ensure that “reasonable precautions are taken to avoid such waste.” BLM RTC p.158; 81 FR 83053.
Well Drilling. 43 C.F.R. § 3179.101.	Imposes constraints only in exceptional circumstances where operators must make decision re: how to safely and effectively dispose of gas. 82 FR 46462.	Final rule provides exceptions for safety and technical infeasibility. 81 FR 83055.

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
Well Completion and Related Operations. 43 C.F.R. § 3179.102.	Necessary or confusing in light of EPA standards? 82 FR 46462.	BLM requirements provide a backstop in the event that EPA requirements are no longer in effect. 81 FR 83056; <i>see also</i> 81 FR 83018 (BLM and EPA have independent legal and proprietary responsibilities).
	In light of EPA requirements and industry practice, only affects small universe of sources that may otherwise qualify for exemption. 82 FR 46462.	Final rule includes exemptions based on demonstration of technical infeasibility or if compliance would cause operator to cease production and abandon significant recoverable oil resources. 81 FR 83055.
	Necessary or confusing in light of industry practices? 82 FR 46462.	BLM and EPA requirements are aligned, such that compliance with EPA requirements satisfies BLM requirements. 81 FR 83055-56.
Equipment Requirements for Pneumatic Controllers. 43 C.F.R. § 3179.201.	Questioned necessity of standards in light of EPA standards; asserted that operators will upgrade equipment where it makes economic sense to do so. 82 FR 46462.	Final rule applies to existing controllers that are not covered by EPA. 81 FR 83058. BLM noted that operators may not invest in gas capture even where there are positive net returns because they are focused on potentially higher net returns from expanding oil production. 81 FR 6638.
Downhole Well Maintenance and Liquids Unloading. 43 C.F.R. § 3179.204.	Concerns regarding reporting requirements and whether reporting requirements could be made more consistent. 82 FR 46463.	BLM streamlined reporting requirements in final rule in response to concerns. 81 FR 83063.

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
Pneumatic Diaphragm Pumps. 43 C.F.R. § 3179.202.	Questioned necessity of standards in light of EPA standards. 82 FR 46463.	Final rule applies to existing pumps that are not covered by EPA and applies differing requirements than EPA in certain instances due to differences in two agencies' regulatory authorities. 81 FR 83059–60; 81 FR 83017-18.
	Zero bleeds may not save gas b/c need gas to power electricity for electric pump. 82 FR 46463.	Final rule only requires zero-bleed pumps where feasible; operators may use alternative compliance pathways in addition to installing zero-bleed pumps. 81 FR 83059–60.
Storage Vessels. 43 C.F.R. § 3179.203.	Questioned necessity of standards in light of EPA standards. 82 FR 46463.	BLM and EPA have independent legal and proprietary responsibilities, EPA requirements do not cover existing sources, state rules have gaps, and BLM may grant a variance in the event a state requirement is as effective as the BLM rule. 81 FR 83017-18; <i>see also</i> 81 FR 83061-62.
	Concerns regarding compliance costs. 82 FR 46463.	The final rule contains an exemption based on a demonstration that compliance would cause operator to cease production and abandon significant recoverable oil resources. BLM RTC p.295. BLM's final cost assumptions reflect retrofit costs for existing tanks, in response to comments. BLM RTC p.429.

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
Leak Detection and Repair Requirements. 43 C.F.R. § 3179.301.	Necessary given analogous EPA and state requirements? 82 FR 46464.	BLM and EPA have independent legal and proprietary responsibilities, EPA requirements do not cover existing sources, state rules have gaps, and BLM may grant a variance in the event a state requirement is as effective as the BLM rule. 81 FR 83017-18. EPA has proposed to suspend its requirements.
	Are reporting burdens justified? 82 FR 46464.	BLM determined that reporting requirements are necessary to evaluate the program and ensure compliance. BLM RTC p.237.
	Allow for less frequent inspections? 82 FR 46464.	After extensive consideration of alternative inspection regimes, BLM determined that semi-annual inspections are cost-effective and allow operators to align inspections with EPA requirements. 81 FR 83032
	Allow for non-instrument based inspections? 82 FR 46464.	BLM did not receive any information supporting the contention that non-instrument audio-visual-olfactory (AVO) inspections are as effective as a technology-based program and so did not allow for a solely non-instrument based program. However, operators may supplement instrument-inspections with AVO. 81 FR 83032

Standard	Questions Raised in Suspension/Suspension Proposal	Existing Record Findings and Analysis Supporting Standard
	Exemption for low-producing wells? BLM RTC p. 198	BLM determined that low-producing wells can be associated with high-emitting events; third party providers are available to conduct inspections at low costs; final rule allows operators to use alternative program if equally effective as BLM requirement, and to obtain an exception from this requirement in certain circumstances. 81 FR 83029–30.

APPENDIX 3: Select Issues with the Bureau of Land Management's Interim Domestic Social Cost of Methane

This Appendix highlights numerous issues with the Bureau of Land Management's ("BLM") use of an interim domestic social cost of methane to monetize climate impacts when analyzing its proposal to suspend or delay requirements in the final rule entitled Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016). 82 Fed. Reg. 46,458 (Oct. 5, 2017). This is not an exhaustive list of the issues with BLM's use of an interim domestic social cost of methane. For a more detailed discussion, see the Comment of Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists in this docket, discussing flaws in BLM's SCM analysis.

I. BLM applies arbitrary and unsupported discount rates to future costs and benefits when calculating its interim domestic social cost of methane.

In its Regulatory Impact Analysis, BLM purports to calculate net benefits of delaying the Rule using a novel "interim domestic Social Cost of Methane," applying flat discount rates of 7% and 3% to future costs and benefits of the Rule.²⁸ The use of such high discount rates, normally applied to decisions regarding private capital investments, is wholly inappropriate in the context of costs and benefits to the broader public welfare, particularly in the context of long-term, intergenerational impacts such as climate change mitigation.

BLM justifies use of these discount rates by relying on Office of Management and Budget ("OMB") Circular A-4.²⁹ As an initial matter, federal guidance on Circular A-4 itself is explicit that use of the 7% discount rate is not appropriate in cases – such as climate change harms – involving "intergenerational discounting," or costs and benefits involuntarily imposed on future generations. A 2015 Interagency Working Group on Social Cost of Carbon document, created with participation by OMB, states: "Circular A-4 is a living document . . . [T]he use of 7 percent is not considered appropriate for intergenerational discounting. There is wide support for this view in the academic literature, and it is recognized in Circular A-4 itself."³⁰ OMB Circular A-4, although contemplating the use of 3% and 7% discount rates in certain contexts, is explicit that agencies must "[u]se sound and defensible values or procedures to monetize benefits and costs, and ensure that key analytical assumptions are defensible."³¹ Circular A-4 further requires that agencies must "state in your report what assumptions were used, such as . . . the discount rates applied to future benefits and costs," and to explain the basis for those assumptions.³² BLM has not provided any such explanation here. Given the inappropriateness of applying a high discount

²⁸ BLM, *Regulatory Impact Analysis for the Proposed Rule to Suspend or Delay Certain Requirements of the 2016 Waste Prevention Rule*, 2 (Sept. 27, 2017) ("RIA").

²⁹ RIA at 4.

³⁰ Interagency Working Group on the Social Cost of Carbon, *Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866* ("IWG RTC 2015") at 36 (July 2015). This document was not withdrawn by Executive Order 13,783.

³¹ Circular A-4 at 27.

³² *Id.* at 3.

rate, particularly a capital investment discount rate of 7%, to public intergenerational harms, reliance on Circular A-4's general reference to rates of 3% and 7% fails entirely to satisfy the requirement to explain the basis for BLM's discount rate assumptions.

Given OMB's clear 2015 guidance, it is arbitrary and flatly inconsistent with the 2015 OMB Response to Comments to even consider the use of a 7% discount rate, generally applied in the context of capital investments, to analyses of effects to the public welfare. Circular A-4 explicitly states that "[w]hen regulation primarily and directly affects private consumption... a lower discount rate is appropriate."³³ A 7% discount rate is designed at evaluating optimal outcomes solely for the purpose of private capital investment. OMB acknowledges, however, that in the climate change context, analysis should focus on effects to future individual consumption rather than capital investment:

The consumption rate of interest is the correct concept to use . . . as the impacts of climate change are measured in consumption-equivalent units in the three IAMs used to estimate the SCC. This is consistent with OMB guidance in Circular A-4, which states that when a regulation is expected to primarily impact private consumption—for example, via higher prices for goods and services—it is appropriate to use the consumption rate of interest to reflect how private individuals trade-off current future consumption.³⁴

Not only should the discount rate applied to long-term intergenerational analyses be wholly distinct from the rate for capital investment, it should be well below 2%. The Council on Economic Advisers has stated that, given interest rate changes since the original Circular A-4, a discount rate based on consumption rather than capital "should be at most 2 percent."³⁵ However, given several significant distinguishing characteristics of the harms from climate change and the benefits of climate change mitigation, even that figure of "at most 2%" is inappropriately high.

Overall, governmental policy decisions with implications for climate change deserve a very small or even negative discount rate.³⁶ Climate policy justifies a negative discount rate both because the future harms of climate change are deeply uncertain, stretch far into the future, affect future generations involuntarily, and potentially involve extraordinarily large "fat-tail" risks, including the remote but possible risk of human extinction. Two economists explain the case for extreme care in selecting discount rates in the climate change context:

The discount rate is useful to evaluate small transfers of consumptions across individuals living at different times. It is not the all-purpose tool that can serve for all evaluations. It is not adapted to large scale changes, and it is also not adapted

³³ *Id.* at 33.

³⁴ IWG RTC 2015 at 22.

³⁵ Council of Econ. Advisers, *Discounting for Public Policy: Theory and Recent Evidence on the Merits of Updating the Discount Rate* at 3 ("CEA 2017") (CEA Issue Brief, 2017).

³⁶ See Marc Fleurbaey & Stephane Zuber, Climate policies deserve a negative discount rate, 13 Chi. J. Int'l Law 565 (2013), https://www.law.uchicago.edu/files/files/Fleurbaey%20paper_0.pdf.

to evaluating policies that change the size of the population or the probabilities of different scenarios. For such policies one has to go back to the underlying social welfare criteria. This is an additional reason to pay attention to the selection of such criteria on sound ethical principles.³⁷

Because climate mitigation costs imposed today are likely to most benefit our children, grandchildren, and future generations, the choice of a discount rate is fundamentally an ethical one.³⁸ Circular A-4 itself acknowledges the special case of intergenerational benefits or costs: “If your rule will have important intergenerational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate”³⁹ In the particular case of climate change, multiple factors make even a “lower but positive” discount rate methodologically and ethically questionable.

Taking into account the intergenerational, long-term, and catastrophic effects of climate change, ethical principles weigh against the use of a high, private discount rates for decisions such as governmental policies affecting future methane emissions. Private discount rates are not sound and defensible in the context of very long time horizons. Circular A-4 expressly states that “[p]rivate market rates provide a reliable reference for determining how society values time within a generation, but for extremely long time periods no comparable private rates exist.”⁴⁰ Because no comparable private rates exist for evaluating the effects of massive and uncertain harms, including but not limited to adverse health effects, sea level rise, impaired agriculture, loss of biodiversity, social disruption, and more, there is no defensible basis for using private rates as comparable in evaluating future costs and benefits of climate policies.

Private discount rates are also not sound and defensible in the context of situations catastrophic worst-case outcomes. As economists have explained:

Martin Weitzman’s important recent work on uncertainty suggests that policy should be directed at reducing the risks of worst-case outcomes, not at balancing the likely values of costs and benefits. This fits well with a large portion of the prevailing discourse on climate change: the expected damages are important and costly; the credible worst-case outcomes are disastrously greater. The urgent priority is to protect ourselves against those worst cases, not to fine-tune expenditures to the most likely level of damages.⁴¹

Weitzman explains, “[t]he basic issue here is that spending money to slow global warming should perhaps not be conceptualized primarily as being about consumption smoothing as being about how much insurance to buy to offset the small chance of a ruinous catastrophe

³⁷ *Id.* at 22-23.

³⁸ See Frank Ackerman & Elizabeth A. Stanton, *The Social Cost of Carbon 2* (Apr. 2010).

³⁹ Circular A-4 at 36.

⁴⁰ *Id.*

⁴¹ Ackerman & Stanton 2010 at 12 (citing Martin L. Weitzman, “On Modeling and Interpreting the Economics of Catastrophic Climate Change,” *Review of Economics and Statistics* 91:1-19.

that is difficult to compensate by ordinary savings.”⁴² At the very high levels of greenhouse gas concentrations readily foreseeable under current emission trends, “climate change might conceivably cause catastrophic damages with small but nonnegligible probabilities. Other things being equal, this should lower the discount rate used to evaluate mitigation-investment decisions and raise the social cost of carbon.”⁴³

II. BLM’s domestic social cost of methane is inappropriate.

The domestic social cost of methane developed and used by BLM here is inappropriate for multiple reasons. If each country calculated only its own domestic social cost of carbon, the vast majority of the harm caused by climate change would not be reflected in any country’s cost-benefit analysis of climate action because much of the harm from each ton pollution will occur outside the county where it was emitted. If countries then acted based on these analyses, the result would be far less climate mitigation world-wide than would be economically efficient. This is the familiar economic concept of the tragedy of the commons. And if the United States takes a domestic-only approach, it will be difficult to convince other countries to do otherwise, which ultimately harms the United States.

In addition, the BLM’s calculation of the domestic-only social cost of methane itself is significantly under-inclusive because many of the effects of climate change that occur in other countries will result in spillover effects on the United States. We highlight impacts to U.S. trade below, but there are a wide range of effects—political instability and the resulting security costs, migration and refugees, impacts on U.S. citizens and assets located abroad, impact on willingness of other countries to undertake mitigation policies that have benefits for the US (reciprocity), etc.—that BLM fails to consider here.⁴⁴

A. The interim domestic social cost of methane used by BLM fails to adequately account for the costs associated with trade impacts caused by climate change.

Evidence is overwhelming that the performance of the U.S. economy, including levels of domestic employment and the profitability of U.S. companies, are affected by global trade and investment. This was recognized by the National Academy of Sciences (“NAS”) in a recent report on improving estimates of the social cost of carbon:

Correctly calculating the portion of the SC-CO₂ that directly affects the United States involves more than examining the direct impacts of climate that occur within the country’s physical borders, which is what the 7-23 percent range [estimating the share of the global economy accounted for by the U.S.] is intended

⁴² Martin L. Weitzman, “A Review of *The Stern Review on the Economics of Climate Change*,” 45 *Journal of Econ. Lit.* 703 (2007).

⁴³ Martin L. Weitzman, “Fat Tails and the Social Cost of Carbon,” 104 *Amer. Econ. Rev.* 544 (2014).

⁴⁴ See Comment of Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists to this docket discussing flaws in BLM’s SCM analysis.

to capture. Climate damages to the United States cannot be accurately characterized without accounting for consequences outside U.S. borders.

In addition, the United States could be affected by changes in economic conditions of its trading partners: lower economic growth in other regions could reduce demand for U.S. exports, and lower productivity could increase the prices of U.S. imports. The current SC-IAMs do not fully account for these types of interactions among the United States and other nations or world regions in a manner that allows for the estimation of comprehensive impacts for the United States.⁴⁵

The NAS concluded that estimating the domestic-only SCC (and presumably the SCM) was feasible but could not be based on the IAMs currently used to develop the SCC. Nevertheless, BLM did just that – justifying its actions to present “interim values for use in regulatory analyses until an improved estimate of the impacts of climate change to the U.S. can be developed.”⁴⁶ According to the NAS:

Estimation of the net damages per ton of CO₂ emissions to the United States alone, beyond the approximations done by the IWG, is feasible in principle; however, it is limited in practice by the existing SC-IAM methodologies, which focus primarily on global estimates and do not model all relevant interactions among regions. It is important to consider what constitutes a domestic impact in the case of a global pollutant that could have international implications that impact the United States. More thoroughly estimating a domestic SC-CO₂ would therefore need to consider the potential implications of climate impacts on, and actions by, other countries, which also have impacts on the United States.⁴⁷

In its regulatory impact analysis, BLM states that “[s]ome uncertainties are captured within the analysis, as discussed in detail in this appendix, while other areas of uncertainty [which include ‘inter-regional and inter-sectoral linkages’] have not yet been quantified in a way that can be modeled.”⁴⁸ However, according to the NAS:

Most of the structural and empirical studies that can be used to calibrate a damage function focus on a single type of impact or on the direct effect of climate change on regions in isolation. There is an emerging literature that also incorporates interactions among regions and impacts (e.g., Reilly et al., 2007; Warren, 2011; Diffenbaugh et al., 2012; Taheripour et al., 2013; Baldos and Hertel, 2014; Grogan et al., 2015; Harrison et al., 2016; Zaveri et al., 2016). For example, given global markets, migration, and other factors, effects of a crop failure in India will

⁴⁵ National Academies of Sciences, Engineering, & Medicine, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide*, 53 (2017) (“NAS Report”).

⁴⁶ 2017 RIA at 25.

⁴⁷ NAS Report at 53.

⁴⁸ 2017 RIA at 56.

also have impacts in other countries, and reductions in water availability in one region will have impacts across many regions and sectors.

One set of interactions occurs through market mechanisms, such as trade. For example, the economic impacts of climate change on crop yield in one region will depend in part on the changes in crop yields in other regions. These interactions can be captured by multisectoral, multiregional economic computable general equilibrium (CGE) models. Models of global agriculture and forestry impacts have been developed over more than two decades (e.g., Reilly et al., 1994; Sohngen et al., 2001; Reilly et al., 2007; Roson and van der Mensbrugghe, 2012; Nelson et al., 2014).⁴⁹

In developing an interim domestic social cost of methane (“IDSCM”), BLM is obligated to include the potential for disruptions in trade and investment due to climate impacts on our trading and investment partners, and the damages such disruptions would have on the U.S. economy. In analyzing the costs and benefits of the proposed rule, BLM is obligated to conduct a careful and transparent analysis using quantitative methods where existing techniques and modeling tools are available and qualitative analyses where such tools are unavailable. Adopting a faulty, expedient IDSCM by simply carving out a domestic U.S. share of global economic damages from the IWG’s global Social Cost of Methane has been thoroughly discredited in the literature. The 2017 RIA values the costs of an additional year of methane waste due to suspension of the rule with a flawed IDSCM and is unacceptable.

⁴⁹ NAS Report *supra* n.45.

Table 1**Table 2. Potential direct impacts and consequences on trade infrastructures**

Climate change effect	Mode	Direct impact	Consequences on trade infrastructure
Increased temperature and solar radiation	Land-based	Road pavement cracking; Asphalt rattling; Rail buckling; Loss of water seal causing potholing	Require more frequent maintenance (-) Require track and road repairs or speed restrictions to avoid derailments (-) Higher maintenance and insurance costs (-)
	Aviation	Reduced life of asphalt on airport tarmacs; Reduced airlift capacity	Need to construct longer runways to compensate for reduced airlift (-); Need for ground-cooling mechanisms (-) Higher maintenance and insurance costs (-)
	Sea-based	Reduced refrigeration storage period	Increase refrigeration costs (-)
Increased precipitation and river floods	Land-based	Flooding of land infrastructures; River bridge scour; Wet pavements and safety risks	Need to re-route to avoid climate change-affected roads (-); Higher maintenance and insurance costs (-)
	Aviation	Flooding of runways and access roads; Reduced visibility; Damage facilities including airstrips;	Higher maintenance costs and insurance costs (-)
	Sea-based	Reduced capabilities in loading/uploading of cargo at ports; Increased rates of corrosion / oxidation equipment	Risk of delays (-); Increased construction and maintenance costs (-)
Sea level rise and sea storm surges	Land-based	Permanent or temporary inundation; Submerge of bridges	Risk of delays (-); Higher maintenance and insurance costs (-)
	Aviation	Submerge of terminals and villages	Relocation and migration of people and business (-)
	Sea-based	Lower clearance under waterway bridges; Damage to port infrastructure; Increased rates of corrosion and oxidation equipment	Need for new ship design (-); Need for reconfiguration of operational areas (-); Higher maintenance costs and repair of port facilities (-)
Extreme weather conditions	Land-based	Disturbance to transport electronic infrastructures, signalling, etc.	Disruption to operations (-); Higher maintenance and insurance costs (-)
	Aviation	Disturbance to transport electronic infrastructures, signalling, etc.	Risk of delays (-); Higher maintenance and insurance costs (-)
	Sea-based	Temporary shutdown of ports; Deterioration of sailing conditions; Disturbance to transport electronic infrastructures, signalling, etc.	Risk of delays (-); Higher maintenance and insurance costs (-)
Reduced Arctic sea ice cover	Sea-based	Opening of Arctic shipping routes	Reduced distances and time (+); Need for additional navigation aids such as ice-breakers for ships using the Arctic route (-); Higher insurance costs for ships using the Arctic route (-)

Source: OECD based on Race (2015), UNCTAD (2014), Maddocks et al. (2010).

B. Disruptions to U.S. trade flows and foreign investment due to climate impacts will have a significant impact on the U.S. economy.

In 2016, the U.S. exported \$2.21 trillion worth of goods and services, 12% of U.S. GDP.⁵⁰ Imports amounted to \$2.71 trillion, almost 16% of GDP.⁵¹ Exports of goods were \$1.46 trillion, including capital goods such as machinery and equipment, industrial supplies such as chemicals, and consumer goods. Services exports, including banking, insurance, and transportation, were \$750 billion (of which \$208 billion were travel expenditures by foreigners in the U.S.). Exports of agricultural products were \$129.7 billion.⁵² Climate damages to our trading partners would disrupt these export flows by reducing their economic activity and limiting their ability to purchase U.S. goods and services.

Millions of U.S. jobs are supported by exports. According to the U.S. International Trade Administration, in 2016 the export of goods supported 6.7 million domestic jobs and the export of services supported 4.8 million jobs.⁵³ The leading states for export-based jobs included Texas (1,046,549), California (706,969), Washington (375,009), Illinois (333,674), New York (315,221), Michigan (270,240), Ohio (260,436), Florida (243,755), Georgia (198,488), and Indiana (190,511). Regionally, these jobs were based on exports to Asia and the Pacific (3.4 million), Europe (3.1 million), Canada and Mexico (2.8 million), South and Central America (1 million), the Middle East (.5 million), the Caribbean (.5 million), and Africa (.2 million). Roughly 300,000 U.S. companies engaged in exporting, and 98% were small- or medium-sized businesses with 500 or fewer employees.⁵⁴

Imports represent an even larger share of the U.S. economy. Imports of goods and services totaled \$2.71 trillion in 2016, or almost 16% of GDP.⁵⁵ Climate damages disrupting countries that are sources for inputs and consumption goods would harm the U.S. economy. For example, a major supply shock occurred when Thailand, the world's second-largest producer of hard drives, experienced extreme flooding in 2011 which severely damaged manufacturing facilities. As a result U.S. consumers faced higher prices for many electronic goods, from computers to cameras.⁵⁶ Agricultural products, which represent 44% of U.S. imports, are also at risk from climate impacts, including fruits, vegetables, and wine. Sugar and tropical products

⁵⁰ U.S. Dep't of Commerce, Int'l Trade Admin., *U.S. Trade Overview 2016*, 5 (Apr. 2017) https://www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005537.pdf (last accessed Nov. 6, 2017).

⁵¹ *Id.*

⁵² U.S. Dep't of Agric., Foreign Agric. Serv., *Infographic: U.S. Agricultural Exports, FY 2016*, <https://www.fas.usda.gov/data/infographic-us-agricultural-exports-fy-2016> (last accessed Nov. 6, 2017).

⁵³ U.S. Trade Overview 2016, *supra* n. 50.

⁵⁴ *Id.* at 9-10.

⁵⁵ *Id.* at 5.

⁵⁶ Charles Arthur, *Thailand's Devastating Floods are Hitting PC Hard Drive Supplies, Warn Analysts*, *The Guardian* (Oct. 25, 2011), <https://www.theguardian.com/technology/2011/oct/25/thailand-floods-hard-drive-shortage>.

such as coffee, cocoa, and rubber comprised over 20 percent of U.S. agricultural imports in 2015.⁵⁷

In addition to disrupting trade, climate impacts could also disrupt inward and outward foreign direct investment that would negatively affect the U.S. economy. Foreign direct investment is distinguished from financial investment as investment to acquire, establish, or expand businesses conveying management control. U.S. entities own or invest in businesses, infrastructure, factories, office buildings, and hotels in foreign countries, and foreign entities own similar assets in the U.S. According to the Office of the U.S. Trade Representative, “international investment pays large and important dividends for the U.S. economy and American workers by increasing exports, improving productivity, creating jobs, and raising wages.”⁵⁸ Climate impacts could damage overseas assets owned by U.S. businesses and individuals as well as reduce the flows of capital into the U.S. from foreign entities experiencing climate damages and reduced economic activity in their own countries.

In 2015, U.S. direct investment abroad totaled roughly \$5 trillion. Climate impacts in countries hosting U.S. foreign direct investment could damage the profitability of U.S. companies, which reportedly hold roughly \$2.6 trillion in profits abroad from their operations in foreign countries.⁵⁹ According to Forbes, “US companies are now making very large profits outside the US economy ... that accrue to American companies.”⁶⁰

Foreign direct investment within the United States was roughly \$3 trillion.⁶¹ In 2016, new foreign direct investment flows into the U.S. exceeded \$370 billion.⁶² Significant levels of foreign investment in the U.S. come from over thirty countries, are widely distributed across

⁵⁷ USDA, Economic Research Service, *Agricultural Trade* (May 5, 2017), <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/agricultural-trade/> (last accessed Nov. 6, 2017).

⁵⁸ Exec. Office of the President, Office of the U.S. Trade Rep., *Investment* <https://ustr.gov/issue-areas/services-investment/investment> (last visited Nov. 6, 2017).

⁵⁹ Nick Wells, *Companies are holding a \$2.6 trillion pile of cash overseas that's still growing*, CNBC (Apr. 28, 2017), <https://www.cnbc.com/2017/04/28/companies-are-holding-trillions-in-cash-overseas.html> (last visited Nov. 6, 2017).

⁶⁰ Tim Worstall, *Why Have Corporate Profits Been Rising As A Percentage Of GDP? Globalisation*, Forbes (May 7, 2013), <https://www.forbes.com/sites/timworstall/2013/05/07/why-have-corporate-profits-been-rising-as-a-percentage-of-gdp-globalisation/#1c976c8e2a6e> (last visited Nov. 6, 2017).

⁶¹ Derrick T. Jenniges & James J. Fetzer, Bureau of Econ. Analysis, *Direct Investment Positions for 2015 – Country and Industry Detail*, Bureau of Economic Analysis 1 (2016), https://www.bea.gov/scb/pdf/2016/07%20July/0716_direct_investment_positions.pdf (last visited Nov. 6, 2017).

⁶² U.S. Dep't of Commerce, Bureau of Econ. Analysis, *Expenditures by Foreign Direct Investors for New Investment in the United States, 2014 - 2016* (2017), <https://www.bea.gov/newsreleases/international/fdi/fdinewsrelease.htm> (last visited Nov. 6, 2017).

sectors of the economy, and are found in virtually every state.⁶³ Nationally, newly acquired, established, or expanded foreign-owned businesses in 2016 employed 480,800 workers.⁶⁴ In Texas alone, foreign-controlled companies employed 460,100 workers in 2011, 5.2 percent of the state's total private-industry employment.⁶⁵ Major sources of this foreign investment included United Kingdom, France, Japan, Switzerland, and the Netherlands.

Domestic economic impacts from climate change abroad could result in damage to U.S. overseas assets, slow inward foreign direct investment, reduce corporate profits, and reduce returns on U.S. financial investments in other countries.

C. Climate change will have adverse impacts on the domestic and foreign infrastructure on which U.S. trade depends.

The latest U.S. National Climate Assessment (NCA) describes the vulnerability of the U.S. transportation system to climate change that can disrupt U.S. trade flows and negatively impact the economy. It found that:

The impacts from sea level rise and storm surge, extreme weather events, higher temperatures and heat waves, precipitation changes, and other climatic conditions are affecting the reliability and capacity of the U.S. transportation system in many ways.

Most ocean-going ports are in low-lying coastal areas, including three of the most important for imports and exports: Los Angeles/Long Beach (which handles 31% of the U.S. port container movements) and the Port of South Louisiana and the Port of Galveston/Houston (which combined handle 25% of the tonnage handled by U.S. ports).⁶⁶

The recently-released Climate Science Special Report of the 4th National Climate Assessment continues to find that “it is virtually certain that sea level rise this century and beyond will pose a growing challenge to coastal communities, infrastructure, and ecosystems from increased (permanent) inundation, more frequent and extreme coastal flooding, [and] erosion of coastal landforms.”⁶⁷

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ Org. for Int’l Investment, *Foreign Direct Investment in Texas*, http://www.ofii.org/sites/default/files/Texas_0.pdf.

⁶⁶ U.S. Global Change Research Program, *National Climate Assessment: Chapter 5, Transportation* at 134, 146 (2014), <http://nca2014.globalchange.gov/> (last accessed Nov. 6, 2017) (“2015 NCA Report”).

⁶⁷ U.S. Global Change Research Program, *National Climate Assessment Climate Science Special Report* 334 (2017), <https://science2017.globalchange.gov/> (last accessed Nov. 6, 2017).

The 3rd NCA also detailed that numerous studies indicate increasing severity and frequency of flooding throughout much of the Mississippi and Missouri River basins. The report found that, “[d]isruptions to the nation’s inland water system from floods or droughts can, and has, totally disrupted barge traffic.”⁶⁸ Further, the nation has seen increasingly severe hurricanes damage to road and rail systems that bring goods to U.S. ports for shipment abroad.

Similar climate impacts to trade infrastructure abroad will also negatively impact the U.S. economy. In a recently-released report, the Organization for Cooperation and Development (OECD) concluded that the adverse impacts of climate change, including higher temperatures, sea level rise, increased storm surges, and extreme weather events, may affect the production of commodities that are heavily traded internationally, that climate change threatens trade infrastructure, and that the economic consequences of climate change damages in one region may affect other regions.⁶⁹

The OECD found that climate-related disruption and damage to seaports will increase trade costs.

Maritime shipping, which accounts for around 80% of global trade by volume and more than 70% of global trade by value, could experience some negative consequences from climate change. Increased storms, increased precipitation, and sea level rise may cause more frequent port closure, affect speed of passage, necessitate the use of alternative shipping routes or additional safety measures, and increase the maintenance costs for ships and ports.⁷⁰

These impacts may also require changes in ship design and reconfiguration of port operational areas.

The study also found that airports are exposed to the same climate impacts. “Research suggests that sea level rise, increased storminess, and extreme precipitation induced by climate change can affect the operations of airports, lead to more frequent disturbances, and affect infrastructures in weather-exposed or low-lying areas.”⁷¹ Increased temperatures could also reduce airlift capacities and require longer runways to compensate for reduced airlift. Table 1, above, presents a detailed summary of the direct impacts and consequences of climate change on trade infrastructure from the OECD report.

OECD concluded that:

One key direct effect of climate change is that supply, transport and distribution chains might become more vulnerable to disruptions due to climate change,

⁶⁸ 2015 NCA Report at 138.

⁶⁹ R. Dellink, R. *et al.*, *International Trade Consequences of Climate Change*, OECD Trade & Environment Working Papers 19 (2017), http://www.oecd-ilibrary.org/trade/international-trade-consequences-of-climate-change_9f446180-en?crawler=true (last visited Nov. 6, 2017).

⁷⁰ *Id.* at 19.

⁷¹ *Id.*

thereby affecting future international trade patterns. Extreme weather events, for instance, may lead to the temporary shutdown of ports and transport routes; they might also damage infrastructure critical to trade and thus have longer-lasting effects. These and other interruptions can lead to delays, increase the costs of international trade and could lead to a shift in trade patterns as companies involved in trade seek alternatives to increase reliability of shipping.⁷²

The threats to international trade from climate change are recognized by other international institutions. The World Trade Organization (WTO), has found that “[c]limate change may increase the vulnerability of the supply, transport and distribution chains upon which international trade depends” and that “[i]mpacts on infrastructure will include damage to buildings, roads, railways, airports, bridges, and to port facilities due to storm surges, flooding and landslides.”⁷³ The WTO also warns that “[m]any tourist destinations rely on natural assets – beaches, clear seas, tropical climate, or abundant snowfall, for example – to attract holiday-makers. A rise in sea levels or changes in weather patterns might deprive countries of these natural assets.”⁷⁴ The World Economic Forum has concluded that “climate change is also affecting the world’s capacity to trade,” that “many ports, especially in developing countries, are not ready to withstand stronger and more frequent storms or rising sea levels,” and that “[t]ransport systems – the arteries of trade – are not prepared to cope with climate change.”⁷⁵

Higher trade costs due to climate impacts are also recognized by the U.S. Census Bureau, which compiles U.S. trade statistics. It found that “during port closures, export and import shipments may be diverted, amended, or canceled.”⁷⁶ The Commerce Department’s Bureau of Economic Analysis reports that “there are several possible impacts of the hurricanes on U.S. trade in services. For example, transport services may be affected by port closures and by diverted shipments. Travel expenditures and other services trade may be affected to the extent that service activities are interrupted.”⁷⁷

⁷² *Id.* at 18.

⁷³ World Trade Org. & United Nations Env’t Prog., *Trade and Climate Change* (2009), https://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf (last visited Nov. 6, 2017).

⁷⁴ *Id.*

⁷⁵ World Economic Forum, *What Does Climate Change Mean for the Future of World Trade?* (2015), <https://www.weforum.org/agenda/2015/12/what-does-climate-change-mean-for-the-future-of-trade/> (last visited Nov. 6, 2017).

⁷⁶ U.S. Dep’t of Commerce, U.S. Census Bureau, *Effects of 2017 Atlantic Hurricanes on U.S. International Trade in Goods and Services* (2017), https://www.census.gov/foreign-trade/statistics/notices/20170928_Hurricane.html (last visited Nov. 6, 2017).

⁷⁷ *Id.*

Attachment 5

Executive Order No. 13,783 on Promoting Energy Independence and Economic Growth, 82 Fed. Reg. 16,093 (Mar. 28, 2017)

Federal Register

Vol. 82, No. 61

Friday, March 31, 2017

Presidential Documents

Title 3—

Executive Order 13783 of March 28, 2017

The President

Promoting Energy Independence and Economic Growth

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. (a) It 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. Moreover, the prudent development of these natural resources is essential to ensuring the Nation's geopolitical security.

(b) It is further in the national interest to ensure that the Nation's electricity is affordable, reliable, safe, secure, and clean, and that it can be produced from coal, natural gas, nuclear material, flowing water, and other domestic sources, including renewable sources.

(c) Accordingly, it is the policy of the United States that executive departments and agencies (agencies) immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.

(d) It further is the policy of the United States that, to the extent permitted by law, all agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the States concerning these matters in our constitutional republic.

(e) It is also the policy of the United States that necessary and appropriate environmental regulations comply with the law, are of greater benefit than cost, when permissible, achieve environmental improvements for the American people, and are developed through transparent processes that employ the best available peer-reviewed science and economics.

Sec. 2. Immediate Review of All Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources. (a) The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources. Such review shall not include agency actions that are mandated by law, necessary for the public interest, and consistent with the policy set forth in section 1 of this order.

(b) For purposes of this order, "burden" means to unnecessarily obstruct, delay, curtail, or otherwise impose significant costs on the siting, permitting, production, utilization, transmission, or delivery of energy resources.

(c) Within 45 days of the date of this order, the head of each agency with agency actions described in subsection (a) of this section shall develop and submit to the Director of the Office of Management and Budget (OMB Director) a plan to carry out the review required by subsection (a) of this section. The plans shall also be sent to the Vice President, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The head of any agency who determines that such agency does not have

agency actions described in subsection (a) of this section shall submit to the OMB Director a written statement to that effect and, absent a determination by the OMB Director that such agency does have agency actions described in subsection (a) of this section, shall have no further responsibilities under this section.

(d) Within 120 days of the date of this order, the head of each agency shall submit a draft final report detailing the agency actions described in subsection (a) of this section to the Vice President, the OMB Director, the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, and the Chair of the Council on Environmental Quality. The report shall include specific recommendations that, to the extent permitted by law, could alleviate or eliminate aspects of agency actions that burden domestic energy production.

(e) The report shall be finalized within 180 days of the date of this order, unless the OMB Director, in consultation with the other officials who receive the draft final reports, extends that deadline.

(f) The OMB Director, in consultation with the Assistant to the President for Economic Policy, shall be responsible for coordinating the recommended actions included in the agency final reports within the Executive Office of the President.

(g) With respect to any agency action for which specific recommendations are made in a final report pursuant to subsection (e) of this section, the head of the relevant agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding, those actions, as appropriate and consistent with law. Agencies shall endeavor to coordinate such regulatory reforms with their activities undertaken in compliance with Executive Order 13771 of January 30, 2017 (Reducing Regulation and Controlling Regulatory Costs).

Sec. 3. Rescission of Certain Energy and Climate-Related Presidential and Regulatory Actions. (a) The following Presidential actions are hereby revoked:

(i) Executive Order 13653 of November 1, 2013 (Preparing the United States for the Impacts of Climate Change);

(ii) The Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards);

(iii) The Presidential Memorandum of November 3, 2015 (Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment); and

(iv) The Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

(b) The following reports shall be rescinded:

(i) The Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); and

(ii) The Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions).

(c) The Council on Environmental Quality shall rescind its final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," which is referred to in "Notice of Availability," 81 *Fed. Reg.* 51866 (August 5, 2016).

(d) The heads of all agencies shall identify existing agency actions related to or arising from the Presidential actions listed in subsection (a) of this section, the reports listed in subsection (b) of this section, or the final guidance listed in subsection (c) of this section. Each agency shall, as soon as practicable, suspend, revise, or rescind, or publish for notice and comment proposed rules suspending, revising, or rescinding any such actions, as appropriate and consistent with law and with the policies set forth in section 1 of this order.

Sec. 4. Review of the Environmental Protection Agency's "Clean Power Plan" and Related Rules and Agency Actions. (a) The Administrator of the Environmental Protection Agency (Administrator) shall immediately take all steps necessary to review the final rules set forth in subsections (b)(i) and (b)(ii) of this section, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules. In addition, the Administrator shall immediately take all steps necessary to review the proposed rule set forth in subsection (b)(iii) of this section, and, if appropriate, shall, as soon as practicable, determine whether to revise or withdraw the proposed rule.

(b) This section applies to the following final or proposed rules:

(i) The final rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64661 (October 23, 2015) (Clean Power Plan);

(ii) The final rule entitled "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," 80 *Fed. Reg.* 64509 (October 23, 2015); and

(iii) The proposed rule entitled "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule," 80 *Fed. Reg.* 64966 (October 23, 2015).

(c) The Administrator shall review and, if appropriate, as soon as practicable, take lawful action to suspend, revise, or rescind, as appropriate and consistent with law, the "Legal Memorandum Accompanying Clean Power Plan for Certain Issues," which was published in conjunction with the Clean Power Plan.

(d) The Administrator shall promptly notify the Attorney General of any actions taken by the Administrator pursuant to this order related to the rules identified in subsection (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, pending the completion of the administrative actions described in subsection (a) of this section.

Sec. 5. Review of Estimates of the Social Cost of Carbon, Nitrous Oxide, and Methane for Regulatory Impact Analysis. (a) In order to ensure sound regulatory decision making, it is essential that agencies use estimates of costs and benefits in their regulatory analyses that are based on the best available science and economics.

(b) The Interagency Working Group on Social Cost of Greenhouse Gases (IWG), which was convened by the Council of Economic Advisers and the OMB Director, shall be disbanded, and the following documents issued by the IWG shall be withdrawn as no longer representative of governmental policy:

(i) Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (February 2010);

(ii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (May 2013);

(iii) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (November 2013);

(iv) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (July 2015);

(v) Addendum to the Technical Support Document for Social Cost of Carbon: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (August 2016); and

(vi) Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (August 2016).

(c) Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A–4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.

Sec. 6. *Federal Land Coal Leasing Moratorium.* The Secretary of the Interior shall take all steps necessary and appropriate to amend or withdraw Secretary's Order 3338 dated January 15, 2016 (Discretionary Programmatic Environmental Impact Statement (PEIS) to Modernize the Federal Coal Program), and to lift any and all moratoria on Federal land coal leasing activities related to Order 3338. The Secretary shall commence Federal coal leasing activities consistent with all applicable laws and regulations.

Sec. 7. *Review of Regulations Related to United States Oil and Gas Development.* (a) The Administrator shall review the final rule entitled “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources,” 81 *Fed. Reg.* 35824 (June 3, 2016), and any rules and guidance issued pursuant to it, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.

(b) The Secretary of the Interior shall review the following final rules, and any rules and guidance issued pursuant to them, for consistency with the policy set forth in section 1 of this order and, if appropriate, shall, as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules:

(i) The final rule entitled “Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands,” 80 *Fed. Reg.* 16128 (March 26, 2015);

(ii) The final rule entitled “General Provisions and Non-Federal Oil and Gas Rights,” 81 *Fed. Reg.* 77972 (November 4, 2016);

(iii) The final rule entitled “Management of Non-Federal Oil and Gas Rights,” 81 *Fed. Reg.* 79948 (November 14, 2016); and

(iv) The final rule entitled “Waste Prevention, Production Subject to Royalties, and Resource Conservation,” 81 *Fed. Reg.* 83008 (November 18, 2016).

(c) The Administrator or the Secretary of the Interior, as applicable, shall promptly notify the Attorney General of any actions taken by them related to the rules identified in subsections (a) and (b) of this section so that the Attorney General may, as appropriate, provide notice of this order and any such action to any court with jurisdiction over pending litigation related to those rules, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, until the completion of the administrative actions described in subsections (a) and (b) of this section.

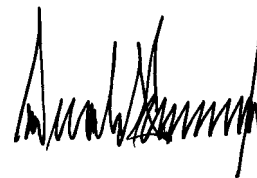
Sec. 8. *General Provisions.* (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

A handwritten signature in black ink, appearing to be "Donald Trump", located in the upper right quadrant of the page.

THE WHITE HOUSE,
March 28, 2017.

[FR Doc. 2017-06576
Filed 3-30-17; 11:15 am]
Billing code 3295-F7-P

Attachment 6

Secretary of the Interior, **Secretarial Order No. 3349** on **American Energy Independence** (Mar. 29, 2017)



THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. **3349**

Subject: American Energy Independence

Sec. 1 Purpose. This Order implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017 and entitled "Promoting Energy Independence and Economic Growth" (March 28, 2017 E.O.). It also directs a reexamination of the mitigation policies and practices across the Department of the Interior (Department) in order to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families.

Sec. 2 Authorities. This Order is issued under the authority of Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, and other applicable statutory authorities.

Sec. 3 Background. Among other provisions, the March 28, 2017 E.O. directs the Department to review all existing regulations, orders, guidance documents, policies, and any other similar actions that potentially burden the development or utilization of domestically produced energy resources. A plan to carry out the review must be submitted to the Director of the Office of Management and Budget (OMB) and to certain other White House officials within 45 days of the date of the March 28, 2017 E.O. The objective of the review is to identify agency actions that unnecessarily burden the development or utilization of the Nation's energy resources and support action to appropriately and lawfully suspend, revise, or rescind such agency actions as soon as practicable.

The March 28, 2017 E.O. also directs the Department to promptly review certain specific actions recently taken by the Department, in particular Secretary's Order 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program," and four rules related to onshore oil and gas development.

The March 28, 2017 E.O. also rescinds certain Presidential Actions, reports, and final guidance related to climate change, including:

- a. E.O. 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change);
- b. Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); and
- c. Presidential Memorandum of September 21, 2016 (Climate Change and National Security).

The March 28, 2017 E.O. directs the Department to identify agency actions "related to or arising from" the rescinded Presidential Actions, reports, and guidance, and to initiate a lawful and appropriate process to suspend, revise, or rescind such actions.

The March 28, 2017 E.O. also rescinds the Presidential Memorandum issued on November 3, 2015, entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." That Memorandum directed the Secretary of the Interior, among other Cabinet officials, to undertake a number of actions to implement a landscape-scale mitigation policy, including specific directions to the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) to develop mitigation policies that incorporated compensatory mitigation into planning and permitting processes.

Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 13, 2013, is directly related to the rescinded Presidential Memorandum on mitigation. Secretary's Order 3330 dovetails with the subsequently issued Presidential Memorandum by directing the development and implementation of a landscape-scale mitigation policy for the Department. As directed by the Order, the Secretary received a report in April 2014 entitled, "A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior." The Strategy set forth a number of "deliverables" by nearly every office and bureau within the Department to advance the stated goal of "landscape-scale mitigation." Given the close nexus between the rescinded Presidential Memorandum and Secretary's Order 3330, a thorough reexamination is needed of the policies set out in that Order.

Sec. 4 Policy. To begin implementing the March 28, 2017 E.O., I hereby order the following:

a. Revocation of Secretary's Order 3330. I hereby revoke Secretary's Order 3330, "Improving Mitigation Policies and Practices of the Department of the Interior," dated October 31, 2013. As set forth below, all actions taken pursuant to Secretary's Order 3330 must be reviewed for possible reconsideration, modification, or rescission as appropriate.

b. Review of Department Actions. As set forth in Sec. 5 below, each bureau and office shall review all existing regulations, orders, guidance documents, policies, instructions, notices, implementing actions, and any other similar actions (Department Actions) related to or arising from the Presidential Actions set forth above and, to the extent deemed necessary and permitted by law, initiate an appropriate process to suspend, revise, or rescind any such actions, consistent with the policies set forth in the March 28, 2017 E.O.

Sec. 5 **Implementation.** The following actions shall be taken pursuant to this Order:

a. Mitigation Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions they have adopted or are in the process of developing relating to (1) the Presidential Memorandum dated November 3, 2015, "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" and (2) Secretary's Order 3330.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action for review.

b. Climate Change Policy Review.

(i) Within 14 days of the date of this Order, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, all Department Actions they have adopted, or are in the process of developing, relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 E.O., in particular: Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change); Presidential Memorandum of June 25, 2013 (Power Sector Carbon Pollution Standards); Presidential Memorandum of September 21, 2016 (Climate Change and National Security); Report of the Executive Office of the President of June 2013 (The President's Climate Action Plan); Report of the Executive Office of the President of March 2014 (Climate Action Plan Strategy to Reduce Methane Emissions); and the Council on Environmental Quality's final guidance entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 *Fed. Reg.* 51866 (August 5, 2016).

(ii) Within 30 days of the date of this Order, the Deputy Secretary shall inform the Assistant Secretaries whether to proceed with reconsideration, modification, or rescission as appropriate and necessary of any Department Actions identified in the review required by subsection (i) above.

(iii) Within 90 days of the date of this Order, each bureau and office required to reconsider, modify, or rescind any such Department Action, shall submit to the Deputy Secretary, through their Assistant Secretary, a draft revised or substitute Department Action, for review.

c. Review of Other Department Actions Impacting Energy Development.

(i) As previously announced by the Department, BLM shall proceed expeditiously with proposing to rescind the final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands," 80 *Fed. Reg.* 16128 (Mar. 26, 2015).

(ii) Within 21 days, the Director, BLM shall review the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation," 81 *Fed. Reg.* 83008 (January 17, 2017), and report to the Assistant Secretary - Land and Minerals Management on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iii) Within 21 days, the Director, National Park Service shall review the final rule entitled, "General Provisions and Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 77972 (Nov. 4, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

(iv) Within 21 days, the Director, FWS shall review the final rule entitled, "Management of Non-Federal Oil and Gas Rights," 81 *Fed. Reg.* 79948 (Nov. 14, 2016), and report to the Assistant Secretary for Fish and Wildlife and Parks on whether the rule is fully consistent with the policy set forth in Section 1 of the March 28, 2017 E.O.

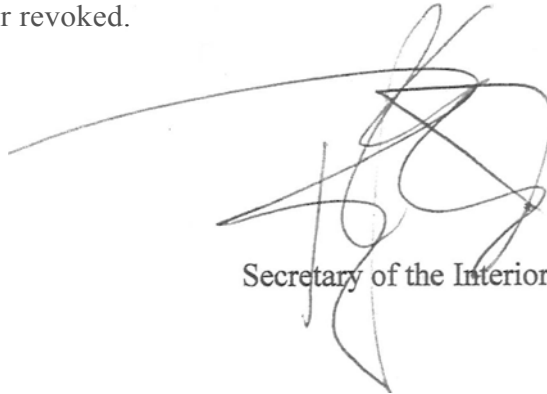
(v) Within 21 days, each bureau and office head shall provide to the Deputy Secretary, through their Assistant Secretary, a report that identifies all existing Department Actions issued by their bureau or office that potentially burden (as that term is defined in the March 28, 2017 E.O.) the development or utilization of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear resources.

(vi) Within 35 days, the Deputy Secretary shall provide to me a plan to complete the review of Department Actions contemplated by Section 2 of the March 28, 2017 E.O. The plan must meet all objectives and time lines set forth in the March 28, 2017 E.O.

Sec. 5 Effect of the Order. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies,

instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 6 Expiration Date. This Order is effective immediately. It will remain in effect until it is amended, superseded, or revoked.



Secretary of the Interior

Date: MAR 29 2017

Attachment 7

Federal Respondents' Motion to Extend Briefing Deadlines in
Wyoming v. U.S. Dep't of the Interior, No. 2:16-cv-285-SWS (D. Wyo.
June 20, 2017), ECF No. 129

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**IN THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF WYOMING**

STATE OF WYOMING and STATE OF)	
MONTANA)	
	)	No. 16-cv-00285-SWS
Petitioners,)	
	)	[Consolidated with 16-cv-00280-SWS]
and)	
	)	FEDERAL RESPONDENTS'
	)	MOTION TO EXTEND THE
STATE OF NORTH DAKOTA and STATE OF	)	BRIEFING DEADLINES
TEXAS,)	
)	
Intervenor-Petitioners,)	
)	
v.)	
)	
UNITED STATES DEPARTMENT OF THE)	
INTERIOR, <i>et al.</i> ,)	
)	
Respondents.)	
)	
and)	
)	
WYOMING OUTDOOR COUNCIL, <i>et al.</i>)	
)	
Intervenor-Respondents.)	

Pursuant to Fed. R. Civ. P. 6(b) and Local Rule 6, Federal Respondents respectfully request that this Court extend the briefing deadlines currently in place by 90 days. This Court has previously extended the briefing schedule twice based on Western Energy Alliance and the Independent Petroleum Association of America’s (“Industry Petitioners”) request for an extension. ECF Nos. 100, 118. Under the current briefing deadlines, opening briefs are due July 3, 2017, response briefs are due August 11, 2017, and reply briefs are due August 25, 2017. ECF No. 126. As good cause to support their request for an extension, Federal Respondents state the following.

1. The Bureau of Land Management (“BLM”) published its Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule (hereinafter, “the Rule”) in the Federal Register on November 18, 2016. 81 Fed. Reg. 83,008 (Nov. 18, 2016). The Rule became effective on January 17, 2017. *Id.* Many of the Rule’s requirements were to be phased in over time, and would not become operative until January 17, 2018. *See id.* at 83,023-24, 83,033; 43 C.F.R. §§ 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, 3179.301-305. North Dakota, Texas, and Industry Petitioners have cited the impending January 2018 compliance date for these requirements as a reason why expeditious resolution of this matter is necessary. ECF No. 112 ¶¶ 3, 8; ECF No. 113 at 3-4; ECF No. 123 ¶¶ 16, 18.

2. On March 28, 2017, President Donald J. Trump issued an Executive Order requiring that the Secretary of the Interior “review” the Rule and “if appropriate, . . . as soon as practicable, . . . publish for notice and comment proposed rules suspending, revising, or rescinding” the Rule. Exec. Order No. 13,783, 82 Fed. Reg. 16,093, § 7(b) (Mar. 28, 2017). On March 29, 2017, the Secretary of the Interior issued Secretary’s Order 3349 requiring the Director of the BLM, within 21 days, to “review” the Rule and “report to the Assistant Secretary

– Land and Minerals Management on whether the Rule is fully consistent with the policy set forth in” the Executive Order. Dep’t of the Interior, Sec’y Order 3349, § 5(c)(ii) (Mar. 29, 2017), *available at* <https://elips.doi.gov/elips/0/doc/4512/Page1.aspx>.

3. Pursuant to this direction, the Department of the Interior has developed a three-step plan to propose to revise or rescind the Rule and prevent any harm from compliance with the Rule in the interim. First, BLM has postponed the Rule’s upcoming January 2018 compliance deadlines. On June 15, 2017, BLM published in the Federal Register a Notice of the Postponement of Certain Compliance Dates of the Rule (hereinafter “Postponement Notice”). 82 Fed. Reg. 27,430 (June 15, 2017). As explained in the Postponement Notice, BLM has exercised its authority under 5 U.S.C. § 705 to postpone the Rule’s upcoming January 2018 compliance dates, pending judicial review. *Id.* (postponing compliance dates for 43 C.F.R. §§ 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301-305).

4. Second, BLM intends to conduct notice and comment rulemaking to propose to suspend certain provisions of the Rule already in effect and extend the compliance dates of requirements not yet in effect, but currently postponed pursuant to BLM’s Postponement Notice. *Id.* at 27,431. As presently envisioned, this rule would suspend or extend the requirements of the following provisions of the Rule until July 17, 2019: 43 C.F.R. §§ 3162.3-1(j), 3179.7, 3179.9(b), 3179.10(a), 3179.101, 3179.102, 3179.201(d), 3179.202(h), 3179.203(b)-(c), 3179.204, and 3179.301-305. That is, the proposed rule would suspend until July 17, 2019, the Rule’s requirements relating to waste minimization plans, gas capture percentages, measurement of flared volumes, well drilling, well completions and related operations, pneumatic controllers, pneumatic diaphragm pumps, storage vessels, downhole well maintenance and liquids unloading, and leak detection and repair. BLM intends to publish this proposed rule for public notice and

comment before the end of August 2017, and to publish a final rule in advance of the January 2018 compliance dates (which are currently postponed by the June 15, 2017 Postponement Notice).

5. Third, BLM intends to publish a separate proposed rule for public notice and comment that would propose to permanently rescind or revise the Rule. The proposed suspension of the Rule's requirements until July 17, 2019 under the second step of BLM's three-step process, if adopted as a final rule after notice and an opportunity for public comment, is intended to provide relief to states and operators from the Rule's requirements while BLM engages in notice and comment rulemaking to propose to rescind or revise the Rule.

6. In light of the postponement of the Rule's January 2018 compliance dates and BLM's intent to undertake a rulemaking to propose to suspend most of the Rule's requirements until July 17, 2019, Federal Respondents request an extension of the current briefing schedule for a period of 90 days. Such an extension will allow BLM to devote its resources to developing and promulgating a rule proposing to suspend and extend the provisions of the Rule, rather than to the defense of a Rule that BLM is actively reconsidering. The requested extension will also ensure that the Court's and Parties' time and resources are not wasted litigating a Rule which may soon be replaced, and many provisions of which may never come into effect. Indeed, it is possible that BLM's reconsideration of the Rule may ultimately obviate the need for judicial resolution of Petitioners' claims.

7. An extension will not prejudice Petitioners because the upcoming January 2018 compliance dates, which they have cited as the source of their harm, have been postponed. Thus, Petitioners do not need to expend resources to comply with those requirements. To the extent Petitioners allege that they are suffering ongoing harm, their previous requests for multiple

extensions of merits briefing belie those claims. *See* ECF Nos. 97, 110. This Court also found in its Order denying Petitioners' motion for a preliminary injunction that Petitioners had not demonstrated imminent irreparable harm flowing from the portions of the Rule currently in effect. ECF No. 92 at 22-26. Even if the portions of the Rule currently in effect are harmful to Petitioners, BLM is in the process of developing a proposed rule to suspend those provisions, and anticipates finalizing such a rule by this coming fall. If the parties were to proceed with the briefing deadlines currently in place, it is unlikely the merits would be resolved prior to this fall.

8. An extension is also justified because one of Federal Respondents' attorneys is currently on maternity leave and will be unable to assist with briefing if the current schedule remains in place. This case has been staffed thus far by two Department of Justice attorneys—Ms. Boronow and Ms. Piropato—and both worked extensively and cooperatively in responding to the Petitioners' motions for a preliminary injunction in late 2016 and early 2017. The United States would be prejudiced if Ms. Piropato were not able to contribute to the briefing on the merits.

9. For these reasons, Federal Respondents propose the following briefing schedule:

- Federal Respondents shall file a status report on September 1, 2017, notifying the Court and the parties of BLM's progress in promulgating a suspension of various requirements of the Rule.
- Opening briefs shall be filed on October 2, 2017.
- Response briefs shall be filed on November 9, 2017.
- Reply briefs shall be filed on November 24, 2017.

10. As required by Local Rule 7.1(b)(1)(A), Federal Respondents have conferred with the other parties to this litigation who have indicated that they take the following positions on this motion:

- Petitioners States of Wyoming and Montana take no position on this motion.
- Industry Petitioners oppose this motion and intend to file a response.
- Intervenor-Petitioners States of North Dakota and Texas oppose this motion and intend to file a response.
- Intervenor-Respondents States of California and New Mexico state their position as follows: “The States of California and New Mexico do not oppose the extension to the extent that it is based on the Department’s intention to conduct notice and comment rulemaking to reconsider certain provisions of the Rule, assuming such reconsideration is done in compliance with the Administrative Procedure Act. However, the States of California and New Mexico oppose the extension to the extent that it is based on 5 U.S.C. § 705, which does not apply to a Rule that is already in effect.”
- Intervenor-Respondents Conservation Groups state their position as follows: “The Conservation Groups take no position on the extension motion at this time, but reserve the right to file a response. The Conservation Groups also preserve all rights with respect to the validity of BLM's stay of the rule pursuant to 5 U.S.C. § 705.”

Respectfully submitted this 20th day of June, 2017.

JEFFREY H. WOOD
Acting Assistant Attorney General
Environment and Natural Resources Division

/s/ Clare Boronow
MARISSA PIROPATO
CLARE BORONOW

/s/ C. Levi Martin
C. Levi Martin
Assistant United States Attorney

CERTIFICATE OF SERVICE

I hereby certify that on June 20, 2017, a copy of the foregoing was served by filing a copy of that document with the Court's CM/ECF system, which will send notice of electronic filing to counsel of record.

/s/ Clare Boronow
Clare Boronow

Attachment 8

BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, **Postponement of Certain Compliance Dates**, 82 Fed. Reg. 27,430 (June 15, 2017)

2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by August 14, 2017. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: May 25, 2017.

V. Anne Heard,

Acting Regional Administrator, Region 4.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart RR—Tennessee

■ 2. Add § 52.2219 to read as follows:

§ 52.2219 Conditional approval.

Tennessee submitted a letter to EPA on December 7, 2016, with a commitment to address the State

Implementation Plan deficiencies regarding requirements of Clean Air Act section 110(a)(2)(D)(i)(II) related to interference with measures to protect visibility in another state (prong 4) for the 2010 1-hour NO₂, 2010 1-hour SO₂, and 2012 annual PM_{2.5} NAAQS. EPA conditionally approved the prong 4 portions of Tennessee’s March 13, 2014, 2010 1-hour NO₂ and 2010 1-hour SO₂ infrastructure SIP submission and December 16, 2015, 2012 annual PM_{2.5} infrastructure SIP submission in an action published in the **Federal Register** on June 15, 2017. If Tennessee fails to meet its commitment by June 15, 2018, the conditional approval will automatically become a disapproval on that date and EPA will issue a finding of disapproval.

[FR Doc. 2017–12342 Filed 6–14–17; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Part 3170

[17X.LLWO310000.L13100000.PP0000]

RIN 1004–AE14

Waste Prevention, Production Subject to Royalties, and Resource Conservation; Postponement of Certain Compliance Dates

AGENCY: Bureau of Land Management, Interior.

ACTION: Notification; postponement of compliance dates.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) issued a final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (the “Waste Prevention Rule” or “Rule”). Immediately after the Waste Prevention 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. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. In light of the existence and potential consequences of the pending litigation, the BLM has concluded that justice requires it to postpone the compliance dates for certain sections of the Rule pursuant to the Administrative Procedure Act, pending judicial review.

DATES: June 15, 2017.

FOR FURTHER INFORMATION CONTACT:

Timothy Spisak at the BLM Washington Office, 20 M Street SE., Room 2134 LM,

Washington, DC 20003, or by telephone at 202–912–7311. For questions relating to regulatory process issues, contact Faith Bremner at 202–912–7441.

Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339 to contact these individuals during normal business hours. FRS is available 24 hours a day, 7 days a week to leave a message or question with these individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

I. Background

On November 18, 2016, the BLM published the Waste Prevention Rule. (81 FR 83008) The Rule addresses, among other things, the loss of natural gas through venting, flaring, and leaks during the production of Federal and Indian oil and gas. The Rule replaced Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (1980) (“NTL–4A”), which governed the venting and flaring of Federal and Indian gas for more than three decades. In addition to updating and revising the requirements of NTL–4A, the Rule contained new requirements that operators capture a certain percentage of the gas they produce (43 CFR 3179.7), measure flared volumes (43 CFR 3179.9), upgrade or replace pneumatic equipment (43 CFR 3179.201–179.202), capture or combust storage tank vapors (43 CFR 3179.203), and implement leak detection and repair (LDAR) programs (43 CFR 3179.301–.305). The Rule did not obligate operators to comply with these new requirements until January 17, 2018. Compliance with certain other provisions of the Rule is already mandatory, including the requirement that operators submit a “waste minimization plan” with applications for permits to drill (43 CFR 3162.3–1), new regulations for the royalty-free use of production (43 CFR subpart 3178), new regulatory definitions of “unavoidably lost” and “avoidably lost” oil and gas (43 CFR 3179.4), limits on venting and flaring during drilling and production operations (43 CFR 3179.101–179.105), and requirements for downhole well maintenance and liquids unloading (43 CFR 3179.204).

Immediately after the 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. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of

America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the Rule and that the Rule exceeds the BLM's statutory authority.

On March 28, 2017, the President issued Executive Order No. 13783 (E.O. 13783) entitled, "Promoting Energy Independence and Economic Growth." E.O. 13783 directed the Secretary of the Interior (Secretary) to review the Rule for consistency with the policies set forth in Section 1 of E.O. 13783 and, if appropriate, publish for notice and comment a proposed rule suspending, revising, or rescinding the Rule. E.O. 13783 Sec. 7(b). On March 29, 2017, the Secretary issued Secretarial Order 3349 implementing E.O. 13783. The Department's review of the Rule is ongoing.

The Secretary has received written requests from WEA and the American Petroleum Institute (API) that the BLM suspend the Rule or postpone its compliance dates in light of the regulatory uncertainty created by the pending litigation and the ongoing administrative review of the Rule. Letter from Kathleen M. Sgamma to Secretary Zinke (April 4, 2017); letter from Jack N. Gerard to Secretary Zinke (May 16, 2017). Both API and WEA stated that operators face the prospect of significant expenditures to comply with provisions of the Rule that will become operative in January 2018. WEA specifically noted that the LDAR, storage tank, and pneumatic device provisions will require operators to begin purchasing and installing tens of thousands of replacement parts in the near future.

Section 705 of the Administrative Procedure Act (APA), 5 U.S.C. 705, provides that, "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review." The Rule obligates operators to comply with its "capture percentage," flaring measurement, pneumatic equipment, storage tank, and LDAR provisions beginning on January 17, 2018. This compliance date has not yet passed and is within the meaning of the term "effective date" as that term is used in Section 705 of the APA. Considering the substantial cost that complying with these requirements poses to operators (see U.S. Bureau of Land Management, Regulatory Impact Analysis for: Revisions to 43 CFR subpart 3100

(Onshore Oil and Gas Leasing) and 43 CFR subpart 3600 (sic) (Onshore Oil and Gas Operations), Additions of 43 CFR subpart 3178 (Royalty-Free Use of Lease Production) and 43 CFR subpart 3179 (Waste Prevention and Resource Conservation) (November 10, 2016)), and the uncertain future these requirements face in light of the pending litigation and administrative review of the Rule, the BLM finds that justice requires it to postpone the future compliance dates for the following sections of the Rule: 43 CFR 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–3179.305.

While the BLM believes the Waste Prevention Rule was properly promulgated, the petitioners have raised serious questions concerning the validity of certain provisions of the Rule. Given this legal uncertainty, operators should not be required to expend substantial time and resources to comply with regulatory requirements that may prove short-lived as a result of pending litigation or the administrative review that is already under way. Postponing these compliance dates will help preserve the regulatory status quo while the litigation is pending and the Department reviews and reconsiders the Rule.

The provisions with compliance dates that have passed and are therefore unaffected by this document include: the requirement that operators submit a "waste minimization plan" with applications for permits to drill (43 CFR 3162.3–1), new regulations for the royalty-free use of production (43 CFR subpart 3178), new regulatory definitions of "unavoidably lost" and "avoidably lost" oil and gas (43 CFR 3179.4), limits on venting and flaring during drilling and production operations (43 CFR 3179.101–179.105), and requirements for downhole well maintenance and liquids unloading (43 CFR 3179.204).

Separately, the BLM intends to conduct notice-and-comment rulemaking to suspend or extend the compliance dates of those sections affected by the Rule.

II. Postponement of Compliance Dates

Pursuant to Section 705 of the APA, the BLM hereby postpones the future compliance dates for the following sections affected by the final rule entitled, "Waste Prevention, Production Subject to Royalties, and Resource Conservation", pending judicial review: 43 CFR 3179.7, 3179.9, 3179.201, 3179.202, 3179.203, and 3179.301–3179.305. BLM will publish a document announcing the outcome of that review.

Dated: June 9, 2017.

Katharine S. MacGregor

Delegated the Authority of the Assistant Secretary for Land and Minerals Management.

[FR Doc. 2017–12325 Filed 6–14–17; 8:45 am]

BILLING CODE 4310–84–P

NATIONAL FOUNDATION FOR THE ARTS AND HUMANITIES

National Endowment for the Arts

45 CFR Parts 1149 and 1158

RIN 3135-AA33

Implementing the Federal Civil Penalties Adjustment Act Improvements Act of 2015

AGENCY: National Endowment for the Arts, National Foundation for the Arts and Humanities.

ACTION: Interim final rule; request for comments.

SUMMARY: The National Endowment for the Arts (NEA) is adjusting the maximum civil monetary penalties that may be imposed for violations of the Program Fraud and Civil Remedies Act (PFCRA) and the NEA's Restrictions on Lobbying to reflect the requirements of the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (the 2015 Act). The 2015 Act further amended the Federal Civil Penalties Inflation Adjustment Act of 1990 (the Inflation Adjustment Act) to improve the effectiveness of civil monetary penalties and to maintain their deterrent effect.

DATES:

Effective date: This rule is effective June 15, 2017.

Comments date: Submit comments on or before July 17, 2017.

ADDRESSES: You may submit comments, identified by RIN 3135-AA33, by any of the following methods:

- *Federal eRulemaking Portal:* <https://www.regulations.gov>. Follow the instructions for submitting comments.

- *Email:* generalcounsel@arts.gov. Include RIN 3135-AA33 in the subject line of the message.

- *Mail:* National Endowment for the Arts, Office of the General Counsel, 400 7th Street SW., Second Floor, Washington, DC 20506.

- *Hand Delivery/Courier:* National Endowment for the Arts, Office of the General Counsel, 400 7th Street SW., Second Floor, Washington, DC 20506.

Instructions: All submissions received must include the agency name and docket number or Regulatory

Attachment 9

BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, **Delay and Suspension of Certain Requirements, Proposed Rule**, 82 Fed. Reg. 46,458 (Oct. 5, 2017)

federal requirements, and impose no additional requirements beyond those imposed by State law, and there are no anticipated significant adverse human health or environmental effects, the rule is not subject to Executive Order 12898. The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this document and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2). This action nevertheless will be effective 60 days after the final approval is published in the **Federal Register**.

List of Subjects in 40 CFR Part 271

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous waste, Hazardous waste transportation, Indian lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

Authority: This action is issued under the authority of sections 2002(a), 3006, and 7004(b) of the Solid Waste Disposal Act as amended, 42 U.S.C. 6912(a), 6926, and 6974(b).

Dated: September 26, 2017.

Alexis Strauss,

Acting Regional Administrator, Region 9.

[FR Doc. 2017-21522 Filed 10-4-17; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3160 and 3170

[17X.LLWO310000.L13100000.PP0000]

RIN 1004-AE54

Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed rule.

SUMMARY: On November 18, 2016, the Bureau of Land Management (BLM) published in the **Federal Register** a final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (2016 final rule). The BLM is now proposing to temporarily suspend or delay certain requirements contained in the 2016 final rule until January 17, 2019. The BLM is currently reviewing the 2016 final rule and wants to avoid imposing temporary or permanent compliance costs on operators for requirements that may be rescinded or significantly revised in the near future.

DATES: Send your comments on this proposed rule to the BLM on or before November 6, 2017. As explained later, the BLM is also requesting that the Office of Management and Budget (OMB) extend the control number (1004-0211) for the 24 information collection activities that would continue in this proposed rule. If you wish to comment on this request, please note that such comments should be sent directly to the OMB, and that the OMB is required to make a decision concerning the collection of information contained in this proposed rule between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment to the OMB on the proposed information collection revisions is best assured of being given full consideration if the OMB receives it by November 6, 2017.

ADDRESSES:

Mail: U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134LM, 1849 C St. NW., Washington, DC 20240, Attention: 1004-AE52.

Personal or messenger delivery: U.S. Department of the Interior, Bureau of Land Management, 20 M Street SE., Room 2134 LM, Washington, DC 20003, Attention: Regulatory Affairs.

Federal eRulemaking Portal: <https://www.regulations.gov>. In the Searchbox, enter “RIN 1004-AE54” and click the “Search” button. Follow the instructions at this Web site. Comments on the information collection burdens: **Fax:** Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Desk Officer for the Department of the Interior, fax 202-395-5806.

Electronic mail: OIRA_Submission@omb.eop.gov. Please indicate “Attention: OMB Control Number 1004-0211,” regardless of the method used to submit comments on the information collection burdens. If you submit comments on the information collection

burdens, you should provide the BLM with a copy, at one of the addresses shown earlier in this section, so that we can summarize all written comments and address them in the final rule preamble.

FOR FURTHER INFORMATION CONTACT:

Catherine Cook, Acting Division Chief, Fluid Minerals Division, 202-912-7145, or ccook@blm.gov, for information regarding the substance of this proposed rule or information about the BLM’s Fluid Minerals program. For questions relating to regulatory process issues, contact Faith Bremner, Regulatory Analyst, at 202-912-7441, or 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. Public Comment Procedures
- II. Background
- III. Discussion of the Proposed Rule
- IV. Procedural Matters

I. Public Comment Procedures

If you wish to comment on this proposed rule, you may submit your comments by any of the methods described in the **ADDRESSES** section.

Please make your comments on the proposed rule as specific as possible, confine them to issues pertinent to the proposed rule, and explain the reason for any changes you recommend. Where possible, your comments should reference the specific section or paragraph of the proposal that you are addressing. The BLM is not obligated to consider or include in the Administrative Record for the final rule comments that we receive after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed above (see **ADDRESSES**).

Comments, including names and street addresses of respondents, will be available for public review at the address listed under “**ADDRESSES: Personal or messenger delivery**” during regular hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays. Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we

cannot guarantee that we will be able to do so.

II. Background

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of Federal land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. In fiscal year (FY) 2016, sales volumes from Federal onshore production lands accounted for 9 percent of domestic natural gas production, and 5 percent of total U.S. oil production. Over \$1.9 billion in royalties were collected from all oil, natural gas, and natural gas liquids transactions in FY 2016 on Federal and Indian Lands. Royalties from Federal lands are shared with States. Royalties from Indian lands are collected for the benefit of the Indian owners.

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. See 81 FR 83008 (Nov. 18, 2016). The 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). The 2016 final 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 final rule became effective on January 17, 2017. Many of the final rule's provisions are to be phased in over time, and are to become operative on January 17, 2018.

Immediately after the 2016 final rule was issued, industry groups and States with significant BLM-managed Federal and Indian minerals filed petitions for judicial review. The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the State of Wyoming, the State of Montana, the State of North Dakota, and the State of Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.); *W. Energy All. v. Zinke*, Case No. 16-cv-280-SWS (D. Wyo.).

Petitioners assert that the BLM was arbitrary and capricious in promulgating the 2016 final rule and that the rule exceeds the BLM's statutory authority. Shortly after filing petitions for judicial review, petitioners filed motions for a preliminary injunction, seeking a stay of the rule pending the outcome of the litigation. These motions were denied by the court on January 16, 2017, and the rule went into effect the following day. Although the court denied the motions for a preliminary injunction, it did express concerns that the BLM may have "usurp[ed]" the authority of the Environmental Protection Agency (EPA) and the States under the Clean Air Act, and questioned whether it was appropriate for the 2016 final rule to be justified based on its environmental and societal benefits, rather than on its resource conservation benefits alone. The next stage in the litigation will be the court's consideration of the merits of the petitioner's claims. It is possible that the court's decision on these claims could result in the 2016 final rule being overturned. On June 15, 2017, the Department of the Interior (Department) issued a **Federal Register** notice, pursuant to 5 U.S.C. 705, postponing the January 2018 compliance dates of the 2016 final rule pending judicial review. 82 FR 27430 (June 15, 2017).

In the Regulatory Impact Analysis (RIA) for the 2016 final rule, the BLM estimated that the requirements of the 2016 final rule would impose compliance costs, not including potential cost savings for product recovery, of approximately \$114 million to \$279 million per year (2016 RIA at 4). The BLM had concluded that, while many of the requirements were consistent with EPA regulations for new sources, current industry practice, or similar to the requirements found in some existing State regulations, the 2016 final rule would be an economically significant rule with estimated costs and benefits exceeding \$100 million per year (2016 RIA at 138). Comments received by many oil and gas companies and trade associations representing members of the oil and gas industry suggested that the BLM's proposed and final rules were unnecessary and would cause substantial harm to the industry. During the litigation following the issuance of the 2016 final rule, the petitioners argued that the BLM underestimated the compliance costs of the final rule and that the costs would drive the industry away from Federal and Indian lands, thereby reducing royalties and harming State and tribal economies. The petitioners also argued that the final

rule would cause marginal wells to be shut-in, thereby ceasing production and reducing economic benefits to local, State, tribal, and Federal governments. The BLM is concerned that the RIA for the 2016 final rule may have underestimated costs and overestimated benefits, and is therefore presently reviewing that analysis for potential inaccuracies. In any event, the RIA for the 2016 rule indicates that the rule poses a substantial burden on industry, particularly those requirements that are set to become effective on January 17, 2018.

Since late January 2017, the President has issued several Executive Orders that necessitate a review of the 2016 final rule by the Department. On January 30, 2017, the President issued Executive Order 13771, entitled, "Reducing Regulation and Controlling Regulatory Costs," which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. In addition, on March 28, 2017, the President issued Executive Order 13783, entitled, "Promoting Energy Independence and Economic Growth." Section 7(b) of Executive Order 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for consistency with the policy articulated in section 1 of the Order and, "if appropriate," to publish proposed rules suspending, revising, or rescinding those rules. Among other things, section 1 of Executive Order 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 Executive Order 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 final rule to determine whether it is fully consistent with the policy set forth in section 1 of Executive Order 13783. The BLM conducted an initial review of the 2016 final rule and found that it appears to be inconsistent with the policy in section 1 of Executive Order 13783. The BLM found that some provisions of the rule appear to add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Following up on its initial review, the BLM is currently reviewing the 2016 final rule to develop an appropriate proposed

revision—to be promulgated through notice-and-comment rulemaking—that would propose to align the 2016 final rule with the policies set forth in section 1 of Executive Order 13783.

III. Discussion of the Proposed Rule

A. Summary and Request for Comment

Today, the BLM is proposing to temporarily suspend or delay certain requirements contained in the 2016 final rule until January 17, 2019. The BLM is currently reviewing the 2016 final rule, as directed by the aforementioned Executive Orders and by Secretarial Order No. 3349. The BLM wants to avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future. The BLM also wishes to avoid expending scarce agency resources on implementation activities (internal training, operator outreach/education, developing clarifying guidance, etc.) for such potentially transitory requirements.

For certain requirements in the 2016 final rule that have yet to be implemented, this proposed rule would temporarily postpone the implementation dates until January 17, 2019, or for one year. For certain requirements in the 2016 final rule that are currently in effect, this proposed rule would temporarily suspend their effectiveness until January 17, 2019. A detailed discussion of the proposed suspensions and delays is provided below. The BLM has attempted to tailor the proposed rule so as to target the requirements of the 2016 final rule for which immediate regulatory relief appears to be particularly justified. Although the requirements of the 2016 final rule that would not be suspended under the proposed rule may ultimately be revised in the near future, the BLM is not proposing to suspend them because it does not, at this time, believe that suspension is necessary.

The BLM promulgated the 2016 final rule, and now proposes to suspend and delay certain provisions of that rule, pursuant to its authority under the following statutes: The Mineral Leasing Act of 1920 (30 U.S.C. 188–287), the Mineral Leasing Act for Acquired Lands (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 (43 U.S.C. 1701–1785), the Indian Mineral Leasing Act of 1938 (25 U.S.C. 396a–g), the Indian Mineral Development Act of 1982 (25 U.S.C. 2101–2108), and the Act of March 3, 1909 (25 U.S.C. 396). See 81 FR 83008 and 83019–83021 (Nov. 18,

2016). 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.¹ The Federal and Indian mineral leasing statutes share a common purpose of promoting the development of Federal and Indian oil and gas resources for the financial benefit of the public and Indian mineral owners.² In order to ensure that the development of Federal and Indian oil and gas resources will not be unnecessarily hindered by regulatory burdens, the BLM is exercising its inherent authority³ to reconsider the 2016 final rule. The suspension of requirements proposed today is a part of the BLM's reconsideration process.

The BLM seeks comment on this proposed rule. Issues of particular interest to the BLM include the necessity of the proposed suspensions and delays, the costs and benefits associated with the proposed suspensions and delays, and whether suspension of other requirements of the 2016 rule is warranted. The BLM is also interested in the appropriate length of the proposed suspension and delays and would like to know whether the period should be longer or shorter (e.g., six months, 18 months, or 2 years). The BLM has allowed a 30-day comment period for this proposed rule, which the BLM believes will afford the public a meaningful opportunity to comment. This proposed rule is a straightforward suspension and delay of regulatory provisions that were (in a proposed form) themselves recently the object of public comment procedures. Because this proposal is a narrow one, involving a simple and temporary suspension and delay of regulatory provisions with which interested parties are likely already familiar, the BLM believes that the 30-day comment period is appropriate.

B. Section-by-Section Discussion

43 CFR 3162.3–1(j)—Drilling Applications and Plans

In the 2016 final rule, the BLM added a paragraph (j) to 43 CFR 3162.3–1, which presently requires 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 is required for approval of the APD, but the plan is not itself part of the APD, and the terms of the plan are not enforceable against the operator. The purpose of the waste-minimization plan is for the operator to set forth a strategy for how the operator will 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 must 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 is required when an operator cannot 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.

In the RIA for the 2016 final rule, the BLM estimated that the administrative burden of the waste-minimization plan requirements would be roughly \$1 million per year for the industry and \$180,000 per year for the BLM (2016 RIA at 96 and 100). The BLM is currently reviewing the requirements of § 3162.3–1(j) in order to determine whether the burden it imposes on operators is necessary and whether this burden can be reduced. The BLM is also evaluating whether there are circumstances in which compliance with § 3162.3–1(j) is infeasible because some of the required information is in the possession of a midstream company that is not in a position to share it with the operator. The BLM is considering narrowing the required information and

¹ 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.

² 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.").

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

is also considering whether submission of a State waste-minimization plan, such as those required by New Mexico and North Dakota, would serve the purpose of § 3162.3–1(j). While the BLM conducts this review and considers revising § 3162.3–1, the BLM does not believe that generating and reviewing lengthy, unenforceable waste-minimization plans is a prudent use of operator or BLM resources. The BLM is therefore proposing to suspend the waste minimization plan requirement of § 3162.3–1(j) until January 17, 2019.

This proposed rule would revise § 3162.3–1 by adding “Beginning January 17, 2019” to the beginning of paragraph (j). The rest of this paragraph would remain the same as in the 2016 final rule and the introductory paragraph is repeated in the proposed rule text only for context.

43 CFR 3179.7—Gas Capture Requirement

In the 2016 final rule, the BLM sought to constrain routine flaring 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 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 would choose whether to comply with the capture targets on each of the operator’s leases, units or communized areas, or on a county-wide or state-wide basis.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would impose costs of up to \$162 million per year and generate cost savings from product recovery of up to \$124 million per year, with both costs and cost savings increasing as the requirements increased in stringency (2016 RIA at 49).

The BLM is currently considering whether the capture-percentage requirement of § 3179.7 is unnecessarily complex and whether it will, in fact, be a significant improvement on the requirements of NTL–4A. The BLM is considering whether the NTL–4A framework can be applied in a manner that addresses any inappropriate levels of flaring, and whether market-based incentives (*i.e.*, royalty obligations) could improve capture in a more straightforward and efficient manner. Finally, the BLM is considering whether the need for a complex capture-

percentage requirement could be obviated through other BLM efforts to facilitate pipeline development. Rather than require operators to institute new processes and adjust their plans for development to meet a capture-percentage requirement that may be rescinded or revised as a result of the BLM’s review, the BLM is proposing to delay for one year the compliance dates for § 3179.7’s capture requirements. This delay would allow the BLM sufficient time to conduct notice-and-comment rulemaking to determine whether the capture percentage requirements should be rescinded or revised and would prevent operators from being unnecessarily burdened by regulatory requirements that are subject to change.

This proposed rule would revise the compliance dates in paragraphs (b), (b)(1) through (b)(4), and (c)(2)(i) through (vii) of § 3179.7 to begin January 17, 2019. Paragraphs (c), (c)(1), and the introductory text of (c)(2) would remain the same as in the 2016 final rule and are repeated in the proposed rule text only for context.

43 CFR 3179.9—Measuring and Reporting Volumes of Gas Vented and Flared From Wells

Section 3179.9 requires operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas, whether royalty-bearing or royalty-free. This section further provides that specific requirements apply when the operator is flaring 50 Mcf or more of gas per day from a high-pressure flare stack or manifold, based on estimated volumes from the previous 12 months, or based on estimated volumes over the life of the flare, whichever is shorter. Beginning on January 17, 2018, if this volume threshold is met, § 3179.9(b) would require the operator to measure the volume of the flared gas, or calculate the volume of the flared gas based on the results of a regularly performed gas-to-oil ratio test, so as to allow the BLM to independently verify the volume, rate, and heating value of the flared gas.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would impose costs of about \$4 million to \$7 million per year (2016 RIA at 52).

The BLM is presently reviewing § 3179.9 to determine whether the additional accuracy associated with the measurement and estimation required by § 3179.9(b) justifies the burden it would place on operators. The BLM is considering whether it would make more sense to allow the BLM to require measurement or estimation on a case-by-case basis, rather than imposing a

blanket requirement on all operators. In order to avoid unnecessary compliance costs on the part of operators, the BLM is proposing to delay the compliance date in § 3179.9 until January 17, 2019.

This proposed rule would revise the compliance date in § 3179.9(b)(1). The rest of paragraph (b)(1) would remain the same as in the 2016 final rule and is repeated in the proposed rule text only for context.

43 CFR 3179.10—Determinations Regarding Royalty-Free Flaring

Section 3179.10(a) provides that approvals to flare royalty free that were in effect as of January 17, 2017, will continue in effect until January 17, 2018. The purpose of this provision was to provide a transition period for operators who were operating under existing approvals for royalty-free flaring. Because the BLM’s review of the 2016 final rule could result in rescission or substantial revision of the rule, the BLM believes that terminating pre-existing flaring approvals in January 2018 would be premature and disruptive and would introduce needless regulatory uncertainty for operators with existing flaring approvals. The BLM is therefore proposing to extend the end of the transition period provided for in § 3179.10(a) to January 17, 2019.

This proposed rule would revise the date in paragraph (a) and replace “as of the effective date of this rule” with “as of January 17, 2017,” which is the effective date of the 2016 final rule, for clarity. This proposed rule would not otherwise revise paragraph (a), but the rest of the paragraph would remain the same as in the 2016 final rule and is repeated in the proposed rule text only for context.

43 CFR 3179.101—Well Drilling

Section 3179.101(a) requires that gas reaching the surface as a normal part of drilling operations 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 communized area; or (4) Injected. Section 3179.101(a) also specifies that gas may not be vented, except under the circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the ways specified above. Section 3179.101(b) states that gas lost as a result of a loss of well control will be classified as avoidably lost if the BLM determines that the loss of well control was due to operator negligence.

The BLM is currently reviewing § 3179.101 to determine whether it is

necessary in light of current operator practices. The experience of BLM field office personnel indicates that operators would typically dispose of gas during well drilling consistent with § 3179.101(a). The primary effect of § 3179.101, therefore, may be to impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas. The BLM is therefore proposing to suspend the effectiveness of § 3179.101 until January 17, 2019, while the BLM completes its review of § 3179.101 and decides whether to propose permanently revising or rescinding it through notice-and-comment rulemaking.

This proposed rule would add a new paragraph (c) making it clear that the operator must comply with § 3179.101 beginning January 17, 2019.

43 CFR 3179.102—Well Completion and Related Operations

Section 3179.102 addresses gas that reaches the surface during well-completion, post-completion, and fluid-recovery operations after a well has been hydraulically fractured or refractured. It requires the gas to be used or 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. Section 3179.102 specifies that gas may not be vented, except under the narrow circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the four ways specified above. Section 3179.102(b) provides that an operator will be deemed to be in compliance with its gas capture and disposition requirements if the operator is in compliance with the requirements for control of gas from well completions established under Environmental Protection Agency (EPA) regulations 40 CFR part 60, subparts OOOO or OOOOa regulations, or if the well is not a “well affected facility” under those regulations.

The BLM is currently reviewing § 3179.102 to determine whether it is necessary in light of current operator practices and the analogous EPA regulations in 40 CFR part 60, subparts OOOO and OOOOa. The experience of BLM field office personnel indicates that operators would typically dispose of gas during well completions and related operations consistent with § 3179.102(a). The BLM also suspects that most of the well completions and related operations that would otherwise be covered by § 3179.102 are actually

exempted under § 3179.102(b). Considering current industry practice and the overlap with EPA regulations, the primary effect of § 3179.102 may be to generate confusion about regulatory compliance during well-drilling and related operations. The BLM is therefore proposing to suspend the effectiveness of § 3179.102 until January 17, 2019, while the BLM completes its review of § 3179.102 and decides whether to permanently revise or rescind it through notice-and-comment rulemaking.

This proposed rule would add a new paragraph (e) making it clear that operators must comply with § 3179.102 beginning January 17, 2019.

43 CFR 3179.201—Equipment Requirements for Pneumatic Controllers

Section 3179.201 addresses 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. Section 3179.201 applies to such controllers if the controllers: (1) Have a continuous bleed rate greater than 6 standard cubic feet per hour (scf/hour) (“high-bleed” controllers); and (2) Are 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 be subject to those regulations if the controllers were new, modified, or reconstructed sources. Section 3179.201(b) requires 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. Section 3179.201(d) requires that this replacement occur no later than January 17, 2018, or within 3 years from the effective date of the rule if the well or facility served by the controller has an estimated remaining productive life of 3 years or less.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would impose costs of about \$2 million per year and generate cost savings from product recovery of \$3 million to \$4 million per year (2016 RIA at 56).

The BLM is currently reviewing § 3179.201 to determine whether it should be revised or rescinded. The BLM is considering whether § 3179.201 is necessary in light of the analogous EPA regulations and the fact that operators are likely to adopt more efficient equipment in cases where it makes economic sense for them to do so. The BLM does not believe that operators should be required to make equipment upgrades to comply with

§ 3179.201 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the compliance date stated in § 3179.201 until January 17, 2019.

This proposed rule would revise the first sentence of paragraph (d) by replacing “no later than 1 year after the effective date of this section” with “by January 17, 2019.” This proposed rule would also replace “the effective date of this section” with “January 17, 2017” the two times that it appears in the second sentence of paragraph (d). This proposed rule would not otherwise revise paragraph (d), but the rest of the paragraph would remain the same as in the 2016 final rule and is repeated in the proposed rule text only for context.

43 CFR 3179.202—Requirements for Pneumatic Diaphragm Pumps

Section 3179.202 establishes 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 includes a Federal or Indian lease. It applies to such pumps if they are 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, § 3179.202 requires 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 may route the exhaust to a flare or low-pressure combustion device if the operator makes a determination (and notifies the BLM through a Sundry Notice) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust is not viable because: (1) A pneumatic pump is necessary to perform the function required; and (2) Capturing the exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low-pressure combustor on-site, or routing to such a device would be technically infeasible, the operator is not required to route the exhaust to a flare or low-pressure combustion device. Under § 3179.202(h), an operator must replace its covered pneumatic diaphragm pump or route the exhaust gas to capture or flare beginning no later than January 17, 2018.

In the RIA for the 2016 final rule, the BLM estimated that this requirement would impose costs of about \$4 million per year and generate cost savings from

product recovery of \$2 million to \$3 million per year (2016 RIA at 61).

The BLM is currently reviewing § 3179.202 to determine whether it should be rescinded or revised. Analogous EPA regulations apply to new, modified, and reconstructed sources, therefore limiting the applicability of § 3179.202. In addition, the BLM is concerned that requiring zero-emissions pumps may not conserve gas in some cases. The volume of royalty-free gas used to generate electricity to provide the power necessary to operate a zero-emission pump could exceed the volume of gas necessary to operate the pneumatic pump that the zero-emission pump would replace. The BLM does not believe that operators should be required to make equipment upgrades to comply with § 3179.202 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the compliance date stated in § 3179.202 until January 17, 2019.

This proposed rule would revise paragraph (h) by replacing “no later than 1 year after the effective date of this section” in the first sentence with “by January 17, 2019” and would also replace “the effective date of this section” with “January 17, 2017” the two times that it appears later in the same sentence. This proposed rule would not otherwise revise paragraph (h); the rest of the paragraph would remain the same as in the 2016 final rule and is repeated in the proposed rule text only for context.

43 CFR 3179.203—Storage Vessels

Section 3179.203 applies to crude oil, condensate, intermediate hydrocarbon liquid, or produced-water storage vessels that contain production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, and that are 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 have the potential for volatile organic compound (VOC) emissions equal to or greater than 6 tons per year (tpy), § 3179.203 requires operators to route all gas vapor from the vessels to a sales line. Alternatively, the operator may route the vapor to a combustion device if it determines that routing the vapor to a sales line is technically infeasible or unduly costly. The operator also may submit a Sundry Notice to the BLM that demonstrates that compliance with the above options would cause the operator to cease production and abandon significant

recoverable oil reserves under the lease due to the cost of compliance. Pursuant to § 3179.203(c), operators must meet these requirements for covered storage vessels by January 17, 2018 (unless the operator will replace the storage vessel in order to comply, in which case it has a longer time to comply).

In the RIA for the 2016 final rule, the BLM estimated that this requirement would impose costs of about \$7 million to \$8 million per year and generate cost savings from product recovery of up to \$200,000 per year (2016 RIA at 74).

The BLM is currently reviewing § 3179.203 to determine whether it should be rescinded or revised. The BLM is considering whether § 3179.203 is necessary in light of analogous EPA regulations and whether the costs associated with compliance are justified. The BLM does not believe that operators should be required to make upgrades to their storage vessels in order to comply with § 3179.203 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the January 17, 2018, compliance date in § 3179.203 until January 17, 2019.

This proposed rule would revise the first sentence of paragraph (b) by replacing “Within 60 days after the effective date of this section” with “Beginning January 17, 2019” and by adding “after January 17, 201” between the words “vessel” and “the operator.” This proposed rule would also revise the introductory text of paragraph (c) by replacing “no later than one year after the effective date of this section” with “by January 17, 2019” and by changing “or three years if” to “or by January 17, 2020, if” to account for removing the reference to “the effective date of this section.” This proposed rule would not otherwise revise paragraphs (b) and (c), and the rest of these paragraphs would remain the same as in the 2016 final rule and are repeated in the proposed rule text only for context.

43 CFR 3179.204—Downhole Well Maintenance and Liquids Unloading

Section 3179.204 establishes requirements for venting and flaring during downhole well maintenance and liquids unloading. It requires the operator to use practices for such operations that minimize vented gas and the need for well venting, unless the practices are necessary for safety. Section 3179.204 also requires that for wells equipped with a plunger lift system or an automated well-control system, the operator must optimize the operation of the system to minimize gas

losses. Under § 3179.204, before an operator manually purges a well for the first time, the operator must document in a Sundry Notice that other methods for liquids unloading are technically infeasible or unduly costly. In addition, during any liquids unloading by manual well purging, the person conducting the well purging is required to be present on-site to minimize to the maximum extent practicable any venting to the atmosphere. This section also requires the operator to maintain records of the cause, date, time, duration and estimated volume of each venting event associated with manual well purging, and to make those records available to the BLM upon request. Additionally, operators are required to notify the BLM by Sundry Notice within 30 days after the following conditions are met: (1) The cumulative duration of manual well-purging events for a well exceeds 24 hours during any production month; or (2) The estimated volume of gas vented in the process of conducting liquids unloading by manual well purging for a well exceeds 75 Mcf during any production month. In the RIA for the 2016 final rule, the BLM estimated that these requirements would impose costs of about \$6 million per year and generate cost savings from product recovery of about \$5 million to \$9 million per year (2016 RIA at 66). In addition, there would be estimated administrative burdens associated with these requirements of \$323,000 per year for the industry and \$37,000 per year for the BLM (2016 RIA at 98 and 101).

The BLM is currently reviewing § 3179.204 to determine whether it should be rescinded or revised. The BLM does not believe that operators should be burdened with the operational and reporting requirements imposed by § 3179.204 until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. In addition, as part of this review, the BLM would want to review how these data could be reported in a consistent manner among operators. The BLM is therefore proposing to suspend the effectiveness of § 3179.204 until January 17, 2019.

This proposed rule would add a new paragraph (i), making it clear that operators must comply with § 3179.204 beginning January 17, 2019.

43 CFR 3179.301—Operator Responsibility

Sections 3179.301 through 3179.305 establish 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. Section 3179.302 prescribes the instruments and methods that may be used for leak detection. Section 3179.303 prescribes the frequency for inspections and § 3179.304 prescribes the time frames for repairing leaks found during inspections. Finally, § 3179.305 requires operators to maintain records of their leak detection and repair activities and submit an annual report to the BLM. Pursuant to § 3179.301(f), operators must begin to comply with the leak detection and repair requirements of §§ 3179.301 through 3179.305 before: (1) January 17, 2018, for sites in production prior to January 17, 2017; (2) 60 days after beginning production for sites that began production after January 17, 2017; and (3) 60 days after a site that was out of service is brought back into service and re-pressurized.

In the RIA for the 2016 final rule, the BLM estimated that these requirements would impose costs of about \$83 million to \$84 million per year and generate cost savings from product recovery of about \$12 million to \$21 million per year (2016 RIA at 91). In addition, there would be estimated administrative burdens associated with these requirements of \$3.9 million per year for the industry and over \$1 million per year for the BLM (2016 RIA at 98 and 102).

The BLM is currently reviewing § 3179.301 through § 3179.305 to determine whether they should be revised or rescinded. The BLM is considering whether these requirements are necessary in light of comparable EPA and State leak detection and repair regulations. The BLM is considering whether the reporting burdens imposed by these sections are justified and whether the substantial compliance costs could be mitigated by allowing for less frequent and/or non-instrument-based inspections or by exempting wells that have low potential to leak natural gas. The BLM does not believe that operators should be burdened with the significant compliance costs imposed by these sections until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore proposing to delay the effective dates for these sections until January 17, 2019, by revising § 3179.301(f).

This proposed rule would revise paragraph (f)(1) by replacing “Within one year of January 17, 2017 for sites

that have begun production prior to January 17, 2017;” with “By January 17, 2019, for all existing sites.” This proposed rule would also revise paragraph (f)(2) by adding “new” between the words “for” and “sites” and by replacing the existing date with “January 17, 2019.” Finally, this proposed rule would revise paragraph (f)(3) by adding “an existing” between the words “when” and “site” and by adding “after January 17, 2019” to the end of the sentence. This proposed rule would not otherwise revise paragraph (f), and the rest of the paragraph would remain the same as in the 2016 final rule and is repeated in the proposed rule text only for context.

C. Summary of Estimated Impacts

The BLM reviewed the proposed rule and conducted an RIA and Environmental Assessment (EA) that examine the impacts of the proposed requirements. The following discussion is a summary of the proposed rule’s economic impacts. The RIA and draft EA that we prepared have been posted in the docket for the proposed rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox, enter “RIN 1004-AE54” and click the “Search” button. Follow the instructions at this Web site.

The suspension or delay in the implementation of certain requirements in the 2016 final rule would postpone the impacts estimated previously to the near-term future. That is to say, impacts that we previously estimated would occur in 2017 are now estimated to occur in 2018, impacts that we previously estimated would occur in 2018 are now estimated to occur in 2019, and so on. In the RIA for this proposed rule, we track this shift in impacts over the 10-year period following the delay. A 10-year period of analysis was also used in the RIA prepared for the 2016 final rule. Except for some notable changes, the 2017 RIA uses the impacts estimated and underlying assumptions used by the BLM for the RIA prepared for the 2016 final rule, published in November 2016. The BLM’s proposed rule would temporarily suspend or delay almost all of the requirements in the 2016 final rule that we estimated would pose a compliance burden to operators and generate benefits of gas savings or reductions in methane emissions.

Estimated Reductions in Compliance Costs (Excluding Cost Savings)

First, we examine the reductions in compliance costs excluding the savings that would have been realized from product recovery. The BLM’s proposed

rule would temporarily suspend or delay almost all of the requirements in the 2016 final rule that we estimated would pose a compliance burden to operators. We estimate that suspending or delaying the targeted requirements of the 2016 final rule until January 17, 2019, would substantially reduce compliance costs during the period of the suspension or delay (2017 RIA at 29).

Impacts in year 1:

- A reduction in compliance costs of \$114 million (using a 7 percent discount rate to annualize capital costs) or \$110 million (using a 3 percent discount rate to annualize capital costs).

Impacts from 2017–2027:

- Total reduction in compliance costs ranging from \$73 million to \$91 million (net present value (NPV) using a 7 percent discount rate) or \$40 million to \$50 million (NPV using a 3 percent discount rate).

Estimated Reduction in Benefits

The BLM’s proposed rule would temporarily suspend or delay almost all of the requirements in the 2016 final rule that we estimated would generate benefits of gas savings or reductions in methane emissions. We estimate that the proposed rule would result in forgone benefits, since estimated cost savings that would have come from product recovery would be deferred and the emissions reductions would also be deferred (2017 RIA at 32).

Impacts in year 1:

- A reduction in cost savings of \$19 million.

Impacts from 2017–2027:

- Total reduction in cost savings of \$36 million (NPV using a 7 percent discount rate) or \$21 million (NPV using a 3 percent discount rate).

We estimate that the proposed rule would also result in additional methane and VOC emissions of 175,000 and 250,000 tons, respectively, in year 1 (2017 RIA at 32).

These estimated emissions are measured as the change from the baseline environment, which is the 2016 final rule’s requirements being implemented per the 2016 final rule schedule. Since the proposed rule would delay the implementation of those requirements, the estimated benefits of the 2016 final rule would be forgone during the temporary suspension or delay.

The BLM used interim domestic values of the carbon dioxide and methane to value the forgone emissions reductions resulting from the delay (see the discussion of social cost of greenhouse gases in the 2017 RIA at Section 3.2 and Appendix).

Impact in Year 1:

- Forgone methane emissions reductions valued at \$8 million (using interim domestic SC-CH₄ based on a 7 percent discount rate) or \$26 million (using interim domestic SC-CH₄ based on a 3 percent discount rate).

Impacts from 2017–2027:

- Forgone methane emissions reductions valued at \$1.9 million (NPV and interim domestic SC-CH₄ using a 7 percent discount rate); or
- Forgone methane emissions reductions valued at \$300,000 (NPV and interim domestic SC-CH₄ using a 3 percent discount rate).

Estimated Net Benefits

The proposed rule is estimated to result in positive net benefits, meaning that the reduction of compliance costs would exceed the reduction in cost savings and the cost of emissions additions (2017 RIA at 36).

Impact in year 1:

- Net benefits of \$83–86 million (using interim domestic SC-CH₄ based on a 7 percent discount rate) or \$64–68 million (using interim domestic SC-CH₄ based on a 3 percent discount rate).

Impacts from 2017–2027:

- Total net benefits ranging from \$35–52 million (NPV and interim domestic SC-CH₄ using a 7 percent discount rate); or
- Total net benefits ranging from \$19–29 million (NPV and interim domestic SC-CH₄ using a 3 percent discount rate).

Energy Systems

The proposed 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, particularly in the short-term. However, since the relative changes in production are expected to be small, we do not expect that the proposed rule would significantly impact the price, supply, or distribution of energy.

We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context (2017 RIA at 41).

Annual Impacts:

- A decrease in natural gas production of 9.0 billion cubic feet (Bcf) in year 1 (0.03 percent of the total U.S. production).
- An increase in crude oil production of 91,000 barrels in year 2 (0.003 percent of the total U.S. production). There is no estimated change in crude oil production in year 1.

Royalty Impacts

In the short-term, the rule is expected to decrease natural gas production from

Federal and Indian leases, and likewise, is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners. From 2017–2027, however, we expect a small increase in total royalties, likely due to production slightly shifting into the future where commodity prices are expected to be higher.

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.

We estimate a reduction in royalties of \$2.6 million in year 1 (2017 RIA at 43). This amount represents about 0.2 percent of the total royalties received from oil and gas production on Federal lands in FY 2016. However, from 2017–2027, we estimate an increase in total royalties of \$1.26 million (NPV using a 7 percent discount rate) or \$380,000 (NPV using a 3 percent discount rate).

Consideration of Alternative Approaches

In developing this proposed rule, the BLM considered alternative timeframes for which it could suspend or delay the requirements (*e.g.*, 6 months and 2 years). Ultimately, the BLM decided to propose a suspension or delay for one year, which it believes to be the minimum length of time practicable within which to review the 2016 final rule and complete a notice-and-comment rulemaking to revise that regulation. We note that, based on the progress of the review during this rulemaking process, the BLM may revise the length of the suspension or delay for the final rule.

A shorter suspension or delay of the same 2016 final rule requirements would result in a smaller reduction in compliance costs, smaller reduction in cost savings, and a smaller amount of forgone emissions reductions, relative to the proposal (2017 RIA at 49–50). Meanwhile, a longer suspension or delay of the same 2016 final rule requirements would result in a larger reduction in compliance costs, larger reduction in cost savings, and larger amount of forgone emissions reductions, relative to the proposal (2017 RIA at 50).

Employment Impacts

The proposed rule would temporarily suspend or delay certain requirements of the BLM's 2016 final rule on waste prevention and is a temporary deregulatory action. As such, we estimate that it would 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 the employment would be positive.

In the RIA for the 2016 final 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 to the extent that the compliance costs would force the operator to shut in production, the 2016 final rule had provisions that would exempt these operations from compliance. Based on these factors, the BLM determined that the 2016 final rule would not alter the investment or employment decisions of firms or significantly adversely impact employment. The RIA also noted that the requirements would require the one-time installation or replacement of equipment and the ongoing implementation of a leak detection and repair program, both of which would require labor to comply.

We do not believe that the proposed rule would substantially alter the investment or employment decisions of firms for two reasons. First, the RIA for the 2016 final rule determined that that rule would not substantially alter the investment or employment decisions of firms, and so therefore delaying the 2016 final rule would likewise not be expected to impact those decisions. We also recognize that while there might be a small positive impact on investment and employment due to the reduction in compliance burdens, the magnitude of the reductions are relatively small.

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 overwhelming majority of entities operating in the onshore crude oil and natural gas extraction industry and, therefore, the proposed rule would impact a significant 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.

The BLM identified up to 1,828 entities that operate on Federal and Indian leases and recognizes that the overwhelming majority of these entities are small business, as defined by the SBA. We estimated the potential reduction in compliance costs to be about \$60,000 per entity during the initial year when the requirements would be suspended or delayed. This represents the average maximum amount by which the operators would be positively impacted by the proposed rule.

We used existing BLM information and research concerning firms that have recently completed Federal and Indian wells and the financial and employment information on a sample of these firms, as available in company annual report filings with the Securities and Exchange Commission (SEC). From the original list of companies, we identified 55 company filings. Of those companies, 33 were small businesses.

From data in the companies' 10-K filings to the SEC, the BLM was able to calculate the companies' profit margins for the years 2012, 2013, and 2014. We then calculated a profit margin figure for each company when subject to the average annual reduction in compliance costs associated with this proposed rule. For these 26 small companies, the estimated per-entity reduction in compliance costs would result in an average increase in profit margin of 0.17 percentage points (based on the 2014 company data) (2017 RIA at 46).

Impacts Associated With Oil and Gas Operations on Tribal Lands

The proposed rule would apply 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 about the estimate impacts.

IV. Procedural Matters

Regulatory Planning and Review (Executive Orders 12866 and 13563)

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.

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.

This proposed rule would temporarily suspend or delay portions of the BLM's 2016 final rule while the BLM reviews those requirements. We have developed this proposed rule in a manner consistent with the requirements in Executive Order 12866 and Executive Order 13563.

After reviewing the requirements of the proposed rule, the OMB has determined that it is an economically significant action according to the criteria of Executive Order 12866. The BLM reviewed the requirements of the proposed 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 proposed 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-AE54" and click the "Search" button. Follow the instructions at this Web site.

Regulatory Flexibility Act

This proposed rule would not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) The Regulatory Flexibility Act (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, either 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 proposed rule would likely affect a substantial number of small entities.

However, the BLM believes that the proposed rule would not have a significant economic impact on a substantial number of small entities. Although the rule would affect a substantial number of small entities, the BLM does not believe that these effects would be economically significant. The proposed rule would temporarily suspend or delay certain requirements placed on operators by the 2016 final rule. Operators would not have to undertake the associated compliance activities, either operational or administrative, that are outlined in the 2016 final rule until January 17, 2019, except to the extent the activities are required by State or tribal law, or by other pre-existing BLM regulations. The screening analysis conducted by the BLM estimates that the average reduction in compliance costs associated with this proposed rule would be a small fraction of a percent of the profit margin for small companies, which is not a large enough impact to be considered significant.

Small Business Regulatory Enforcement Fairness Act

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

(a) Would have an annual effect on the economy of \$100 million or more.

(b) Would not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions.

(c) Would not have a significant adverse effects 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 proposed rule would not impose an unfunded mandate on State, local, or tribal governments, or the private sector of \$100 million or more per year. The proposed rule would not have a significant or unique effect on State, local, or tribal governments or the private sector. The proposed rule contains no requirements that would apply to State, local, or tribal governments. It would temporarily suspend or delay 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 proposed rule. This proposed 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 proposed rule would not affect a taking of private property or otherwise have taking implications under Executive Order 12630. A takings implication assessment is not required. The proposed rule would temporarily suspend or delay many of the requirements placed on operators by the 2016 final rule. Operators would not have to undertake the associated compliance activities, either operational or administrative, that are outlined in the 2016 final rule until January 17, 2019, and therefore would impact 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 proposed 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 would 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 proposed 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 proposed rule would 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 would 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 proposed rule does not have sufficient federalism implications to warrant preparation of a Federalism Assessment.

Civil Justice Reform (Executive Order 12988)

This proposed rule complies with the requirements of Executive Order 12988. More specifically, this proposed 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 proposed 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 proposed 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 would result from this proposed rule. Under this proposed rule, oil and gas operations on tribal and allotted lands would not be subject to many of the requirements placed on operators by the 2016 final rule until January 17, 2019.

The BLM believes that temporarily suspending or delaying these requirements would assist in preventing Indian lands from being viewed by oil

and gas operators as less attractive than non-Indian lands due to unnecessary and burdensome compliance costs, thereby preventing economic harm to tribes and allottees.

The BLM is conducting tribal outreach which it believes is appropriate given that the proposed rule would extend the compliance dates of the 2016 final rule, but would not change the policies of that rule. The BLM notified tribes of the action and requested feedback and comment through the respective BLM State Office Directors. Future tribal consultation may occur on an ongoing basis.

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 has approved the 24 information collection activities in the 2016 final rule and has assigned control number 1004–0211 to those activities. In the Notice of Action approving the 24 information collection activities in the 2016 final rule, OMB announced that the control number will expire on January 31, 2018. The Notice of Action also included terms of clearance.

The BLM requests the extension of control number 1004–0021 until January 31, 2019. The BLM requests no other changes to the control number.

In accordance with the PRA, the BLM is inviting public comment on the proposed extension of control no. 1004–0211. Descriptions of the information collection activities in this proposed rule, along with estimates of the annual burdens, are shown below. Included in the burden estimates are the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each component of the proposed information collection requirements.

The BLM has submitted the information collection request for this proposed rule to OMB for review in accordance with the PRA. You may obtain a copy of the request from the BLM by electronic mail request to James Tichenor at jtichenor@blm.gov or by telephone request to 202–573–0536.

You may also review the information collection request online at: <http://www.reginfo.gov/public/do/>.

The BLM requests comments on the following subjects:

- Whether the collection of information is necessary for the proper functioning of the BLM, including whether the information will have practical utility;
- The accuracy of the BLM's estimate of the burden of collecting the information, including the validity of the methodology and assumptions used;
- The quality, utility, and clarity of the information to be collected; and
- How to minimize the information collection burden on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other forms of information technology.

If you want to comment on the information collection requirements of this proposed rule, please send your comments directly to OMB, with a copy to the BLM, as directed in the

ADDRESSES section of this preamble. Please identify your comments with "OMB Control Number 1004–0211." OMB is required to make a decision concerning the collection of information contained in this proposed rule between 30 to 60 days after publication of this document in the **Federal Register**. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it by November 6, 2017.

2. Summary of Information Collection Activities

Title: Waste Prevention, Production Subject to Royalties, and Resource Conservation (43 CFR parts 3160 and 3170). Form 3160–5, Sundry Notices and Reports on Wells.

OMB Control Number: 1004–0211.

Forms: Form 3160–3, Application for Permit to Drill or Re-enter; and 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 the extension of control number 1004–0021 until January 31, 2019. The BLM requests no changes to the control number except this extension.

Estimated Number of Responses: 63,200.

Estimated Total Annual Burden Hours: 82,170.

Estimated Total Non-Hour Cost: None.

3. Information Collection Request

The BLM requests extension of OMB control number 1004–0211 until January 31, 2019. This extension would continue OMB's approval of the following information collection activities.

Plan To Minimize Waste of Natural Gas (43 CFR 3162.3–1)

The 2016 final rule added a new provision to 43 CFR 3162.3–1 that requires a plan to minimize waste of natural gas when submitting an Application for Permit to Drill or Re-enter (APD) for a development oil well. This information is in addition to the APD information that the BLM already collects under OMB Control Number 1004–0137. The required elements of the waste minimization plan are listed at paragraphs (j)(1) through (j)(7).

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).

Request for Approval of Alternative Capture Requirement (43 CFR 3179.8)

Section 3179.8 applies only to leases issued before the effective date of the 2016 final rule and to operators choosing to comply with the capture requirement in § 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis. The regulation provides that operators who

meet those parameters may seek BLM approval of a capture percentage other than that which is applicable under 43 CFR 3179.7. The operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

- The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated; and
- The oil and gas production levels of each of the operator's wells on the lease, unit, or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well.

In addition, the request must include map(s) showing:

- The entire lease, unit, or communitized area, and the surrounding lands to a distance and on a scale that shows the field in which the well is or will be located (if applicable), and all pipelines that could transport the gas from the well;
- All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases, (both on Federal or Indian leases and on other properties) within the map area;
- Identification of all of the operator's wells within the lease from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and
- Identification of all of the operator's wells within the lease from which gas is captured;

The following information is also required:

- Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines; and
- Projected costs of and the combined stream of revenues from both gas and oil production, including: (1) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (2) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the

life of the operator's lease, unit, or communitized area, whichever is less.

Notification of Choice To Comply on County- or State-Wide Basis (43 CFR 3179.7(c)(3)(ii))

Section 3179.7 requires operators flaring gas from development oil wells to capture a specified percentage of the operator's adjusted volume of gas produced over the relevant area. The "relevant area" is each of the operator's leases, units, or communitized areas, unless the operator chooses to comply on a county- or State-wide basis and the operator notifies the BLM of its choice by Sundry Notice (Form 3160–5) by January 1 of the relevant year.

Request for Exemption From Well Completion Requirements (43 CFR 3179.102(c) and (d))

Section 3179.102 lists several requirements pertaining to gas that reaches the surface during well completion and related operations. An operator may seek an exemption from these requirements by submitting a Sundry Notice (Form 3160–5) that includes the following information:

- (1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
- (2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
- (3) Data that show the costs of compliance; and
- (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

The rule also provides that an operator that is in compliance with the EPA regulations for well completions under 40 CFR part 60, subpart OOOO or subpart OOOOa is deemed in compliance with the requirements of this section. As a practical matter, all new, reconstructed, and modified hydraulically fracturing or refracturing events are now subject to the EPA requirements, so the BLM does not believe that the requirements of this section would have any independent effect, or that any operator would request an exemption from the requirements of this section, as long as

the EPA requirements remain in effect. For this reason, the BLM is not estimating any PRA burdens for § 3179.102.⁴

Request for Extension of Royalty-Free Flaring During Initial Production Testing (43 CFR 3179.103)

Section 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.

Request for Extension of Royalty-Free Flaring During Subsequent Well Testing (43 CFR 3179.104)

Section 3179.104 allows gas to be flared royalty-free for no more than 24 hours during well tests subsequent to the initial production test. The operator may seek authorization to flare royalty-free for a longer period by submitting a Sundry Notice (Form 3160–5) to the BLM.

Reporting of Venting or Flaring (43 CFR 3179.105)

Section 3179.105 allows an operator to flare gas royalty-free during a temporary, short-term, infrequent, and unavoidable emergency. Venting gas is permissible if flaring is not feasible during an emergency. The regulation defines limited circumstances that constitute an emergency, and other circumstances that do not constitute an emergency.

The operator must estimate and report to the BLM on a Sundry Notice (Form 3160–5) volumes flared or vented in circumstances that, as provided by 43 CFR 3179.105, do not constitute emergencies for the purposes of royalty assessment:

- (1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;

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

(3) 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;

- (4) Scheduled maintenance;

(5) A situation caused by operator negligence; or

⁴ The EPA has convened a proceeding for reconsidering the final OOOOa rule, see 82 FR 25730 (June 5, 2017). If EPA's requirements are altered in any way in the future, then PRA burdens estimated for BLM's rule could increase by up to \$130/event if the operator files for an exemption.

(6) 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.

Pneumatic Controllers—Introduction

Section 3179.201 pertains to any pneumatic controller that: (1) Is not subject to EPA regulations at 40 CFR 60.5360a through 60.5390a, but would be subject to those regulations if it were a new or modified source; and (2) has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour. Section 3179.201(b) requires operators to replace each high-bleed pneumatic controller with a controller with a bleed rate lower than 6 scf per hour, with the following exceptions: (1) The pneumatic controller exhaust is routed to processing equipment; (2) the pneumatic controller exhaust was and continues to be routed to a flare device or low pressure combustor; (3) The pneumatic controller exhaust is routed to processing equipment; or (4) The operator notifies the BLM through a Sundry Notice and demonstrates, and the BLM agrees, that such would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

Notification of Functional Needs for a Pneumatic Controller (43 CFR 3179.201(b)(1)–(3))

An operator may invoke one of the first three exceptions described above by notifying the BLM through a Sundry Notice (Form 3160–5) that use of the pneumatic controller is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, and the Sundry Notice (Form 3160–5) describes those functional needs.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (43 CFR 3175.201(b)(4) and 3175.201(c))

An operator may invoke the fourth exception described above by demonstrating to the BLM through a Sundry Notice (Form 3160–5), and by obtaining the BLM's agreement, that replacement of a pneumatic controller would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice (Form 3160–5) must include the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Controller Within 3 Years (43 CFR 3179.201(d))

The operator may replace a high-bleed pneumatic controller if the operator notifies the BLM through a Sundry Notice (Form 3160–5) that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less.

Pneumatic Diaphragm Pumps—Introduction

With some exceptions, § 3179.202 pertains to any pneumatic diaphragm pump that: (1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to EPA regulations at 40 CFR 60.5360a through 60.5390a, but would be subject to those regulations if it were a new, reconstructed, or modified source as defined in 40 CFR part 60 subpart OOOOa. This regulation generally requires replacement of such a pump with a zero-emissions pump or routing of the pump's exhaust gas to processing equipment for capture and sale.

This requirement does not apply to pneumatic diaphragm pumps that do not vent exhaust gas to the atmosphere. In addition, this requirement does not apply if the operator submits a Sundry Notice to the BLM documenting that the pump(s) operated on less than 90

individual days in the prior calendar year.

Showing That a Pneumatic Diaphragm Pump Was Operated on Fewer Than 90 Individual Days in the Prior Calendar Year (43 CFR 3179.202(b)(2))

A pneumatic diaphragm pump is not subject to § 3179.202 if the operator documents in a Sundry Notice (Form 3160–5) that the pump was operated fewer than 90 days in the prior calendar year.

Notification of Functional Needs for a Pneumatic Diaphragm Pump (43 CFR 3179.202(d))

In lieu of replacing a pneumatic diaphragm pump or routing the pump exhaust gas to processing equipment, an operator may submit a Sundry Notice (Form 3160–5) to the BLM showing that replacing the pump with a zero emissions pump is not viable because a pneumatic pump is necessary to perform the function required, and that routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (43 CFR 3175.202(f) and (g))

An operator may seek an exemption from the replacement requirement by submitting a Sundry Notice (Form 3160–5) to the BLM that provides an economic analysis that demonstrates that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice (Form 3160–5) must include the following information:

(1) Well information that must include: (i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and (ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with § 3179.202(c) through (e); and

(3) The operator's estimate of the costs and revenues of the combined stream of revenues from both the gas and oil components, including: (i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production

over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Diaphragm Pump Within 3 Years (43 CFR 3179.202(h))

The operator may replace a pneumatic diaphragm pump if the operator notifies the BLM through a Sundry Notice (Form 3160–5) that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less.

Storage Vessels (43 CFR 3179.203(c) and (d))

A storage vessel is subject to 43 CFR 3179.203(c) if the vessel: (1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to any of the requirements of EPA regulations at 40 CFR part 60, subpart OOOO, but would be subject to that subpart if it were a new, reconstructed, or modified source.

The operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority that limit the VOC emissions to less than 6 tpy.

If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy, the operator must replace the storage vessel at issue in order to comply with the requirements of this section, and the operator must

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with the requirement to route all tank vapor gas from the storage vessel to a sales line is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice (Form 3160–5) that demonstrates, and the BLM agrees, that compliance with

§ 3179.203(c)(2) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

To support the demonstration described above, the operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with § 3179.203(c)(1) or (2) on the lease; and

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components, including: The operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting (43 CFR 3179.204(c) and (e))

The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations. Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of a Sundry Notice (Form 3160–5). This requirement applies to each well the operator operates.

For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 and make them available to the BLM, upon request.

Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume (43 CFR 3179.204(f))

The operator must notify the BLM by Sundry Notice (Form 3160–5), within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

Leak Detection—Compliance With EPA Regulations (43 CFR 3179.301(j))

Sections 3179.301 through 3179.305 include information collection activities pertaining to the detection and repair of gas leaks during production operations. These regulations require operators to inspect all equipment covered under § 3179.301(a) for gas leaks.

Section 3179.301(j) allows an operator to satisfy the requirements of §§ 3179.301 through 3179.305 for some or all of the equipment or facilities on a given lease by notifying the BLM in a Sundry Notice (Form 3160–5) that the operator is complying with EPA requirements established pursuant to 40 CFR part 60 with respect to such equipment or facilities.

Leak Detection—Request To Use an Alternative Monitoring Device and Protocol (43 CFR 3179.302(c))

Section 3175.302 specifies the instruments and methods that an operator may use to detect leaks. Section 3175.302(d) allows the BLM to approve an alternative monitoring device and associated inspection protocol if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a).

Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice (Form 3160–5) to BLM that includes the following information: (1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function; (2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded; (3) Records and data from laboratory and field testing, including but not limited to performance testing; (4) A demonstration that the proposed monitoring device and protocol will

achieve equal or greater reduction of gas lost through leaks compared with the approach specified in the regulations; (5) Tracking and documentation procedures; and (6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

Leak Detection—Operator Request To Use an Alternative Leak Detection Program (43 CFR 3179.303(b))

Section 3179.303(b) allows an operator to submit a Sundry Notice (Form 3160–5) requesting authorization to detect gas leaks using an alternative instrument-based leak detection program, different from the specified requirement to inspect each site semi-annually using an approved monitoring device.

To obtain approval for an alternative leak detection program, the operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

- (1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);
- (2) The proposed monitoring protocol;
- (3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;
- (4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);
- (5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and
- (6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program That Does Not Meet Specified Criteria (43 CFR 3179.303(d))

An operator may seek authorization for an alternative leak detection program that does not achieve equal or greater

reduction of gas lost through leaks compared to the required approach, if the operator demonstrates that compliance with the leak-detection regulations (including the option for an alternative program under 43 CFR 3179.303(b)) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM may approve an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks, but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

To obtain approval for an alternative program under this provision, the operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

- (1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;
- (2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
- (3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301–305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);
- (4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;
- (5) The information required to obtain approval of an alternative program under § 3179.303(b), except that the estimated volume of gas that will be lost through leaks under the alternative program must be compared to the volume of gas lost under the required program, but does not have to be shown to be at least equivalent.

Leak Detection—Notification of Delay in Repairing Leaks (43 CFR 3179.304(b))

Section 3179.304(a) requires an operator to repair any leak no later than 30 calendar days after discovery of the

leak, unless there is good cause for delay in repair. If there is good cause for a delay beyond 30 calendar days, § 3179.304(b) requires the operator to submit a Sundry Notice (Form 3160–5) notifying the BLM of the cause.

Leak Detection—Inspection Recordkeeping and Reporting (43 CFR 3179.305)

Section 3179.305 requires operators to maintain the following records and make them available to the BLM upon request: (1) For each inspection required under § 3179.303, documentation of the date of the inspection and the site where the inspection was conducted; (2) The monitoring method(s) used to determine the presence of leaks; (3) A list of leak components on which leaks were found; (4) The date each leak was repaired; and (5) The date and result of the follow-up inspection(s) required under § 3179.304. By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes: (1) The number of sites inspected; (2) The total number of leaks identified, categorized by the type of component; (3) The total number of leaks repaired; (4) The total number of leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak; and (5) A certification by a responsible officer that the information in the report is true and accurate.

Leak Detection—Annual Reporting of Inspections (43 CFR 3179.305(b))

By March 31 of each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

- (1) The number of sites inspected;
- (2) The total number of leaks identified, categorized by the type of component;
- (3) The total number of leaks repaired;
- (4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.
- (5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

4. Burden Estimates

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

Type of response	Number of responses	Hours per response	Total hours (Column B × Column C)
A	B	C	D
Plan to Minimize Waste of Natural Gas, 43 CFR 3162.3–1, Form 3160–3	2,000	8	16,000
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	4	200
Notification of Choice to Comply on County- or State-wide Basis, 43 CFR 3179.7(c)(3)(iii)	200	1	200
Request for Approval of Alternative Capture Requirement, 43 CFR 3179.8(b), Form 3160–5 ..	50	16	800
Request for Exemption from Well Completion Requirements, 43 CFR 3179.102(c) and (d), Form 3160–5	0	0	0
Request for Extension of Royalty-Free Flaring During Initial Production Testing, 43 CFR 3179.103, Form 3160–5	500	2	1,000
Request for Extension of Royalty-Free Flaring During Subsequent Well Testing, 43 CFR 3179.104, Form 3160–5	5	2	10
Reporting of Venting or Flaring, 43 CFR 3179.105, Form 3160–5	250	2	500
Notification of Functional Needs for a Pneumatic Controller, 43 CFR 3179.201(b)(1)–(3), Form 3160–5	10	2	20
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3175.201(b)(4) and 3175.201(c), Form 3160–5	50	4	200
Showing in Support of Replacement of Pneumatic Controller within 3 Years, 43 CFR 3179.201(d), Form 3160–5	100	1	100
Showing that a Pneumatic Diaphragm Pump was Operated on Fewer than 90 Individual Days in the Prior Calendar Year, 43 CFR 3179.202(b)(2), Form 3160–5	100	1	100
Notification of Functional Needs for a Pneumatic Diaphragm Pump, 43 CFR 3179.202(d), Form 3160–5	150	1	150
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3175.202(f) and (g), Form 3160–5	10	4	40
Showing in Support of Replacement of Pneumatic Diaphragm Pump within 3 Years, 43 CFR 3179.202(h), Form 3160–5	100	1	100
Storage Vessels, 43 CFR 3179.203(c), Form 3160–5	50	4	200
Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting, 43 CFR 3179.204(c) and (e), Form 3160–5	5,000	1	5,000
Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume, 43 CFR 3179.204(f), Form 3160–5	250	1	250
Leak Detection—Compliance with EPA Regulations, 43 CFR 3179.301(j), Form 3160–5	50	4	200
Leak Detection—Request to Use an Alternative Monitoring Device and Protocol, 43 CFR 3179.302(c), Form 3160–5	5	40	200
Leak Detection—Operator Request to Use an Alternative Leak Detection Program, 43 CFR 3179.303(b), Form 3160–5	20	40	800
Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program that Does Not Meet Specified 43 CFR 3179.303(d), Form 3160–5	150	20	3,000
Leak Detection—Notification of Delay in Repairing Leaks, 43 CFR 3179.304(a), Form 3160–5	100	1	100
Leak Detection—Inspection Recordkeeping and Reporting, 43 CFR 3179.305	52,000	.25	13,000
Leak Detection—Annual Reporting of Inspections, 43 CFR 3179.305(b), Form 3160–5	2,000	20	40,000
Totals	63,200	.....	82,170

National Environmental Policy Act

The BLM has prepared a draft 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.*). If the final EA supports the issuance of a Finding of No Significant Impact (FONSI) for the rule, the preparation of an environmental impact statement pursuant to the NEPA would not be required.

The draft EA and FONSI have been placed in the file for the BLM's Administrative Record for the rule at the address specified in the **ADDRESSES** section. The EA and FONSI have also been posted in the docket for the rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox,

enter “RIN 1004–AE54” and click the “Search” button. Follow the instructions at this Web site. The BLM invites the public to review these documents and suggests that anyone wishing to submit comments on the EA and FONSI should do so in accordance with the instructions contained in the “Public Comment Procedures” section above.

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

This proposed 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 [OIRA] as a significant energy action.”

The rule temporarily suspends or delays certain requirements in the 2016 final rule and would reduce compliance costs in the short-term. The BLM determined that the 2016 final rule would not have impacted the supply, distribution, or use of energy and so the suspension or delay of many of the 2016 final rule's requirements until January

17, 2019, will likewise not have an impact on the supply, distribution, or use of energy. As such, we do not consider the proposed rule to be a “significant energy action” as defined in Executive Order 13211.

Clarity of This Regulation (Executive Orders 12866)

We are required by Executive Orders 12866 (section 1(b)(12)), 12988 (section 3(b)(1)(B)), and 13563 (section 1(a)), and by the Presidential Memorandum of June 1, 1988, to write all rules in plain language. This means that each rule must:

- (a) Be logically organized;
- (b) Use the active voice to address readers directly;
- (c) Use common, everyday words and clear language rather than jargon;
- (d) Be divided into short sections and sentences; and
- (e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help the BLM revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that you find unclear, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Authors

The principal authors of this proposed rule are: James Tichenor and Michael Riches of the BLM Washington Office; Sheila Mallory of the BLM New Mexico State Office, Eric Jones of the BLM Moab, Utah Field Office; David Mankiewicz of the BLM Farmington, New Mexico Field Office; and Beth Poindexter of the BLM Dickinson, North Dakota 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: September 28, 2017.

Katharine S. MacGregor,

Acting Assistant Secretary for Land and Minerals Management.

43 CFR Chapter II

For the reasons set out in the preamble, the Bureau of Land Management proposes to amend 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.

- 2. Amend § 3162.3–1 by revising paragraph (j) introductory text to read as follows:

§ 3162.3–1 Drilling applications and plans.

* * * * *

(j) Beginning January 17, 2019, when submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The waste minimization plan must include the following information:

* * * * *

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. Amend § 3179.7 by revising paragraphs (b) and (c) to read as follows:

§ 3179.7 Gas capture requirement.

* * * * *

(b) Beginning January 17, 2019, the operator’s capture percentage must equal:

(1) For each month during the period from January 17, 2019, to December 31, 2020: 85 percent;

(2) For each month during the period from January 1, 2021, to December 31, 2023: 90 percent;

(3) For each month during the period from January 1, 2024, to December 31, 2026: 95 percent; and

(4) For each month beginning January 1, 2027: 98 percent.

(c) The term “capture percentage” in this section means the “total volume of gas captured” over the “relevant area” divided by the “adjusted total volume of gas produced” over the “relevant area.”

(1) The term “total volume of gas captured” in this section means: For each month, the volume of gas sold from all of the operator’s development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term “adjusted total volume of gas produced” in this section means:

The total volume of gas captured over the month *plus* the total volume of gas flared over the month from high pressure flares from all of the operator’s development oil wells that are in production in the relevant area, *minus*:

(i) For each month from January 17, 2019, to December 31, 2019: 5,400 Mcf times the total number of development oil wells “in production” in the relevant area;

(ii) For each month from January 1, 2020, to December 31, 2020: 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month from January 1, 2021, to December 31, 2021: 1,800 Mcf times the total number of development oil wells in production in the relevant area; and

(iv) For each month from January 1, 2022, to December 31, 2022: 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month from January 1, 2023, to December 31, 2024: 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month from January 1, 2025, to December 31, 2025: 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month after January 1, 2026: 750 Mcf times the total number of development.

* * * * *

■ 5. Amend § 3179.9 by revising paragraph (b)(1) introductory text to read as follows:

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

* * * * *

(b) * * *

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning January 17, 2019, the operator must either:

* * * * *

■ 6. Amend § 3179.10 by revising paragraph (a) to read as follows:

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of January 17, 2017, will continue in effect until January 17, 2019.

* * * * *

■ 7. Amend § 3179.101 by adding paragraph (c) to read as follows:

§ 3179.101 Well drilling.

* * * * *

(c) The operator must comply with this section beginning January 17, 2019.

■ 8. Amend § 3179.102 by adding paragraph (e) to read as follows:

§ 3179.102 Well completion and related operations.

* * * * *

(e) The operator must comply with this section beginning January 17, 2019.

■ 9. Amend § 3179.201 by revising paragraph (d) to read as follows:

§ 3179.201 Equipment requirements for pneumatic controllers.

* * * * *

(d) The operator must replace the pneumatic controller(s) by January 17, 2019, as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from January 17, 2017, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from January 17, 2017.

* * * * *

■ 10. Amend § 3179.202 by revising paragraph (h) to read as follows:

§ 3179.202 Requirements for pneumatic diaphragm pumps.

* * * * *

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device by January 17, 2019, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from January 17, 2017, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from January 17, 2017.

* * * * *

■ 11. Amend § 3179.203 by revising paragraph (b) and paragraph (c) introductory text to read as follows:

§ 3179.203 Storage vessels.

* * * * *

(b) Beginning January 17, 2019, and within 30 days after any new source of production is added to the storage vessel after January 17, 2019, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has

the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, by January 17, 2019, or by January 17, 2020, if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

* * * * *

■ 12. Amend § 3179.204 by adding paragraph (i) to read as follows:

§ 3179.204 Downhole well maintenance and liquids unloading.

* * * * *

(i) The operator must comply with this section beginning January 17, 2019.

■ 13. Amend § 3179.301 by revising paragraph (f) to read as follows:

§ 3179.301 Operator responsibility.

* * * * *

(f) The operator must make the first inspection of each site:

(1) By January 17, 2019, for all existing sites;

(2) Within 60 days of beginning production for new sites that begin production after January 17, 2019; and

(3) Within 60 days of the date when an existing site that was out of service is brought back into service and repressurized after January 17, 2019.

* * * * *

[FR Doc. 2017-21294 Filed 10-4-17; 8:45 am]

BILLING CODE 4310-84-P

Attachment 10

Letter from Tomás Carbonell, EDF, et al., to Michael D. Nedd, Acting Director, BLM (Oct. 20, 2017)

October 20, 2017

Michael D. Nedd
Acting Director, U.S. Bureau of Land Management
1849 C Street NW, Room 5665
Washington, DC 20240

Attn: RIN 1004-AE54

Re: Request for Public Hearings and Extension of Comment Period on BLM's Proposed Rule on Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements

Acting Director Nedd,

On behalf of our more than ten million members and supporters, the undersigned organizations request that you extend the public comment period to at least 60 days and hold public hearings on the Bureau of Land Management's ("BLM") October 5, 2017 proposed rule on Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements ("Proposed Rule").¹

The Proposed Rule would suspend a duly-promulgated regulation and allow the continued waste of natural gas, deprive taxpayers, States, and Tribes of royalty revenues for that gas, and increase emissions of methane and other pollutants that contribute to smog and climate change. The Proposed Rule also dramatically revises the BLM's previous estimate of the benefits of the underlying rule that is being suspended, introducing new issues that have not previously been presented in any other notice and comment proceeding. Given the significance of these changes, this rulemaking should comply with federal agencies' standard procedures to ensure adequate public notice of and opportunity to comment on important regulatory actions with significant impacts on the public. This should include a reasonable period to provide meaningful public comment and a chance to provide input at public hearings on the proposal.

BLM adopted the Waste Prevention Rule on November 18, 2016.² The Waste Prevention Rule is a critically important set of requirements to reduce the waste of natural gas from oil and gas production on public and Tribal lands. This common-sense rule requires oil and gas producers operating on public or Tribal lands (or producing public or Tribal minerals) to take reasonable steps to increase the capture and productive use of natural gas, rather than venting, flaring, or leaking it into the air. Reducing waste of natural gas bolsters our energy supplies, increases

¹ U.S. BLM, *Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements*, 82 Fed. Reg. 46,458 (Oct. 5, 2017) (*hereinafter* "Proposed Rule")

² U.S. BLM, *Waste Prevention, Production Subject to Royalties, and Resource Conservation*, 81 Fed. Reg. 83,008 (Nov. 18, 2016) (*hereinafter* "Waste Prevention Rule").

royalty revenues for States and federal taxpayers, and has the additional benefit of cutting harmful emissions of methane and volatile organic compounds, which form smog and help drive climate change. The Waste Prevention Rule responded to calls from the Government Accounting Office and other independent oversight authorities to update the underlying 35-year old regulations and address the waste problem.

On October 5, 2017, however, the BLM proposed to suspend until January 17, 2019, almost all of the Waste Prevention Rule's requirements to reduce flaring, venting and leaks of natural gas. Previously, on June 15, 2017, the BLM had attempted to stay the applicability of some of these same requirements without conducting notice-and-comment rulemaking, but that effort was overturned by the courts on October 4, 2017.³ In issuing the notice, the BLM also indicated its intent to revisit these and other provisions through a subsequent rulemaking, indicating that they "may be rescinded or significantly revised in the near future" —only increasing the likelihood that these benefits will be delayed beyond the time outlined in the Proposed Rule.

In addition, the BLM supported its proposal with a new calculation of the costs and benefits of the provisions of the Waste Prevention Rule that would be suspended. The new calculation dramatically altered the BLM's previous benefits calculation, which was completed less than a year ago, artificially reducing the Rule's projected benefits by as much as 87%. In fact, the Proposed Rule so fundamentally changed BLM's previous estimates as to convert an estimated roughly \$750 million or \$1.1 billion in benefits from the Waste Prevention Rule to roughly *negative* \$420 million or \$750 million—in other words, where BLM previously found the rule would overall benefit the American people, BLM now claims the rule would actually make us worse off.⁴

The BLM produced these results primarily by assuming away almost all of the damages from climate change associated with lost gas on public and tribal lands. Specifically, the BLM drastically revised the Interagency Working Group's ("IWG") standardized estimates of the costs

³ U.S. BLM, *Waste Prevention, Production Subject to Royalties, and Resource Conservation; Postponement of Certain Compliance Dates*, 82 Fed. Reg. 27430 (June 15, 2017); *California v. U.S. BLM*, No. 3:17-cv-03804-EDL, 2017 WL 4416409 (N.D. Cal. Oct. 4, 2017) (order granting plaintiffs' motions for summary judgment and vacating stay).

⁴ The final Waste Prevention Rule estimates net positive quantified benefits over a 10-year period of \$740-\$983 million (7% discount rate) or \$862-\$1,178 million (3% discount rate). U.S. BLM, *Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations), Additions of 43 CFR 3178 (Royalty-Free Use of Lease Production) and 43 CFR 3179 (Waste Prevention and Resource Conservation)*, 114 (Nov. 10, 2016) (*hereinafter* "2016 RIA"). The Proposed Rule estimates net quantified benefits of the Waste Prevention Rule over a 10-year period of: -\$523 million or -\$766 million (7% discount rate, "high cost scenario"); -\$494 million or -\$737 million (7% discount rate, "low cost scenario"); -\$455 million or -\$770 million (3% discount rate, "high cost scenario"); and -\$419 million or -\$735 million (3% discount rate, "low cost scenario"). U.S. BLM, *Regulatory Impact Analysis for the Proposed Rule to Suspend or Delay Certain Requirements of the 2016 Waste Prevention Rule*, 36-39 (Sept. 27, 2017) (*hereinafter* "2017 RIA").

of climate change, expressed as dollars per ton of carbon dioxide or methane emitted to the atmosphere in a given year.⁵ Over several years, with opportunities for public comment and peer review by the National Academies, the IWG produced and refined the U.S. government's best estimate of the monetized costs of greenhouse gases' contribution to climate change. BLM's new estimate of the social costs of methane departs dramatically from the IWG estimate that was used in the original Waste Prevention Rule, and BLM's estimate has not been presented for public comment in any other federal rulemaking to date. Further, it is based on highly controversial and complex methodological choices—including the exclusion of all harms from climate change that occur outside of the United States, and steep discounting of the future costs of climate change.⁶

In light of the complex and weighty issues raised in BLM's proposed suspension of the Waste Prevention Rule, and the significant, deleterious impacts the proposal would have on the public, we urge the BLM to provide the public at least 60 days to comment on the Proposed Rule—the same amount of time specified in Executive Order 12,866 for major rulemakings. Allowing the public only 30 days to prepare and submit comments on the Proposed Rule is clearly inadequate, particularly given the fundamental, highly technical, and extremely controversial changes to the benefits estimates included in the Proposed Rule, and the public comment opportunities that were provided for the Waste Prevention Rule and its cost estimate methodologies. Sixty days is the minimum comment period recommended under Executive Order 12,866, in order for the public to provide meaningful comment,⁷ and much longer comment periods are common for significant rulemakings such as this one. The 330,000 comments that the BLM received on the proposed Waste Prevention Rule show the intense public interest in this safeguard, which now extends to efforts to suspend and reverse it.

We also urge the BLM to conduct one or more public hearings on this proposal that would enable individuals from Western communities affected by flaring, venting and leaks to share their perspectives on the importance of BLM's protections. In developing the Waste Prevention Rule, the BLM proactively reached out to stakeholders and held multiple rounds of hearings and tribal outreach sessions before and after issuing a proposed rule. For example, during the public comment period on the proposal, the BLM held four public hearings and four tribal outreach

⁵ See Interagency Working Group on Social Cost of Greenhouse Gases, U.S. Government, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*, (Aug. 2016) (https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf); Interagency Working Group on Social Cost of Greenhouse Gases, U.S. Government, *Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide* (Aug. 2016) (https://www.epa.gov/sites/production/files/2016-12/documents/addendum_to_sc_ghg_tsd_august_2016.pdf). Twelve federal agencies participated in the IWG.

⁶ See U.S. BLM, 2016 RIA at 109; U.S. BLM 2017 RIA at 31.

⁷ See E.O. 12,866, 58 Fed. Reg. 51,735 (Mar. 30, 1993) (“In addition, each agency should afford the public a meaningful opportunity to comment on any proposed regulation, which in most cases should include a comment period of not less than 60 days.”).

meetings in: Farmington, New Mexico; Oklahoma City, Oklahoma; Denver, Colorado; and Dickinson, North Dakota.⁸ Before the tribal outreach sessions, the BLM sent letters to over 200 tribal leaders to invite their participation.⁹ BLM also conducted seven online meeting sessions with State regulators.¹⁰ The public should have a similar opportunity to opine on this effort to suspend and lay the groundwork for rescinding or significantly revising the rule.

We appreciate your consideration of our concerns, and we hope that you will allow for a fair and adequate opportunity for public comment and participation in this important rule-making.

Respectfully Submitted,

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⁸ U.S. BLM, *Waste Prevention Rule* at 83,021.

⁹ *Id.*

¹⁰ *Id.*

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**IN THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF WYOMING**

STATE OF WYOMING and STATE OF)	
MONTANA,)	
	)	No. 16-cv-00285-SWS
Petitioners,)	
	)	[Consolidated with 16-cv-00280-SWS]
and)	
	)	FEDERAL RESPONDENTS'
	)	MOTION FOR AN EXTENSION OF
STATE OF NORTH DAKOTA and STATE OF	)	THE MERITS BRIEFING
TEXAS,	)	DEADLINES
)	
Intervenor-Petitioners,)	
)	
v.)	
)	
UNITED STATES DEPARTMENT OF THE)	
INTERIOR, <i>et al.</i> ,)	
)	
Respondents,)	
)	
and)	
)	
WYOMING OUTDOOR COUNCIL, <i>et al.</i> ,)	
)	
Intervenor-Respondents.)	

Federal Respondents respectfully move this Court for a 37-day extension of the merits briefing deadlines in these two consolidated cases. The extension will provide sufficient time to the Bureau of Land Management (“BLM”) to complete a rule (“Suspension Rule”) suspending or delaying the majority of the provisions of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule (“Waste Prevention Rule”), including the portions of the Waste Prevention Rule that would otherwise become effective on January 17, 2018. As BLM aims to complete the Suspension Rule by December 8, 2017 and is currently working on a second rulemaking (“Revision Rule”) to revise or rescind the Waste Prevention Rule, *see* Ex. A, Decl. of Timothy Spisak, ¶¶ 5, 11, proceeding with the merits briefing at this time would be a waste of judicial resources and would undermine the administrative process. This Court has previously extended the briefing schedule twice based on Western Energy Alliance’s and the Independent Petroleum Association of America’s request for an extension, and once based on Federal Respondents’ request for an extension. ECF Nos. 100, 118, 129.

As Defendants have previously explained to this Court, President Donald J. Trump issued an Executive Order on March 28, 2017 requiring that the Secretary of the Interior “review” the Waste Prevention Rule and “if appropriate, . . . as soon as practicable, . . . publish for notice and comment proposed rules suspending, revising, or rescinding” the Rule. Exec. Order No. 13,783, 82 Fed. Reg. 16,093, § 7(b) (Mar. 28, 2017). As directed, BLM has reviewed the Waste Prevention Rule and determined that it does not align with the policy set forth in Executive Order 13,783, which states that it is “in the national interest to promote the 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.” 82 Fed. Reg. at 16,093; 82 Fed. Reg. 46,458, 46,459-60 (Oct. 5, 2017); Ex. A ¶ 4.

BLM is therefore in the process of “reviewing the [Waste Prevention Rule] to develop an appropriate proposed revision.” 82 Fed. Reg. at 46,459-60; Ex. A ¶ 5.

On October 5, 2017, BLM published a proposed rule to suspend or delay for twelve months the majority of the provisions of the Waste Prevention Rule, including all of the requirements that would take effect on January 17, 2018, and all of the provisions that Petitioners have cited as their basis for seeking an expeditious resolution of this matter. 82 Fed. Reg. 46,458; *see, e.g.*, ECF No. 112 ¶¶ 3, 8; ECF No. 113 at 3-4; ECF No. 123 ¶¶ 16, 18. Specifically, the proposed Suspension Rule would suspend the provisions of the Waste Prevention Rule regarding waste minimization plans, gas capture, the measurement and reporting of vented and flared gas, royalty-free flaring determinations, well drilling, well completion, pneumatic controllers, pneumatic diaphragm pumps, storage vessels, downhole maintenance and liquids unloading, and leak detection and repair. 82 Fed. Reg. at 46,474-75. The goal of the proposed Suspension Rule is to “avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future.” *Id.* at 46,460.

The comment period for the proposed Suspension Rule ends November 6, 2017, *id.* at 46,458, and BLM expects to publish the final rule by December 8, 2017. Ex. A ¶¶ 10-11. BLM will utilize the twelve-month period while the majority of the Waste Prevention Rule is suspended to prepare and complete the Revision Rule, as determined to be appropriate and lawful after a public notice-and-comment rulemaking process, to rescind or revise the entire Waste Prevention Rule, including the aspects of the Waste Prevention Rule that have been challenged in this case. *See* Ex. A ¶¶ 5, 7; 82 Fed. Reg. at 46,459-60.

Federal Respondents request an extension of the briefing deadlines for 37 days to allow BLM to focus on finalizing the Suspension Rule by December 8, 2017. Once the Suspension Rule is completed, it will provide the immediate relief sought by Petitioners—relief from the portions of the Waste Prevention Rule that would otherwise come into effect on January 17, 2018, as well as other provisions of the Waste Prevention Rule already in effect—and thereby obviate the need for immediate judicial review of the Waste Prevention Rule. Rather than require BLM to defend a rule that the agency is in the midst of suspending, an extension would preserve the integrity of BLM’s ongoing administrative process by allowing the agency to complete its rulemaking without concern for judicial interference. *See Abbott Labs. v. Gardner*, 387 U.S. 136, 148 (1967) (encouraging courts to avoid “entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way”), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99 (1977).

The requested extension also serves judicial economy. As the Tenth Circuit recently noted in connection with BLM’s Fracking Rule, “proceeding to address whether the district court erred in invalidating the BLM’s Fracking Regulation when the BLM has now commenced rescinding that same regulation appears to be a very wasteful use of limited judicial resources.” *Wyoming v. Zinke*, 2017 WL 4173619, at *5 (10th Cir. Sept. 21, 2017). Those same concerns apply here. BLM is taking steps to suspend or delay the majority of the requirements of the Waste Prevention Rule and has indicated its intent to substantially revise the Waste Prevention Rule. Thus, similar to the Fracking Rule, the Waste Prevention Rule has “become a moving target.” *Id.* Proceeding with immediate judicial review of the Waste Prevention Rule in these

circumstances would undermine the integrity of the administrative process and waste judicial resources.

The requested extension will not prejudice Petitioners. As explained, it will allow BLM to devote its resources to completing the Suspension Rule by December 8, 2017, thereby providing Petitioners relief through the administrative process and obviating the need for immediate judicial review. Requiring BLM to proceed with merits briefing over the next 37 days would only prevent the agency from focusing its time and resources on the administrative processes that will provide certainty for the entire regulated community, including the many states and operators that are not parties to these cases.

Federal Respondents' response to Petitioners' merits briefs is currently due November 6, 2017 and Petitioners' replies are due November 22, 2017. To allow BLM time to complete its suspension rulemaking and to avoid the waste of judicial resources, Federal Respondents request a 37-day extension of the deadline for its response brief to December 13, 2017. To accommodate the holidays, Federal Respondents propose an extension of the deadline for Petitioners' replies to January 5, 2018.

Finally, Federal Respondents propose that the Court hold a status conference on December 8, 2017, or another date before the proposed December 13 deadline, during which Federal Respondents will provide an update on the status of both the Suspension Rule and the Revision Rule. Once the final Suspension Rule has been published, and Petitioners have thereby been afforded relief from the regulatory requirements underlying their complaints, Federal Respondents plan to request a stay of this litigation to allow BLM time to complete its revision of the Waste Prevention Rule and to avoid wasting judicial resources litigating a rule that may be substantially revised in the near future.

As required by Local Rule 7.1(b)(1)(A), Federal Respondents have conferred with the other parties to this litigation who have indicated that they take the following positions on this motion:

- Petitioner State of Wyoming takes no position on this motion.
- Petitioner State of Montana takes no position on this motion.
- Petitioners Western Energy Alliance and Independent Petroleum Association of America (IPAA) oppose the Federal Defendants’ proposed extension of briefing deadlines and will file a written response to the Federal Defendants’ motion as allowed by Local Rule 7.1(b)(1)(B). Recognizing the time pressures associated with deadlines for both the Federal Defendants’ response brief and the 2018 compliance dates in the Venting & Flaring Rule, Western Energy Alliance and IPAA aim to file their written response by October 27, 2017.
- Intervenor-Petitioners States of North Dakota and Texas (States) oppose the BLM Motion to delay briefing in this matter and believe the BLM’s latest motion is both untimely and prejudicial to the States. North Dakota and Texas intend to file a written response to the BLM Motion by October 27th.
- Intervenor-Respondents States of California and New Mexico take no position on this motion.
- Intervenor-Respondents Citizen Groups take no position on this motion.

Respectfully submitted this 20th day of October, 2017.

JEFFREY H. WOOD
Acting Assistant Attorney General
Environment and Natural Resources Division

/s/ Clare Boronow
MARISSA PIROPATO
CLARE BORONOW

/s/ C. Levi Martin
C. Levi Martin
Assistant United States Attorney

CERTIFICATE OF SERVICE

I hereby certify that on October 20, 2017, a copy of the foregoing was served by filing a copy of that document with the Court's CM/ECF system, which will send notice of electronic filing to counsel of record.

/s/ Clare Boronow
Clare Boronow

Attachment 11

Letter from Lisa DeVille, Ft. Berthold POWER, to Michael D. Nedd, Acting Director, BLM (Nov. 6, 2017)

November 6, 2017

Attn: RIN 1004-AE54

Michael D. Nedd
Acting Director
U.S. Bureau of Land Management
1849 C Street NW, Room 5665
Washington, DC 20240

Re: Tribal Consultation for Proposed Delay and Suspension of Waste Prevention Rule

Acting Director Nedd,

Fort Berthold Protectors of Water and Earth Rights and the undersigned tribal members appreciate the opportunity to provide comments about the Bureau of Land Management's (BLM) proposal, 82 Fed. Reg. 46,458 (Oct. 5, 2017), to delay or suspend certain requirements of its Waste Prevention Rule, 81 Fed. Reg. 83,008 (Nov. 18, 2016). We are concerned that BLM's rapid pace for proposing to suspend or delay the Waste Prevention Rule has not allowed adequate time for tribal consultation.

The Waste Prevention Rule increases royalty payments from minerals held in trust for tribes and individual Indian mineral owners. The Secretary of the Interior has a trust responsibility to tribes and individual Indian mineral owners. *See Cotton Petroleum Corp. v. U.S. Dep't of Interior*, 870 F.2d 1515, 1524 (10th Cir. 1989); *Jicarilla Apache Tribe v. Supron Energy Corp.*, 728 F.2d 1555, 1563–65 (10th Cir. 1984) (Seymour, J., dissenting), *adopted as majority opinion as modified en banc*, 782 F.2d 855 (10th Cir. 1986). Congress has directed the Secretary to “aggressively carry out his trust responsibility in the administration of Indian oil and gas.” 30 U.S.C. § 1701(a)(4).

A component of this trust responsibility is the duty to consult with federally recognized tribes and individual Indian mineral owners prior to making decisions that impact their resources. *See* Executive Order 13,175, 64 Fed. Reg. 67,249 (Nov. 6, 2000). According to BLM's Handbook on Improving and Sustaining BLM-Tribal Relations, “BLM cannot simply rely on the proscribed public participation and notification requirements of . . . other . . . laws to comply with . . . BLM's general trust obligations to consult.” BLM, H 1780-1 at IV-23 (Dec. 15, 2016). BLM's Handbook further acknowledges that, in the mineral development context, “BLM may be required to consult directly with Indian mineral owners themselves.” *Id.* at XIII-5.

Consistent with this responsibility, BLM engaged in an extensive tribal consultation process prior to promulgating the Waste Prevention Rule. In 2014, BLM held four tribal outreach sessions, in Denver, Albuquerque, Dickinson, and Washington, D.C. 81 Fed. Reg. at 83,071. Two of the sessions were live-streamed to allow for greater participation. *Id.* After the proposed rule was published in 2016, BLM facilitated another four tribal outreach meetings in Farmington, Oklahoma City, Denver, and Dickinson. *Id.* In advance of both the 2014 and 2016 tribal outreach sessions, BLM sent letters to over 200 tribal leaders that had previously expressed interest in oil and gas-related matters. *Id.* at 83,021.

By contrast, BLM has provided few opportunities for tribes and individual Indian mineral owners to consult about the proposal to suspend or delay the Waste Prevention Rule. BLM states that it has “notified tribes of the action and requested feedback and comment through the respective BLM State Office Directors” and that “[f]uture tribal consultation *may* occur on an ongoing basis.” 82 Fed. Reg. at 46,467 (emphasis added). We are concerned because this falls well short of the tribal consultation that BLM engaged in prior to promulgating the Waste Prevention Rule. For example, BLM has not provided any means of consultation for individual Indian mineral owners, even though suspending the Waste Prevention Rule will reduce their royalty payments. BLM’s trust responsibility to individual Indian mineral owners demands that they be provided with more opportunities for consultation than the same commenting procedures available to any member of the public.

BLM claims that the amount of tribal outreach it is conducting is “appropriate” because the proposed rule only suspends the Waste Prevention Rule’s compliance dates, rather than changing the Waste Prevention Rule’s substance. *Id.* But BLM also acknowledges that the purpose of the proposed suspension is to avoid requiring operators to comply with the Waste Prevention Rule while BLM reconsiders its substantive requirements. *Id.* at 46,460. Tribes and their members will receive lower royalty payments as long as the Waste Prevention Rule is not fully implemented and enforced, regardless of whether that period is a year, or if BLM ultimately chooses to rescind the Rule altogether. The temporary nature of the proposed suspension has no bearing on BLM’s duty to consult with tribes and individual Indian mineral owners prior to taking actions that impact their oil and gas resources.

Accordingly, we respectfully request that BLM engage in full-fledged consultation, including tribal outreach sessions open to enrolled members of Federally-recognized tribes and individual Indian mineral owners, prior to suspending or delaying the Waste Prevention Rule.

Sincerely,

Lisa DeVille
President
Fort Berthold Protectors of Water & Earth Rights
Mandaree, ND

Cedar Wilkie Gillette
Enrolled Member, Mandan, Hidatsa, and Arikara Nation
Descendant, Turtle Mountain Band of Chippewa
Bozeman, MT

Attachment 12

Letter from Christa Monette, Turtle Mountain Band of Chippewa Indians, to Michael D. Nedd, Acting Director, BLM (Nov. 6, 2017)



TURTLE MOUNTAIN BAND OF CHIPPEWA INDIANS

4180 HIGHWAY 281
P.O. BOX 900
BELCOURT, NORTH DAKOTA 58316

(701) 477-2600
FAX: (701) 477-6836

November 6, 2017

Attn: RIN 1004-AE54

Michael D. Nedd
Acting Director
U.S. Bureau of Land Management
1849 C Street NW, Room 5665
Washington, DC 20240

Re: Tribal Consultation for Proposed Delay and Suspension of Waste Prevention Rule

Acting Director Nedd,

The undersigned tribes, tribal members and organizations of tribal members appreciate the opportunity to provide comments about the Bureau of Land Management's (BLM) proposal, 82 Fed. Reg. 46,458 (Oct. 5, 2017), to delay or suspend certain requirements of its Waste Prevention Rule, 81 Fed. Reg. 83,008 (Nov. 18, 2016). We are concerned that BLM's rapid pace for proposing to suspend or delay the Waste Prevention Rule has not allowed adequate time for tribal consultation.

The Waste Prevention Rule increases royalty payments from minerals held in trust for tribes and individual Indian mineral owners. The Secretary of the Interior has a trust responsibility to tribes and individual Indian mineral owners. *See Cotton Petroleum Corp. v. U.S. Dep't of Interior*, 870 F.2d 1515, 1524 (10th Cir. 1989); *Jicarilla Apache Tribe v. Supron Energy Corp.*, 728 F.2d 1555, 1563-65 (10th Cir. 1984) (Seymour, J., dissenting), *adopted as majority opinion as modified en banc*, 782 F.2d 855 (10th Cir. 1986). Congress has directed the Secretary to "aggressively carry out his trust responsibility in the administration of Indian oil and gas." 30 U.S.C. § 1701(a)(4).

A component of this trust responsibility is the duty to consult with federally recognized tribes and individual Indian mineral owners prior to making decisions that impact their resources. *See* Executive Order 13,175, 64 Fed. Reg. 67,249 (Nov. 6, 2000). According to BLM's Handbook on Improving and Sustaining BLM-Tribal Relations, "BLM cannot simply rely on the proscribed public participation and notification requirements of . . . other . . . laws to comply with . . . BLM's general trust obligations to consult." BLM, H 1780-1 at IV-23 (Dec. 15, 2016). BLM's Handbook further acknowledges that, in the mineral development context, "BLM may be required to consult directly with Indian mineral owners themselves." *Id.* at XIII-5.

Consistent with this responsibility, BLM engaged in an extensive tribal consultation process prior to promulgating the Waste Prevention Rule. In 2014, BLM held four tribal outreach sessions, in

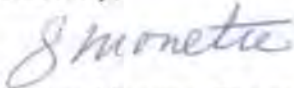
Denver, Albuquerque, Dickinson, and Washington, D.C. 81 Fed. Reg. at 83,071. Two of the sessions were live-streamed to allow for greater participation. *Id.* After the proposed rule was published in 2016, BLM facilitated another four tribal outreach meetings in Farmington, Oklahoma City, Denver, and Dickinson. *Id.* In advance of both the 2014 and 2016 tribal outreach sessions, BLM sent letters to over 200 tribal leaders that had previously expressed interest in oil and gas-related matters. *Id.* at 83,021.

By contrast, BLM has provided few opportunities for tribes and individual Indian mineral owners to consult about the proposal to suspend or delay the Waste Prevention Rule. BLM states that it has “notified tribes of the action and requested feedback and comment through the respective BLM State Office Directors” and that “[f]uture tribal consultation *may* occur on an ongoing basis.” 82 Fed. Reg. at 46,467 (emphasis added). We are concerned because this falls well short of the tribal consultation that BLM engaged in prior to promulgating the Waste Prevention Rule. For example, BLM has not provided any means of consultation for individual Indian mineral owners, even though suspending the Waste Prevention Rule will reduce their royalty payments. BLM’s trust responsibility to individual Indian mineral owners demands that they be provided with more opportunities for consultation than the same commenting procedures available to any member of the public.

BLM claims that the amount of tribal outreach it is conducting is “appropriate” because the proposed rule only suspends the Waste Prevention Rule’s compliance dates, rather than changing the Waste Prevention Rule’s substance. *Id.* But BLM also acknowledges that the purpose of the proposed suspension is to avoid requiring operators to comply with the Waste Prevention Rule while BLM reconsiders its substantive requirements. *Id.* at 46,460. Tribes and their members will receive lower royalty payments as long as the Waste Prevention Rule is not fully implemented and enforced, regardless of whether that period is a year, or if BLM ultimately chooses to rescind the Rule altogether. The temporary nature of the proposed suspension has no bearing on BLM’s duty to consult with tribes and individual Indian mineral owners prior to taking actions that impact their oil and gas resources.

Accordingly, we respectfully request that BLM engage in full-fledged consultation, including tribal outreach sessions open to enrolled members of Federally-recognized tribes and individual Indian mineral owners, prior to suspending or delaying the Waste Prevention Rule.

Sincerely,



Christa Monette, Chairperson

Turtle Mountain Band of Chippewa Indians

Tribal Water Commission

Attachment 13

Letter from George Werito, Jr., Ojo Encino Chapter of the Navajo Nation, to Michael D. Nedd, Acting Director, BLM (Nov. 1, 2017)



OJO ENCINO CHAPTER
HCR 79 BOX 1500, OJO ENCINO, NEW MEXICO 87013
PHONE (505)731-2263 or 731-2262; FAX (505)731-1516
EMAIL: ojoencino@navajochapters.org

November 1, 2017

Attn: RIN 1004-AE54

Michael D. Nedd
Acting Director
U.S. Bureau of Land Management
1849 C Street NW, Room 5665
Washington, DC 20240

Re: Tribal Consultation for Proposed Delay and Suspension of Waste Prevention Rule

Acting Director Nedd,

The undersigned tribes, tribal members and organizations of tribal members submit this comment about the Bureau of Land Management's (BLM) proposal, 82 Fed. Reg. 46,458 (Oct. 5, 2017), to delay or suspend certain requirements of its Waste Prevention Rule, 81 Fed. Reg. 83,008 (Nov. 18, 2016). We oppose BLM's proposal to suspend or delay the Rule's requirements. We are concerned that BLM's rapid pace for proposing to suspend or delay the Waste Prevention Rule has not allowed adequate time for tribal consultation. Accordingly, we request that BLM withdraw its proposal, and engage in full-fledged consultation, including tribal outreach sessions open to enrolled members of Federally-recognized tribes and individual Indian mineral owners, prior to making a final decision about whether to suspend or delay the Waste Prevention Rule's requirements.

The Waste Prevention Rule increases royalty payments from minerals held in trust for tribes and individual Indian mineral owners. The Secretary of the Interior has a trust responsibility to tribes and individual Indian mineral owners. *See Cotton Petroleum Corp. v. U.S. Dep't of Interior*, 870 F.2d 1515, 1524 (10th Cir. 1989); *Jicarilla Apache Tribe v. Supron Energy Corp.*, 728 F.2d 1555, 1563-65 (10th Cir. 1984) (Seymour, J., dissenting), *adopted as majority opinion as modified en banc*, 782 F.2d 855 (10th Cir. 1986). Congress has directed the Secretary to "aggressively carry out his trust responsibility in the administration of Indian oil and gas." 30 U.S.C. § 1701(a)(4).

A component of this trust responsibility is the duty to consult with federally recognized tribes and individual Indian mineral owners prior to making decisions that impact their resources. *See Executive Order 13,175*, 64 Fed. Reg. 67,249 (Nov. 6, 2000). According to BLM's Handbook on Improving and Sustaining BLM-Tribal Relations, "BLM cannot simply rely on the proscribed public participation and notification requirements of . . . other . . . laws to comply with . . . BLM's general trust obligations to consult." BLM, H 1780-1 at IV-23 (Dec. 15, 2016). BLM's Handbook further acknowledges that, in the mineral development context, "BLM may be required to consult directly with Indian mineral owners themselves." *Id.* at XIII-5.

George Werito Jr., Chapter President
Taylor Pinto, Chapter Vice President
Brandon Sam, Chapter Secretary/Treasurer

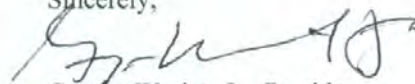
Gloria Chiquito, Chapter Manager
Leonard Tsosie, Council Delegate
Elizabeth Stoney, Land Board Member

Consistent with this responsibility, BLM engaged in an extensive tribal consultation process prior to promulgating the Waste Prevention Rule. In 2014, BLM held four tribal outreach sessions, in Denver, Albuquerque, Dickinson, and Washington, D.C. 81 Fed. Reg. at 83,071. Two of the sessions were live-streamed to allow for greater participation. *Id.* After the proposed rule was published in 2016, BLM facilitated another four tribal outreach meetings in Farmington, Oklahoma City, Denver, and Dickinson. *Id.* In advance of both the 2014 and 2016 tribal outreach sessions, BLM sent letters to over 200 tribal leaders that had previously expressed interest in oil and gas-related matters. *Id.* at 83,021.

By contrast, BLM has provided few opportunities for tribes and individual Indian mineral owners to consult about the proposal to suspend or delay the Waste Prevention Rule. BLM states that it has “notified tribes of the action and requested feedback and comment through the respective BLM State Office Directors” and that “[f]uture tribal consultation *may* occur on an ongoing basis.” 82 Fed. Reg. at 46,467 (emphasis added). We are concerned because this falls well short of the tribal consultation that BLM engaged in prior to promulgating the Waste Prevention Rule. For example, BLM has not provided any means of consultation for individual Indian mineral owners, even though suspending the Waste Prevention Rule will reduce their royalty payments. BLM’s trust responsibility to individual Indian mineral owners demands that they be provided with more opportunities for consultation than the same commenting procedures available to any member of the public.

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Sincerely,



George Werito, Jr., President
Ojo Encino Chapter

Attachment 14

**Federal Respondents' Motion for an Extension of the Merits
Briefing Deadlines in *Wyoming v. U.S. Dep't of the Interior*, No. 2:16-
cv-285-SWS (D. Wyo. Oct. 20, 2017), ECF No. 155**

JEFFREY H. WOOD
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christopher.martin@usdoj.gov

**IN THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF WYOMING**

STATE OF WYOMING and STATE OF)	
MONTANA,)	
	)	No. 16-cv-00285-SWS
Petitioners,)	
	)	[Consolidated with 16-cv-00280-SWS]
and)	
	)	FEDERAL RESPONDENTS'
	)	MOTION FOR AN EXTENSION OF
STATE OF NORTH DAKOTA and STATE OF	)	THE MERITS BRIEFING
TEXAS,	)	DEADLINES
)	
Intervenor-Petitioners,)	
)	
v.)	
)	
UNITED STATES DEPARTMENT OF THE)	
INTERIOR, <i>et al.</i> ,)	
)	
Respondents,)	
)	
and)	
)	
WYOMING OUTDOOR COUNCIL, <i>et al.</i> ,)	
)	
Intervenor-Respondents.)	

Federal Respondents respectfully move this Court for a 37-day extension of the merits briefing deadlines in these two consolidated cases. The extension will provide sufficient time to the Bureau of Land Management (“BLM”) to complete a rule (“Suspension Rule”) suspending or delaying the majority of the provisions of the Waste Prevention, Production Subject to Royalties, and Resource Conservation Rule (“Waste Prevention Rule”), including the portions of the Waste Prevention Rule that would otherwise become effective on January 17, 2018. As BLM aims to complete the Suspension Rule by December 8, 2017 and is currently working on a second rulemaking (“Revision Rule”) to revise or rescind the Waste Prevention Rule, *see* Ex. A, Decl. of Timothy Spisak, ¶¶ 5, 11, proceeding with the merits briefing at this time would be a waste of judicial resources and would undermine the administrative process. This Court has previously extended the briefing schedule twice based on Western Energy Alliance’s and the Independent Petroleum Association of America’s request for an extension, and once based on Federal Respondents’ request for an extension. ECF Nos. 100, 118, 129.

As Defendants have previously explained to this Court, President Donald J. Trump issued an Executive Order on March 28, 2017 requiring that the Secretary of the Interior “review” the Waste Prevention Rule and “if appropriate, . . . as soon as practicable, . . . publish for notice and comment proposed rules suspending, revising, or rescinding” the Rule. Exec. Order No. 13,783, 82 Fed. Reg. 16,093, § 7(b) (Mar. 28, 2017). As directed, BLM has reviewed the Waste Prevention Rule and determined that it does not align with the policy set forth in Executive Order 13,783, which states that it is “in the national interest to promote the 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.” 82 Fed. Reg. at 16,093; 82 Fed. Reg. 46,458, 46,459-60 (Oct. 5, 2017); Ex. A ¶ 4.

BLM is therefore in the process of “reviewing the [Waste Prevention Rule] to develop an appropriate proposed revision.” 82 Fed. Reg. at 46,459-60; Ex. A ¶ 5.

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The comment period for the proposed Suspension Rule ends November 6, 2017, *id.* at 46,458, and BLM expects to publish the final rule by December 8, 2017. Ex. A ¶¶ 10-11. BLM will utilize the twelve-month period while the majority of the Waste Prevention Rule is suspended to prepare and complete the Revision Rule, as determined to be appropriate and lawful after a public notice-and-comment rulemaking process, to rescind or revise the entire Waste Prevention Rule, including the aspects of the Waste Prevention Rule that have been challenged in this case. *See* Ex. A ¶¶ 5, 7; 82 Fed. Reg. at 46,459-60.

Federal Respondents request an extension of the briefing deadlines for 37 days to allow BLM to focus on finalizing the Suspension Rule by December 8, 2017. Once the Suspension Rule is completed, it will provide the immediate relief sought by Petitioners—relief from the portions of the Waste Prevention Rule that would otherwise come into effect on January 17, 2018, as well as other provisions of the Waste Prevention Rule already in effect—and thereby obviate the need for immediate judicial review of the Waste Prevention Rule. Rather than require BLM to defend a rule that the agency is in the midst of suspending, an extension would preserve the integrity of BLM’s ongoing administrative process by allowing the agency to complete its rulemaking without concern for judicial interference. *See Abbott Labs. v. Gardner*, 387 U.S. 136, 148 (1967) (encouraging courts to avoid “entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way”), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99 (1977).

The requested extension also serves judicial economy. As the Tenth Circuit recently noted in connection with BLM’s Fracking Rule, “proceeding to address whether the district court erred in invalidating the BLM’s Fracking Regulation when the BLM has now commenced rescinding that same regulation appears to be a very wasteful use of limited judicial resources.” *Wyoming v. Zinke*, 2017 WL 4173619, at *5 (10th Cir. Sept. 21, 2017). Those same concerns apply here. BLM is taking steps to suspend or delay the majority of the requirements of the Waste Prevention Rule and has indicated its intent to substantially revise the Waste Prevention Rule. Thus, similar to the Fracking Rule, the Waste Prevention Rule has “become a moving target.” *Id.* Proceeding with immediate judicial review of the Waste Prevention Rule in these

circumstances would undermine the integrity of the administrative process and waste judicial resources.

The requested extension will not prejudice Petitioners. As explained, it will allow BLM to devote its resources to completing the Suspension Rule by December 8, 2017, thereby providing Petitioners relief through the administrative process and obviating the need for immediate judicial review. Requiring BLM to proceed with merits briefing over the next 37 days would only prevent the agency from focusing its time and resources on the administrative processes that will provide certainty for the entire regulated community, including the many states and operators that are not parties to these cases.

Federal Respondents' response to Petitioners' merits briefs is currently due November 6, 2017 and Petitioners' replies are due November 22, 2017. To allow BLM time to complete its suspension rulemaking and to avoid the waste of judicial resources, Federal Respondents request a 37-day extension of the deadline for its response brief to December 13, 2017. To accommodate the holidays, Federal Respondents propose an extension of the deadline for Petitioners' replies to January 5, 2018.

Finally, Federal Respondents propose that the Court hold a status conference on December 8, 2017, or another date before the proposed December 13 deadline, during which Federal Respondents will provide an update on the status of both the Suspension Rule and the Revision Rule. Once the final Suspension Rule has been published, and Petitioners have thereby been afforded relief from the regulatory requirements underlying their complaints, Federal Respondents plan to request a stay of this litigation to allow BLM time to complete its revision of the Waste Prevention Rule and to avoid wasting judicial resources litigating a rule that may be substantially revised in the near future.

As required by Local Rule 7.1(b)(1)(A), Federal Respondents have conferred with the other parties to this litigation who have indicated that they take the following positions on this motion:

- Petitioner State of Wyoming takes no position on this motion.
- Petitioner State of Montana takes no position on this motion.
- Petitioners Western Energy Alliance and Independent Petroleum Association of America (IPAA) oppose the Federal Defendants’ proposed extension of briefing deadlines and will file a written response to the Federal Defendants’ motion as allowed by Local Rule 7.1(b)(1)(B). Recognizing the time pressures associated with deadlines for both the Federal Defendants’ response brief and the 2018 compliance dates in the Venting & Flaring Rule, Western Energy Alliance and IPAA aim to file their written response by October 27, 2017.
- Intervenor-Petitioners States of North Dakota and Texas (States) oppose the BLM Motion to delay briefing in this matter and believe the BLM’s latest motion is both untimely and prejudicial to the States. North Dakota and Texas intend to file a written response to the BLM Motion by October 27th.
- Intervenor-Respondents States of California and New Mexico take no position on this motion.
- Intervenor-Respondents Citizen Groups take no position on this motion.

Respectfully submitted this 20th day of October, 2017.

JEFFREY H. WOOD
Acting Assistant Attorney General
Environment and Natural Resources Division

/s/ Clare Boronow
MARISSA PIROPATO
CLARE BORONOW

/s/ C. Levi Martin
C. Levi Martin
Assistant United States Attorney

CERTIFICATE OF SERVICE

I hereby certify that on October 20, 2017, a copy of the foregoing was served by filing a copy of that document with the Court's CM/ECF system, which will send notice of electronic filing to counsel of record.

/s/ Clare Boronow
Clare Boronow

Attachment 15

BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, **Delay and Suspension of Certain Requirements, Final Rule**, 82 Fed. Reg. 58,050 (Dec. 8, 2017)

DEPARTMENT OF THE INTERIOR**Bureau of Land Management****43 CFR Parts 3160 and 3170****[18X.LLWO310000.L13100000.PP0000]****RIN 1004-AE54****Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements****AGENCY:** Bureau of Land Management, Interior.**ACTION:** Final rule.

SUMMARY: The Bureau of Land Management (BLM) is promulgating a final rule (2017 final delay rule) to temporarily suspend or delay certain requirements contained in the rule published in the **Federal Register** on November 18, 2016, entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (2016 final rule) until January 17, 2019. The BLM has concerns regarding the statutory authority, cost, complexity, feasibility, and other implications of the 2016 final rule, and therefore intends to avoid imposing likely considerable and immediate compliance costs on operators for requirements that may be rescinded or significantly revised in the near future. The 2017 final delay rule does not substantively change the 2016 final rule, but simply postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for 1 year.

DATES: This rule is effective on January 8, 2018.

FOR FURTHER INFORMATION CONTACT: Catherine Cook, Acting Division Chief, Fluid Minerals Division, 202–912–7145, or ccook@blm.gov, for information regarding the substance of today’s final delay rule or information about the BLM’s Fluid Minerals program. For questions relating to regulatory process issues, contact Faith Bremner, Regulatory Analyst, at 202–912–7441, or 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. Background
- II. Discussion of the Final Delay Rule
- III. Procedural Matters

I. Background

The BLM’s onshore oil and gas management program is a major

contributor to our nation’s oil and gas production. The BLM manages more than 245 million acres of Federal land and 700 million acres of subsurface estate, making up nearly a third of the nation’s mineral estate. In fiscal year (FY) 2016, sales volumes from Federal onshore production lands accounted for 9 percent of domestic natural gas production, and 5 percent of total U.S. oil production. Over \$1.9 billion in royalties were collected from all oil, natural gas, and natural gas liquids transactions in FY 2016 on Federal and Indian lands. Royalties from Federal lands are shared with States. Royalties from Indian lands are collected for the benefit of the Indian owners.

In response to oversight reviews and a recognition of increased flaring from Federal and Indian leases, the BLM developed the 2016 final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation,” which was published in the **Federal Register** on November 18, 2016. See 81 FR 83008 (Nov. 18, 2016). The 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). The 2016 final 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 final rule became effective on January 17, 2017. Many of the 2016 final rule’s provisions are to be phased in over time, and are to become operative on January 17, 2018.

Since late January 2017, the President has issued several Executive Orders that necessitate a review of the 2016 final rule by the Department. On January 30, 2017, the President issued Executive Order 13771, entitled, “Reducing Regulation and Controlling Regulatory Costs,” which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. In addition, on March 28, 2017, the President issued Executive Order 13783, entitled, “Promoting Energy Independence and Economic Growth.” Section 7(b) of Executive Order 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for consistency with the policy articulated in section 1 of the Order and, “if appropriate,” to publish proposed rules suspending, revising, or rescinding those rules. Among other things, section

1 of Executive Order 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 Executive Order 13783, on March 29, 2017, Secretary of the Interior Ryan Zinke issued Secretarial Order No. 3349, entitled, “American Energy Independence,” which, among other things, directs the BLM to review the 2016 final rule to determine whether it is fully consistent with the policy set forth in section 1 of Executive Order 13783. The BLM conducted an initial review of the 2016 final rule and found that it is inconsistent with the policy in section 1 of Executive Order 13783. The BLM found that some provisions of the 2016 final rule add considerable regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. For example, despite the rule’s assertions, many of the 2016 final rule’s requirements would pose a particular compliance burden to operators of marginal or low-producing wells. There is newfound concern that this additional burden would jeopardize the ability of operators to maintain or economically operate these wells.

Reexamination of the 2016 final rule is also needed because the BLM is not confident that all provisions of the 2016 final rule would survive judicial review. Immediately after the 2016 final rule was issued, petitions for judicial review of the rule were filed by industry groups and certain States with significant BLM-managed Federal and Indian minerals. See *Wyoming v. U.S. Dep’t of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Although the court denied motions for a preliminary injunction, it did express concerns that the BLM may have usurped the authority of the Environmental Protection Agency (EPA) and the States under the Clean Air Act, and questioned whether it was appropriate for the 2016 final rule to be justified based on its environmental and societal benefits, rather than on its resource conservation benefits alone. Moreover, questions have been raised over to what extent Federal regulations should apply to leases in communitization agreements when Federal mineral ownership is very small. The BLM is evaluating these issues as part of its reexamination of the rule.

Reexamination of the 2016 final rule is warranted to reassess the rule’s estimated costs and benefits. In the

Regulatory Impact Analysis (RIA) for the 2016 final rule (2016 RIA), the BLM estimated that the requirements of the 2016 final rule would impose compliance costs, not including potential cost savings for product recovery, of approximately \$114 million to \$279 million per year (2016 RIA at 4). Certain States, tribes, and many oil and gas companies and trade associations have argued, in comments and in the litigation following the issuance of the 2016 final rule, that the BLM underestimated the compliance costs of the 2016 final rule and that the costs would inhibit oil and gas development on Federal and Indian lands, thereby reducing royalties and harming State and tribal economies. The BLM is reexamining these issues to determine whether the 2016 RIA may have underestimated costs.

Apart from this concern over costs, the 2016 RIA also may have overestimated benefits by the use of a social cost of methane that attempts to account for global rather than domestic climate change impacts. Section 5 of Executive Order 13783, issued by the President on March 28, 2017, disbanded the earlier Interagency Working Group on Social Cost of Greenhouse Gases (IWG) and withdrew the Technical Support Documents upon which the RIA for the 2016 final rule relied for the valuation of changes in methane emissions. The Executive Order further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in Office of Management and Budget (OMB) Circular A–4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). The BLM is reassessing its estimates of the rule’s benefits taking into account the Executive Order’s directives.

The BLM also believes that a number of specific assumptions underlying the analysis supporting the 2016 final rule warrant reconsideration. For example, the BLM is reconsidering whether it was appropriate to assume that all marginal wells would receive exemptions from the rule’s requirements and whether this assumption might have masked adverse impacts of the 2016 final rule on production from marginal wells. The BLM is also reconsidering whether it was appropriate to assume that there would be no delay in the BLM’s review of Applications for Permits to Drill (APDs) as a result of reviewing Sundry Notices requesting exemptions from the

rule’s requirements, and that there would be no impact on production due to operators waiting on the BLM to review and approve such requests for exemptions. The BLM is reconsidering whether it was appropriate to assume that there would be no reservoir damage if an operator uses temporary well shut-ins to comply with the 2016 final rule’s capture percentage requirements, and whether it was correct to assume that the capture percentage requirements would not have a disproportionate impact on small operators, who might have fewer wells with which to average volumes of allowable flaring. Finally, the BLM has concerns that its cost-benefit analysis for the leak detection and repair (LDAR) requirements in the 2016 final rule—which used data from the EPA’s OOOOa rule (40 CFR part 60, subpart OOOOa)—was not based on the best available information and science. The BLM is reviewing the effectiveness of LDAR requirements to determine whether more accurate data is available.

Following up on its initial review, the BLM is currently reviewing the 2016 final rule to develop an appropriate proposed revision—to be promulgated through notice-and-comment rulemaking—that would propose to align the 2016 final rule with the policies set forth in section 1 of Executive Order 13783. Today’s final delay rule temporarily suspends or delays certain requirements contained in the 2016 final rule until January 17, 2019. As noted above, the BLM has concerns regarding the statutory authority, cost, complexity, feasibility, and other implications of the 2016 final rule, and therefore wants to avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future. The BLM also wishes to avoid expending scarce agency resources on implementation activities (internal training, operator outreach/education, developing clarifying guidance, etc.) for such potentially transitory requirements.

For certain requirements in the 2016 final rule that have yet to be implemented, this final delay rule will temporarily postpone the implementation dates until January 17, 2019, or for 1 year. For certain requirements in the 2016 final rule that are currently in effect, this final delay rule will temporarily suspend their effectiveness until January 17, 2019. A detailed discussion of the suspensions and delays is provided below. The BLM has attempted to tailor this final delay rule to target the requirements of the 2016 final rule for which immediate

regulatory relief is particularly justified. Although the requirements of the 2016 final rule that are not suspended under this final delay rule may ultimately be revised in the near future, the BLM is not suspending them because it does not, at this time, believe that suspension is necessary, because the cost and other implications do not pose immediate concerns for operators. This final delay rule temporarily suspends or delays all of the requirements in the 2016 final rule that the BLM estimated would pose an immediate compliance burden to operators and generate benefits of gas savings or reductions in methane emissions. The 2017 final delay rule does not suspend or delay the requirements in subpart 3178 related to the royalty-free use of natural gas, but the only estimated compliance costs associated with those requirements are for minor and rarely occurring administrative burdens. In addition, for the most part, the 2017 final delay rule suspends or delays the administrative burdens associated with subpart 3179. Only four of the 24 information collection activities remain, and the burdens associated with these remaining items are not substantial.

The BLM promulgated the 2016 final rule, and now will suspend and delay certain provisions of that rule, pursuant to its authority under the following statutes: The Mineral Leasing Act of 1920 (30 U.S.C. 181–287), the Mineral Leasing Act for Acquired Lands of 1947 (30 U.S.C. 351–360), the Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701–1758), the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701–1785), the Indian Mineral Leasing Act of 1938 (25 U.S.C. 396a–g), the Indian Mineral Development Act of 1982 (25 U.S.C. 2101–2108), and the Act of March 3, 1909 (25 U.S.C. 396). 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.¹

Today’s action temporarily suspending certain requirements of the 2016 final rule does not leave unregulated the venting and flaring of gas from Federal and Indian oil and gas leases. Indeed, regulations from the BLM, the EPA, and the States will operate to address venting and flaring during the period of the suspension. The BLM’s venting and flaring

¹ See, 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. See also *Clean Air Council v. Pruitt*, 862 F.3d 1, 13 (D.C. Cir. 2017) (recognizing that “[a]gencies obviously have broad discretion to reconsider a regulation at any time” through notice and comment rulemaking).

regulations that will remain in effect during the 1-year suspension period include: Definitions clarifying when lost gas is “avoidably lost,” and therefore subject to royalties (§ 3179.4); restrictions on the practice of venting (§ 3179.6); limitations on royalty-free venting and flaring during initial production testing (§ 3179.103); limitations on royalty-free flaring during subsequent well tests (§ 3179.104); and restrictions on royalty-free venting and flaring during “emergencies” (§ 3179.105). The BLM also notes that States with significant Federal oil and gas production have regulations that restrict flaring and these regulations apply to Federal oil and gas operations in those States. See, *e.g.*, 20 Alaska Admin. Code § 25.235; Mont. Admin. R. 36.22.1220–.1221; New Mexico Administrative Code section 19.15.18.12; North Dakota Century Code section 38–08–06.4; North Dakota Industrial Commission Order 24665; 055–3 Wyo. Code R. § 39; Utah Administrative Code R649–3–20. Finally, as discussed elsewhere in this document, EPA regulations in 40 CFR 60 subparts OOOO and OOOOa address natural gas emissions from new, modified, and reconstructed equipment on oil and gas leases.

On October 5, 2017, the BLM published its proposed rule and sought comment on whether to suspend the implementation of certain requirements in the 2016 final rule until January 17, 2019 (82 FR 46458). Issues of particular interest to the BLM included the necessity of the proposed suspensions and delays, the costs and benefits associated with the proposed suspensions and delays, and whether suspension of other requirements of the 2016 final rule were warranted. The BLM was also interested in the appropriate length of the proposed suspension and delays and wanted to know whether the period should be longer or shorter (*e.g.*, 6 months, 18 months, or 2 years). The BLM allowed a 30-day comment period for the proposed delay rule to afford the public a meaningful opportunity to comment on its narrow proposal, involving a straightforward temporary suspension and delay of certain provisions of the 2016 final rule.

The BLM has engaged in stakeholder outreach in the course of developing this final delay rule. On October 16 and 17, 2017, the BLM sent correspondence to tribal governments to solicit their views to inform the development of this final delay rule. The BLM issued a proposed delay rule on September 28, 2017, which was published on October 5, 2017, and accepted public comments

through November 6, 2017. The BLM received over 158,000 public comments on the proposed rule, including approximately 750 unique comments.

II. Discussion of the Final Rule

A. Section-by-Section Discussion

43 CFR 3162.3–1(j)—Drilling Applications and Plans

In the 2016 final rule, the BLM added a paragraph (j) to 43 CFR 3162.3–1, which presently requires that when submitting an APD for an oil well, an operator must also submit a waste-minimization plan. Submission of the plan is required for approval of the APD, but the plan is not itself part of the APD, and the terms of the plan are not enforceable against the operator. The purpose of the waste-minimization plan is for the operator to set forth a strategy for how the operator will 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 must 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 is required when an operator cannot 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.

In the 2016 RIA, the BLM estimated that the administrative burden of the waste-minimization plan requirements would be roughly \$1 million per year for the industry and \$180,000 per year for the BLM (2016 RIA at 96 and 100). The BLM is currently reviewing concerns raised by operators that the

requirements of § 3162.3–1(j) may impose an unnecessary burden and can be reduced. The BLM is also evaluating concerns raised by the operators that § 3162.3–1(j) is infeasible because some of the required information is in the possession of a midstream company that is not in a position to share it with the operator prior to the operator’s submission of an APD. The BLM is considering narrowing the required information and is considering whether submission of a State waste-minimization plan, such as those required by New Mexico and North Dakota, would serve the purpose of § 3162.3–1(j). The BLM is therefore suspending the waste minimization plan requirement of § 3162.3–1(j) until January 17, 2019.

This final delay rule revises § 3162.3–1 by adding “Beginning January 17, 2019” to the beginning of paragraph (j). The rest of this paragraph remains the same as in the 2016 final rule and the introductory paragraph is repeated in this final delay rule text only for context.

43 CFR 3179.7—Gas Capture Requirement

In the 2016 final rule, the BLM sought to constrain routine flaring 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 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 would choose whether to comply with the capture targets on each of the operator’s leases, units or communized areas, or on a county-wide or state-wide basis.

In the 2016 RIA, the BLM estimated that this requirement would impose costs of up to \$162 million per year and generate cost savings from product recovery of up to \$124 million per year, with both costs and cost savings increasing as the requirements increased in stringency (2016 RIA at 49).

The BLM is currently considering concerns raised by operators that the capture-percentage requirement of § 3179.7 is unnecessarily complex and infeasible in some regions because it may cause wells to be shut-in repeatedly (or otherwise cease production if the lease(s) does not allow for a shut in) until sufficient gas infrastructure is in place. The BLM is considering whether

the NTL-4A framework can be applied in a manner that addresses any inappropriate levels of flaring, and whether market-based incentives (*i.e.*, royalty obligations) could improve capture in a more straightforward and efficient manner. Finally, the BLM is considering whether the need for a complex capture-percentage requirement could be obviated through other BLM efforts to facilitate pipeline development.

Since meeting this requirement requires operators to incur significant costs rather than require operators to institute new processes and adjust their plans for development to meet a capture-percentage requirement that may be rescinded or revised as a result of the BLM's review, the BLM is delaying for 1 year the compliance dates for § 3179.7's capture requirements. This final delay rule will allow the BLM sufficient time to more thoroughly explore through notice-and-comment rulemaking whether the capture percentage requirements should be rescinded or revised and would prevent operators from being unnecessarily burdened by regulatory requirements that are subject to change. This final delay rule revises the compliance dates in paragraphs (b), (b)(1) through (b)(4), and (c)(2)(i) through (vii) of § 3179.7 to begin January 17, 2019. Paragraphs (c), (c)(1), and the introductory text of (c)(2) remain the same as in the 2016 final rule and are repeated in this final delay rule text only for context.

43 CFR 3179.9—Measuring and Reporting Volumes of Gas Vented and Flared From Wells

Section 3179.9 requires operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas, whether royalty-bearing or royalty-free. This section further provides that specific requirements apply when the operator is flaring 50 Mcf or more of gas per day from a high-pressure flare stack or manifold, based on estimated volumes from the previous 12 months, or based on estimated volumes over the life of the flare, whichever is shorter. Under the 2016 final rule, § 3179.9(b) would have required the operator, as of January 17, 2018, if the volume threshold is met, to measure the volume of the flared gas, or calculate the volume of the flared gas based on the results of a regularly performed gas-to-oil ratio test, so as to allow the BLM to independently verify the volume, rate, and heating value of the flared gas.

In the 2016 RIA, the BLM estimated that this requirement would impose

costs of about \$4 million to \$7 million per year (2016 RIA at 52).

The BLM is presently reviewing concerns raised by operators that the additional accuracy associated with the measurement and estimation required by § 3179.9(b) does not justify the burden it would place on operators and that the requirement is infeasible because current technology does not reliably measure low pressure, low volume, fluctuating gas flow. The BLM is considering whether it would make more sense to allow the BLM to require measurement or estimation on a case-by-case basis, rather than imposing a blanket requirement on all operators. In order to avoid immediate and potentially unnecessary compliance costs on the part of operators, this final delay rule delays the compliance date in § 3179.9 until January 17, 2019.

This final delay rule revises the compliance date in § 3179.9(b)(1). The rest of paragraph (b)(1) remains the same as in the 2016 final rule and is repeated in this final delay rule text only for context.

43 CFR 3179.10—Determinations Regarding Royalty-Free Flaring

Section 3179.10(a) provides that approvals to flare royalty free that were in effect as of January 17, 2017, will continue in effect until January 17, 2018. The purpose of this provision was to provide a transition period for operators who were operating under existing approvals for royalty-free flaring. Because the BLM's review of the 2016 final rule could result in rescission or substantial revision of the rule, the BLM believes that terminating pre-existing flaring approvals in January 2018 would impose an immediate cost, be premature and disruptive, and would introduce needless regulatory uncertainty for operators with existing flaring approvals. The BLM therefore extends the end of the transition period provided for in § 3179.10(a) to January 17, 2019.

This final delay rule also revises the date in paragraph (a) and replaces "as of the effective date of this rule" with "as of January 17, 2017," which is the effective date of the 2016 final rule, for clarity. Aside from these two changes, this final delay rule does not otherwise revise paragraph (a), but the rest of the paragraph remains the same as in the 2016 final rule and is repeated in this final delay rule text only for context.

43 CFR 3179.101—Well Drilling

Section 3179.101(a) requires that gas reaching the surface as a normal part of drilling operations 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. Section 3179.101(a) also specifies that gas may not be vented, except under the circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the ways specified above. Section 3179.101(b) states that gas lost as a result of a loss of well control will be classified as avoidably lost if the BLM determines that the loss of well control was due to operator negligence.

The BLM is currently reviewing concerns raised by operators that § 3179.101 is unnecessary in light of existing BLM requirements, infeasible in the situations where flares may be used on drilling wells because of insufficient gas to burn, and creates a risk to safety. The BLM has existing regulations that require the operator to flare gas during drilling operations, see Onshore Oil and Gas Order No. 2—Drilling Operations, Section III.C.7. The requirements state that "All flare systems shall be designed to gather and burn all gas. . . . The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare."

Because § 3179.101 includes the primary method of gas disposition, which is also required by Onshore Oil and Gas Order No. 2—Drilling Operations, Section III.C.7, the primary effect of § 3179.101, therefore, may be to impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas.

Further, in addition to the existing requirements regulating well drilling operations, the available data suggest that potential gas losses during a well-drilling operation is very small. According to EPA's Greenhouse Gas Inventory, drilling a well generates only small amounts of uncontrolled gas (2016 RIA at 149 and 151). These data indicate either that operators are already operating in a manner consistent with § 3179.101 or that the amount of potential gas losses from these operations is very small.

The BLM is therefore suspending the effectiveness of § 3179.101 until January 17, 2019, while the BLM completes its review of § 3179.101 and decides whether to propose permanently revising or rescinding it through notice-and-comment rulemaking.

This final delay rule adds a new paragraph (c) making it clear that the

operator must comply with § 3179.101 beginning January 17, 2019. This action does not impact the operator's compliance with Onshore Oil and Gas Order No. 2—Drilling Operations, Section III.C.7.

43 CFR 3179.102—Well Completion and Related Operations

Section 3179.102 addresses gas that reaches the surface during well-completion, post-completion, and fluid-recovery operations after a well has been hydraulically fractured or refractured. It requires the gas to be used or 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. Section 3179.102 specifies that gas may not be vented, except under the narrow circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the four ways specified above. Section 3179.102(b) provides that an operator will be deemed to be in compliance with its gas capture and disposition requirements if the operator is in compliance with the requirements for control of gas from well completions established under Environmental Protection Agency (EPA) regulations 40 CFR part 60, subparts OOOO or OOOOa regulations, or if the well is not a "well affected facility" under those regulations.

The BLM is concerned that § 3179.102 imposes an immediate cost on operators and is currently reviewing it to determine whether it is necessary, in light of current operator practices and the analogous EPA regulations. Operators dispose of gas during well completions and related operations consistent with § 3179.102(a) either to comply with EPA or State regulations.

EPA regulations at 40 CFR part 60, subparts OOOO and OOOOa, address the disposition of gas from oil and gas well completions using hydraulic fracturing, which are the vast majority of well completions occurring on Federal and Indian lands. The BLM believes that over 90 percent of wells on Federal and Indian lands are completed using hydraulic fracturing. Therefore, most of the well completions and related operations that would otherwise be covered by § 3179.102 would actually be exempted under § 3179.102(b).

The EPA regulations also exempt from its coverage a small portion of well completions that, according to EPA's Greenhouse Gas Inventory, generate only small amounts of uncontrolled gas (2016 RIA at 149 and 151). These data indicate either that operators are already

operating in a manner consistent with § 3179.102(a) or that the amount of potential gas losses from these operations is very small.

Considering the overlap with EPA regulations (40 CFR part 60, subparts OOOO and OOOOa), the primary effect of § 3179.102 may be to generate confusion about regulatory compliance during well-drilling and related operations. The BLM is therefore suspending the effectiveness of § 3179.102 until January 17, 2019, while the BLM completes its review of § 3179.102 and decides whether to permanently revise or rescind it through notice-and-comment rulemaking.

This final delay rule adds a new paragraph (e) making it clear that operators must comply with § 3179.102 beginning January 17, 2019.

43 CFR 3179.201—Equipment Requirements for Pneumatic Controllers

Section 3179.201 addresses 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. Section 3179.201 applies to such controllers if the controllers: (1) Have a continuous bleed rate greater than 6 standard cubic feet per hour (scf/hour) ("high-bleed" controllers); and (2) Are 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 be subject to those regulations if the controllers were new, modified, or reconstructed sources. Section 3179.201(b) requires 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. Section 3179.201(d) requires that this replacement occur no later than January 17, 2018, or within 3 years from the effective date of the rule if the well or facility served by the controller has an estimated remaining productive life of 3 years or less.

In the 2016 RIA, the BLM estimated that this requirement would impose costs of about \$2 million per year and generate cost savings from product recovery of \$3 million to \$4 million per year (2016 RIA at 56).

The BLM is concerned that § 3179.201 imposes an immediate cost on operators and is currently reviewing it to determine whether it should be revised or rescinded. The BLM is considering whether § 3179.201 is necessary in light of the analogous EPA regulations (40 CFR part 60, subparts OOOO or

OOOOa) and the fact that operators are likely to adopt more efficient equipment in cases where it makes economic sense for them to do so. The BLM does not believe that operators should be required to make expensive equipment upgrades to comply with § 3179.201 until the BLM has had an opportunity to review its requirements and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore delaying the compliance date stated in § 3179.201 until January 17, 2019.

This final delay rule revises the first sentence of paragraph (d) by replacing "no later than 1 year after the effective date of this section" with "by January 17, 2019." This final delay rule also replaces "the effective date of this section" with "January 17, 2017" the two times that it appears in the second sentence of paragraph (d). This final delay rule does not otherwise revise paragraph (d), but the rest of the paragraph remains the same as in the 2016 final rule and is repeated in the final delay rule text only for context.

43 CFR 3179.202—Requirements for Pneumatic Diaphragm Pumps

Section 3179.202 establishes 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 includes a Federal or Indian lease. It applies to such pumps if they are 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, § 3179.202 requires 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 may route the exhaust to a flare or low-pressure combustion device if the operator makes a determination (and notifies the BLM through a Sundry Notice) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust is not viable because: (1) A pneumatic pump is necessary to perform the function required; and (2) Capturing the exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low-pressure combustor on-site, or routing to such a device would be technically infeasible, the operator is not required to route the exhaust to a flare or low-pressure combustion device. Under § 3179.202(h), an operator must replace its covered pneumatic diaphragm pump

or route the exhaust gas to capture or flare beginning no later than January 17, 2018.

In the 2016 RIA, the BLM estimated that this requirement would impose costs of about \$4 million per year and generate cost savings from product recovery of \$2 million to \$3 million per year (2016 RIA at 61).

The BLM is concerned that § 3179.202 imposes an immediate cost on operators and is currently reviewing it to determine whether it should be rescinded or revised. Analogous EPA regulations apply to new, modified, and reconstructed sources, therefore limiting the applicability of § 3179.202. See 40 CFR part 60, subpart OOOOa. In addition, the BLM is concerned that requiring zero-emissions pumps may not conserve gas in some cases. The volume of royalty-free gas used to generate electricity to provide the power necessary to operate a zero-emission pump could exceed the volume of gas necessary to operate the pneumatic pump that the zero-emission pump would replace. The BLM does not believe that operators should be required to make expensive equipment upgrades to comply with § 3179.202 until the BLM has had an opportunity to review its requirements and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore delaying the compliance date stated in § 3179.202 until January 17, 2019.

This final delay rule revises paragraph (h) by replacing “no later than 1 year after the effective date of this section” in the first sentence with “by January 17, 2019” and also replaces “the effective date of this section” with “January 17, 2017” the two times that it appears later in the same sentence. This final delay rule does not otherwise revise paragraph (h); the rest of the paragraph remains the same as in the 2016 final rule and is repeated in the final delay rule text only for context.

43 CFR 3179.203—Storage Vessels

Section 3179.203 applies to crude oil, condensate, intermediate hydrocarbon liquid, or produced-water storage vessels that contain production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, and that are 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 have the potential for volatile organic compound (VOC) emissions equal to or greater than 6 tons per year (tpy), § 3179.203 requires operators to route all gas vapor from the vessels to a sales line. Alternatively, the

operator may route the vapor to a combustion device if it determines that routing the vapor to a sales line is technically infeasible or unduly costly. The operator also may submit a Sundry Notice to the BLM that demonstrates that compliance with the above options would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance. Pursuant to § 3179.203(c), operators must meet these requirements for covered storage vessels by January 17, 2018 (unless the operator will replace the storage vessel in order to comply, in which case it has a longer time to comply).

In the 2016 RIA, the BLM estimated that this requirement would impose costs of about \$7 million to \$8 million per year and generate cost savings from product recovery of up to \$200,000 per year (2016 RIA at 74).

The BLM is concerned that § 3179.203 imposes an immediate cost on operators and is currently reviewing it to determine whether it should be rescinded or revised. The BLM is considering whether § 3179.203 is necessary in light of analogous EPA regulations (40 CFR part 60, subparts OOOO or OOOOa) and whether the costs associated with compliance are justified. The BLM does not believe that operators should be required to make expensive upgrades to their storage vessels in order to comply with § 3179.203 until the BLM has had an opportunity to review its requirements and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore delaying the January 17, 2018, compliance date in § 3179.203 until January 17, 2019.

This final delay rule revises the first sentence of paragraph (b) by replacing “Within 60 days after the effective date of this section” with “Beginning January 17, 2019” and by adding “after January 17, 2019” between the words “vessel” and “the operator.” This final delay rule also revises the introductory text of paragraph (c) by replacing “no later than one year after the effective date of this section” with “by January 17, 2019” and by changing “or three years if” to “or by January 17, 2020, if” to account for removing the reference to “the effective date of this section.” This final delay rule does not otherwise revise paragraphs (b) and (c), and the rest of these paragraphs remain the same as in the 2016 final rule and are repeated in this final delay rule text only for context.

43 CFR 3179.204—Downhole Well Maintenance and Liquids Unloading

Section 3179.204 establishes requirements for venting and flaring during downhole well maintenance and liquids unloading. It requires the operator to use practices for such operations that minimize vented gas and the need for well venting, unless the practices are necessary for safety. Section 3179.204 also requires that for wells equipped with a plunger lift system or an automated well-control system, the operator must optimize the operation of the system to minimize gas losses. Under § 3179.204, before an operator manually purges a well for the first time, the operator must document in a Sundry Notice that other methods for liquids unloading are technically infeasible or unduly costly. In addition, during any liquids unloading by manual well purging, the person conducting the well purging is required to be present on-site to minimize, to the maximum extent practicable, any venting to the atmosphere. This section also requires the operator to maintain records of the cause, date, time, duration and estimated volume of each venting event associated with manual well purging, and to make those records available to the BLM upon request. Additionally, operators are required to notify the BLM by Sundry Notice within 30 days after the following conditions are met: (1) The cumulative duration of manual well-purging events for a well exceeds 24 hours during any production month; or (2) The estimated volume of gas vented in the process of conducting liquids unloading by manual well purging for a well exceeds 75 Mcf during any production month.

In the 2016 RIA, the BLM estimated that these requirements would impose costs of about \$6 million per year and generate cost savings from product recovery of about \$5 million to \$9 million per year (2016 RIA at 66). In addition, there would be estimated administrative burdens associated with these requirements of \$323,000 per year for the industry and \$37,000 per year for the BLM (2016 RIA at 98 and 101).

The BLM is concerned that § 3179.204 imposes immediate costs on operators and is currently reviewing it to determine whether it should be rescinded or revised. The BLM does not believe that operators should be burdened with the operational and reporting requirements imposed by § 3179.204 until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. In addition, as part of this review, the BLM would

want to review how these data could be reported in a consistent manner among operators. The BLM is therefore suspending the effectiveness of § 3179.204 until January 17, 2019.

This final delay rule adds a new paragraph (i), making it clear that operators must comply with § 3179.204 beginning January 17, 2019.

43 CFR 3179.301—Operator Responsibility

Sections 3179.301 through 3179.305 establish 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. Section 3179.302 prescribes the instruments and methods that may be used for leak detection. Section 3179.303 prescribes the frequency for inspections and § 3179.304 prescribes the time frames for repairing leaks found during inspections. Finally, § 3179.305 requires operators to maintain records of their LDAR activities and submit an annual report to the BLM. Pursuant to § 3179.301(f), operators must begin to comply with the LDAR requirements of §§ 3179.301 through 3179.305 before: (1) January 17, 2018, for sites in production prior to January 17, 2017; (2) 60 days after beginning production for sites that began production after January 17, 2017; and (3) 60 days after a site that was out of service is brought back into service and re-pressurized.

In the 2016 RIA, the BLM estimated that these requirements would impose costs of about \$83 million to \$84 million per year and generate cost savings from product recovery of about \$12 million to \$21 million per year (2016 RIA at 91). In addition, there would be estimated administrative burdens associated with these requirements of \$3.9 million per year for the industry and over \$1 million per year for the BLM (2016 RIA at 98 and 102).

The BLM is concerned that §§ 3179.301 through 3179.305 impose an immediate cost on operators and is currently reviewing them to determine whether they should be revised or rescinded. The analysis of the 2016 rule may have significantly overestimated the benefits of captured gas and therefore not justified the estimated costs. The BLM is also considering whether these requirements are necessary in light of comparable EPA (40 CFR part 60, subpart OOOOa.) and State LDAR regulations. The 2017 RIA

includes a discussion of State regulations (2017 RIA at 17). The BLM is considering whether the reporting burdens imposed by these sections are justified and whether the substantial compliance costs could be mitigated by allowing for less frequent and/or non-instrument-based inspections or by exempting wells that have low potential to leak natural gas. The BLM does not believe that operators should be burdened with the significant compliance costs imposed by these sections until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. The BLM is therefore delaying the effective dates for these sections until January 17, 2019, by revising § 3179.301(f).

This final delay rule revises paragraph (f)(1) by replacing “Within one year of January 17, 2017 for sites that have begun production prior to January 17, 2017;” with “By January 17, 2019, for all existing sites.” This final delay rule also revises paragraph (f)(2) by adding “new” between the words “for” and “sites” and by replacing the existing date with “January 17, 2019.” Finally, this final delay rule revises paragraph (f)(3) by adding “an existing” between the words “when” and “site” and by adding “after January 17, 2019” to the end of the sentence. This final delay rule does not otherwise revise paragraph (f), and the rest of the paragraph remains the same as in the 2016 final rule and is repeated in this final delay rule text only for context.

B. Summary of Estimated Economic Impacts

The BLM reviewed the final delay rule and conducted an RIA and Environmental Assessment (EA) that examine the impacts of the final delay rule’s requirements. The following discussion is a summary of the final delay rule’s economic impacts. The RIA and EA that we prepared have been posted in the docket for the final delay rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox, enter “RIN 1004-AE54” and click the “Search” button. Follow the instructions at this Web site.

The suspension or delay in the implementation of certain requirements in the 2016 final rule postpones the economic impacts estimated previously to the near-term future. That is to say, impacts that we previously estimated would occur in 2017 will now occur in 2018, impacts that we previously estimated would occur in 2018 will now occur in 2019, and so on. In the RIA for this final delay rule, we track this shift in impacts over the 10-year period

following the delay. A 10-year period of analysis was also used in the 2016 RIA. Except for some notable changes, the 2017 RIA uses the impacts estimated and underlying assumptions used by the BLM for the 2016 RIA, published in November 2016. The BLM’s final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that we estimated would pose a compliance burden to operators and generate benefits of gas savings or reductions in methane emissions.

Estimated Reductions in Compliance Costs (Excluding Cost Savings)

First, we examine the reductions in compliance costs excluding the savings that would have been realized from product recovery. This final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that we estimated would pose a compliance burden to operators. We estimate that suspending or delaying the targeted requirements of the 2016 final rule until January 17, 2019, will substantially reduce compliance costs during the period of the suspension or delay (2017 RIA at 29).

Impacts in Year 1:

- A delay in compliance costs of \$114 million (using a 7 percent discount rate to annualize capital costs) or \$110 million (using a 3 percent discount rate to annualize capital costs).

Impacts from 2017–2027:

- Total reduction in compliance costs ranging from \$73 million to \$91 million (net present value (NPV) using a 7 percent discount rate) or \$40 million to \$50 million (NPV using a 3 percent discount rate).

Estimated Reduction in Benefits

This final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that were estimated to generate benefits of gas savings or reductions in methane emissions. We estimate that this final delay rule will result in forgone benefits, since estimated cost savings that would have come from product recovery will be deferred and the emissions reductions will also be deferred (2017 RIA at 32).

Impacts in Year 1:

- A reduction in cost savings of \$19 million.

Impacts from 2017–2027:

- Total reduction in cost savings of \$36 million (NPV using a 7 percent discount rate) or \$21 million (NPV using a 3 percent discount rate).

We estimate that this final delay rule will also result in additional methane and VOC emissions of 175,000 and

250,000 tons, respectively, in Year 1 (2017 RIA at 32).

These estimated emissions are measured as the change from the baseline environment, which is the 2016 final rule's requirements being implemented per the 2016 final rule schedule. Since the final delay rule delays the implementation of those requirements, the estimated benefits of the 2016 final rule will be forgone during the temporary suspension or delay.

The BLM used interim domestic values of the carbon dioxide and methane to value the forgone emissions reductions resulting from the delay (see the discussion of social cost of greenhouse gases in the 2017 RIA at Section 3.2 and Appendix).

Impact in Year 1:

- Forgone methane emissions reductions valued at \$8 million (using interim domestic SC-CH₄² based on a 7 percent discount rate) or \$26 million (using interim domestic SC-CH₄ based on a 3 percent discount rate).

Impacts from 2017–2027:

- Forgone methane emissions reductions valued at \$1.9 million (NPV³ and interim domestic SC-CH₄ using a 7 percent discount rate); or
- Forgone methane emissions reductions valued at \$300,000 (NPV and interim domestic SC-CH₄ using a 3 percent discount rate).

Estimated Net Benefits

This final delay rule is estimated to result in positive net benefits, meaning that the reduction of compliance costs would exceed the reduction in cost savings and the cost of emissions additions (2017 RIA at 36).

Impact in Year 1:

- Net benefits of \$83–86 million (using interim domestic SC-CH₄ based on a 7 percent discount rate) or \$64–68 million (using interim domestic SC-CH₄ based on a 3 percent discount rate).

Impacts from 2017–2027:

- Total net benefits ranging from \$35–52 million (NPV and interim domestic SC-CH₄ using a 7 percent discount rate); or
- Total net benefits ranging from \$19–29 million (NPV and interim domestic SC-CH₄ using a 3 percent discount rate).

Energy Systems

This final delay 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, particularly in the short-term and

on a regional basis. However, since the relative changes in production compared to global levels are expected to be small, we do not expect that this final delay rule will significantly impact the price, supply, or distribution of energy.

Noting that the assumptions in the 2016 RIA are under review and subject to change, we estimate the following incremental changes in production. Also note the representative share of the total U.S. production in 2015 for context (2017 RIA at 41).

Annual Impacts:

- A decrease in natural gas production of 9.0 billion cubic feet (Bcf) in Year 1 (0.03 percent of the total U.S. production).
- An increase in crude oil production of 91,000 barrels in Year 2 (0.003 percent of the total U.S. production). There is no estimated change in crude oil production in Year 1.

Royalty Impacts

Based on the assumptions in the 2016 RIA, which are currently under review, in the short-term the final 2017 delay rule is expected to decrease natural gas production from Federal and Indian leases, and likewise, is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners. From 2017–2027, however, we expect a small increase in total royalties, likely due to production slightly shifting into the future where commodity prices are expected to be higher.

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.

We estimate a reduction in royalties of \$2.6 million in Year 1 (2017 RIA at 43). This amount represents about 0.2 percent of the total royalties received from oil and gas production on Federal lands in FY 2016. However, from 2017–2027, we estimate an increase in total royalties of \$1.26 million (NPV using a 7 percent discount rate) or \$380,000 (NPV using a 3 percent discount rate).

Consideration of Alternative Approaches

In developing this final delay rule, the BLM considered alternative timeframes

for which it could suspend or delay the requirements (*e.g.*, 6 months and 2 years). Ultimately, the BLM decided on a suspension or delay for 1 year, which it believes to be the minimum length of time practicable within which to review the 2016 final rule and complete a notice-and-comment rulemaking to revise that regulation.

Employment Impacts

This final delay rule temporarily suspends or delays certain requirements of the BLM's 2016 final rule on waste prevention and is a temporary 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 the employment will be positive.

In the 2016 RIA, 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 to the extent that the compliance costs would force the operator to shut in production, the 2016 final rule had provisions that would exempt these operations from compliance. Based on these factors, the BLM determined that the 2016 final rule would not alter the investment or employment decisions of firms or significantly adversely impact employment. The RIA also noted that the 2016 final rule would require the one-time installation or replacement of equipment and the ongoing implementation of an LDAR program, both of which would require labor to comply.

As discussed more thoroughly above, the assumptions upon which the determination of the 2016 rule was based upon are under review. Based on the 2016 RIA, this final delay rule will not substantially alter the investment or employment decisions of firms for two reasons. First, the 2016 RIA determined that that rule would not substantially alter the investment or employment decisions of firms, and so therefore delaying the 2016 final rule would likewise not be expected to impact those decisions. We also recognize that while there might be a small positive impact

² Social cost of methane.

³ Net present value.

on investment and employment due to the reduction in compliance burdens, the magnitude of the reductions are relatively small.

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 overwhelming majority of entities operating in the onshore crude oil and natural gas extraction industry and, therefore, this final delay rule will impact a significant 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.

The BLM identified up to 1,828 entities that operate on Federal and Indian leases and recognizes that the overwhelming majority of these entities are small business, as defined by the SBA. We estimated the potential reduction in compliance costs to be about \$60,000 per entity during the initial year when the requirements would be suspended or delayed. This represents the average maximum amount by which the operators would be positively impacted by this final delay rule.

We used existing BLM information and research concerning firms that have recently completed Federal and Indian wells and the financial and employment information on a sample of these firms, as available in company annual report filings with the Securities and Exchange Commission (SEC). From the original list of companies, we identified 55 company filings. Of those companies, 33 were small businesses.

From data in the companies' 10-K filings to the SEC, the BLM was able to calculate the companies' profit margins for the years 2012, 2013, and 2014. We then calculated a profit margin figure for each company when subject to the average annual reduction in compliance costs associated with this final delay rule. For these 26 small companies, the estimated per-entity reduction in compliance costs will result in an average increase in profit margin of 0.17 percentage points (based on the 2014 company data) (2017 RIA at 46).

Impacts Associated With Oil and Gas Operations on Tribal Lands

This final delay rule applies to oil and gas operations on both Federal and

Indian leases. In the 2017 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. The BLM expects the impacts on Tribal Lands to be between 11 percent and 15 percent of those levels described in sections 4.1 to 4.4.4 of the 2017 RIA. Please reference the 2017 RIA at sections 4.1 to 4.4.5 for a full explanation of the estimated impacts.

C. Comments and Responses

The BLM has engaged in stakeholder outreach in the course of developing this 2017 final delay rule to the degree it believes is appropriate given that the final delay rule extends the compliance dates of the 2016 final rule, but does not change the policies of that rule. The BLM published a proposed rule on October 5, 2017 (82 FR 46458), and accepted public comments through November 6, 2017.

The BLM sent correspondence to tribal governments to solicit their views to inform the development of this 2017 final delay rule on October 16 and 17, 2017, and requested feedback and comment through the respective BLM State Office Directors. In addition, BLM State and Field Offices informed the tribes of the BLM delay rule notification letters via phone, and offered to conduct tribal consultation if the tribes chose to do so. More detailed information is found below in the subsection titled "Consultation and Coordination with Indian Tribal Governments (Executive Order 13175 and Departmental Policy)."

The BLM received over 158,000 comments on the proposed rule, including approximately 750 unique comments, which are available for viewing on the *Federal eRulemaking Portal* (<http://www.regulations.gov>) In the Searchbox, enter "RIN 1004-AE54" and click the "Search" button. Follow the instructions at this Web site. The BLM has reviewed all public comments, and has made changes, as appropriate, to the final delay rule and supporting documents based on those comments and internal review. Those changes are described in detail below in this final delay rule. In addition, the "comments and responses" discussion in this final delay rule provides a summary of issues raised most frequently in public comments and the BLM's response. A more comprehensive account of public comments and detailed responses to these comments are available to the public in a supporting document in the docket for this rulemaking at the *Federal*

eRulemaking Portal referenced above. The final delay rule reflects the very extensive input that the BLM gathered from the public comment process.

The comments revolved around several main issues, which are categorized as the following: (1) Industry impacts; (2) Royalty Provisions; (3) Legal authority; (4) Lost gas volumes; (5) Rule net benefits; (6) National impacts, including energy security; (7) Climate change; (8) Air quality and public health; (9) Rule process; and (10) Technical issues, including parts of the rule that were not delayed.

Industry Impacts

The BLM received numerous comments on the BLM's analysis of costs and benefits. Many comments addressed the cost to the operators of complying with the 2017 final delay rule. Some commenters stated that the long-term prevention of energy waste outweighs the additional burden that smaller companies may face from the cost of complying with the 2016 final rule, and others asserted that there is continued stability in the oil and gas industry and jobs despite promulgation of the 2016 final rule so that a delay was unnecessary. Another commenter saw compliance as a cost of doing business and another as a cost to access public lands, while another said they would take a reduction in royalties to pay for reductions in methane emissions. One commenter noted the broad negative impacts of the rule on public welfare through "wasted gas, diminished royalties, and harmful impacts for public health and the environment." One commenter asserted a disparity between the alleged broad negative impacts of the proposed 2017 delay rule on public welfare through "wasted gas, diminished royalties, and harmful impacts for public health and the environment" with the BLM's own conclusion that the 2017 delay rule would not "substantially alter the investment or employment decisions of firms."

The BLM did not revise the proposed rule in response to these comments. Most of the comments on these cost/benefit issues asserted a policy preference for immediately implementing the rule but did not assert that the BLM had relied on improper data analysis. Operators have raised concerns regarding the cost, complexity, and other implications of the 2016 rule. Moreover, the 2016 final rule analysis is under review and the BLM is concerned that certain assumptions that justified the rule's costs may be unsupported. The BLM does not believe that operators

should be required to make expensive equipment upgrades to comply with the 2016 rule until it has had an opportunity to review the requirements and, if appropriate, revise them through notice-and-comment rulemaking.

Many commenters supported issuing the delay rule and stated that a final delay rule would avoid imposing immediate compliance costs for requirements that might be rescinded or significantly revised in the near future. The BLM agrees. This final rule will also allow the BLM to avoid expending agency resources on implementation of activities for potentially transitory requirements. The BLM acknowledges that some operators have upgraded their equipment in the interim, and delaying the 2016 rule does not preclude operators from upgrading their equipment voluntarily, but the BLM does not see the delay as penalizing operators who have adopted the 2016 final rule requirements early, as mentioned in one comment. The intent of the delay rule is to prevent the incurrence of compliance costs and potential unnecessary shutting in of wells while the aforementioned provisions are being reviewed due to the concerns raised in this rulemaking.

As mentioned above, the BLM shows in the 2017 RIA that the avoided costs of delaying the rule exceed the forgone benefits. Over the 11-year evaluation period (2017–2027), the BLM estimates total net benefits ranging from \$35–52 million (NPV and interim social cost of methane using a 7 percent discount rate) or \$19–29 million (NPV and interim domestic social cost of methane using a 3 percent discount rate) (2017 RIA at 1). Thus, the RIA for the 2017 final delay rule concludes that the benefits of the 2017 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). In accordance with E.O. 13783, the BLM is committed to furthering the national interest by promoting “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.” Thus, the policy set forth in E.O. 13783 is aimed at ensuring the “clean” and “prudent” (*i.e.*, not wasteful) development of energy resources. As the BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule’s costs and benefits.

Royalty Provisions

Several commenters stated that the 2016 final rule’s gas capture provisions

would be commercially valuable and economically beneficial to the government through additional royalties. The commenters argued that delaying the 2016 final rule would result in wasted gas and a reduction in the royalties flowing to the States, tribes, and Federal Government.

The BLM did not change its proposal in response to these comments. The BLM’s analysis of the delay rule, which is based on potentially tenuous assumptions made in the 2016 final analysis, shows that it might forgo royalties in the short-term, but that there would be a negligible change from the baseline over the entire period of analysis. See Section 4.4 of the 2017 final delay rule RIA. As the BLM reconsiders the final 2016 rule in accordance with E.O. 13783, it will continue to assess impacts on royalty revenues.

Some commenters were concerned that the 2016 rule would impact oil and gas development on tribal reservations and royalties to tribes. Some tribes are located in known shale play areas and contain large amounts of undeveloped or underdeveloped areas. In particular, the commenters suggested that the 2016 final rule could delay drilling on or drive industry away from tribal lands, reducing income flowing to Indian mineral owners and tribal economies. The BLM agrees that this is an important issue and is assessing it in developing a proposal to revise or rescind the 2016 final rule. The BLM evaluated the royalty impacts of the delay rule on Indian lands and determined that these impacts were minimal (2017 RIA at 40). Following its initial review, the BLM is reviewing the 2016 final rule to develop an appropriate proposed revision of the 2016 final rule that is intended to align the 2016 final rule with section 1 of E.O. 13783. The BLM invites the commenters to provide comment on its proposal to revise the 2016 final rule, when that proposal is available.

The BLM received comments on other royalty-related issues. One commenter believes royalties should not be treated as transfer payments in the 2017 RIA. The BLM disagrees with the commenter. Based on widely-accepted economic principles and OMB Circular A–4, royalties are, by definition, transfer payments.

Legal Authority

Multiple commenters stated that the BLM lacks either implicit or explicit legal authority to suspend certain requirements of the 2016 final rule for the purpose of reconsidering them. They stated that the 2017 final delay rule is

arbitrary and capricious under the Administrative Procedure Act (APA) section 706(2)(A), and the reasoning behind the rule is outside the scope of the Federal Land Policy and Management Act. Commenters stated that promulgation of the 2017 delay rule would put the BLM in violation of both the MLA and FLPMA. Commenters also asserted that, since the 2017 delay rule was proposed shortly after the U.S. District Court for the District of Wyoming denied industry petitioners a preliminary injunction to stay the 2016 final rule until the case was decided on the merits, the BLM is using rulemaking to mirror a judicial function.

The BLM has not modified the rule in light of these comments. The BLM has ample legal authority to modify or otherwise revise the existing regulation in response to substantive concerns regarding cost and feasibility under the authority granted by the MLA, the MLAAL, FOGRMA, FLPMA, the IMLA, the IMDA, and the Act of March 3, 1909. 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. (See, *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).

Moreover, neither the MLA nor FLPMA provide statutory “mandates” that the BLM maintain the regulatory provisions that are being suspended for a year in this final rule. Furthermore, the BLM is not acting arbitrarily and capriciously in promulgating today’s final rule; the preamble, RIA, responses to comments, and other associated documents collectively and adequately explain the rationales and factual bases for each provision in the rule, the relevant factors that the BLM considered, and the reasons why the BLM did not consider certain other factors.

Commenters addressed the importance of government-to-government consultation and stated that, in contrast to the 2016 rule, the BLM only provided a few opportunities for tribes and individual mineral owners to consult about the 2017 delay rule.

The BLM engaged in stakeholder outreach in the course of developing this 2017 final delay rule, and believes its degree of outreach was appropriate given that the final delay rule extends the compliance dates of the 2016 final rule, but does not change the policies of that rule. The BLM sent correspondence to all tribal governments with major oil and gas interests, as well as individual Indian mineral owners that have

expressed to the BLM in the past that they want to be notified of such actions. Such correspondence solicited their views to inform the development of this 2017 final delay rule and requested feedback and comment through the respective BLM State Office Directors. Several tribal governments have provided feedback on today's action.

Commenters were also concerned about delaying the 2016 final rule, which they viewed as helping the Secretary meet his statutory trust responsibilities with respect to development of Indian oil and gas interests, because it ensured extraction that increased royalties rather than waste of resources.

The BLM believes that the 2017 final rule helps the Secretary fulfill his trust responsibility with respect to the development of Indian oil and gas interests. As detailed in the RIA accompanying today's action, although there is expected a short-term reduction in annual royalties to tribes (and other lessors) from the 1-year delay, overall the economic impact of this final delay rule is positive. The delay also provides the BLM an opportunity to reconsider and ensure appropriate compliance requirements are imposed on tribal lands, which may help to avoid having operators forego development of tribal lands due to burdensome and unnecessary compliance requirements.

Commenters stated that the 2017 delay rule would leave the oil and gas operations on Federal and Indian leases unregulated with respect to the activities governed by the provisions being suspended or delayed.

The BLM believes this is not the case. The development and production of oil and gas are regulated under a framework of Federal and State laws and regulations. Several Federal agencies implement Federal laws and requirements, while each State in which oil and gas is produced has one or more regulatory agencies that administer State laws and regulations. As discussed more thoroughly above, the requirements of the 2016 final rule that are not being suspended or delayed, various State laws and regulations, and EPA regulations will operate together to limit venting and flaring during the period of the 1-year suspension. See the 2017 final delay rule RIA for a summary of selected Federal and State regulations and policies that have the effect of limiting the waste of gas from production operations in the States where the production of oil and gas from Federal and Indian leases is most prevalent (2017 RIA at 17).

Lost Gas Volumes

Many commenters stated that the 2017 final delay rule will result in waste of natural gas through venting, flaring, and leaking of natural gas from oil and gas operators. The commenters stated that the valuable energy resources being wasted could otherwise be productively used, which would subsequently increase revenues for taxpayers in the form of royalty and tax collection. Some commenters also expressed concern that the rule impedes U.S. progress towards energy independence. The BLM acknowledges that delaying implementation of compliance requirements for certain provisions of the 2016 final rule could result in incremental flaring of gas during the 1-year interim period when compared to the baseline. However, over 11 years of implementation (2017–2027), the BLM expects an overall small increase in production (and subsequent royalties) when commodity prices are projected to be higher. In addition, the BLM found positive net benefits of the 2017 delay rule due to the reduction in compliance costs exceeding the foregone benefits of the 2016 rule. The BLM also notes that the assumptions of the final analysis of the 2016 rule are under review and may be revised.

Some commenters expressed concern about the uncertainty underlying the estimates of lost gas volumes in the final RIA. The BLM acknowledges that there is uncertainty regarding the quantity and value of gas that is vented or flared on Federal or tribal lands. The BLM reviewed data from the Office of Natural Resources Revenue (ONRR) and 2016 greenhouse gas (GHG) Inventory to develop estimates of the average volume of gas vented and flared. See the 2016 RIA for a complete discussion of the methodology and data used to estimate lost gas volumes (2016 RIA at 15).

Rule Net Benefits

Multiple commenters took issue with the approach the BLM used to calculate the forgone benefits of methane emissions reductions in terms of the social cost of methane in the 2017 delay rule analysis. In particular, commenters suggested that the RIA for the delay rule: (a) Should rely on estimates of the global value of the social cost of methane and not the “domestic-only” value and; (b) That a 7 percent discount rate is not justifiable for use in discounting these benefits and a 3 percent discount rate would be appropriate and consistent with OMB Circular A–4. Multiple commenters also suggested that the BLM continue to use the analysis conducted by the IWG in

regard to these issues. Since publication of the 2016 RIA, several documents upon which the 2016 final rule RIA relied upon have been rescinded. In particular, Section 5 of E.O. 13783, issued by the President on March 28, 2017, disbanded the earlier IWG and withdrew the Technical Support Documents upon which the 2016 RIA relied for the valuation of changes in methane emissions. It further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in OMB Circular A–4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). The social cost of methane (SC–CH₄) estimates used for the 2017 final delay rule analysis are interim values for use in regulatory analyses while estimates of the impacts of climate change to the U.S. are being developed.

Multiple commenters cited specific issues regarding the use of 7 percent discount rate, stating that by applying a 7 percent discount rate, the BLM is ignoring the welfare of future generations of Americans. Commenters further suggested that the use of the 3 percent discount rate is consistent with OMB Circular A–4. The BLM disagrees. The analysis presented in the RIA for the 2017 final delay rule uses both a 3 percent and a 7 percent discount rate in the above analysis. The 7 percent rate is intended to represent the average before-tax rate of 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. The use of both discount rates is consistent with the guidance contained in OMB Circular A–4.

One commenter opposed the use of the social cost of methane to analyze this rulemaking given the uncertainty and the lack of accuracy surrounding these estimates, noting that its use goes against the need to produce an analysis that is “based on the best available science and economics.” The commenter requested that the BLM omit benefits related to the social cost of methane. Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available. The SC–CH₄ estimates presented here 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.

Several commenters stated the BLM neglected to analyze the loss of public health and safety benefits generated by the implementation of the 2016 final rule, citing OMB Circular A-4 guidance as evidence. Commenters also stated that the BLM neglected to analyze the impacts of the proposed suspension on worker safety, which was one of the purposes of the 2016 final rule. Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available. Commenters incorrectly stated that the BLM failed to analyze non-monetized impacts. The EA, which accompanies today's action, analyzes the No-Action and Proposed Action effects on climate change, air quality, noise and light impacts, wildlife resources (threatened and endangered species and critical habitat), and socioeconomics. The EA, where appropriate, incorporates by reference the 2016 final rule EA analysis. Circular A-4 recommends approaches the agencies may take in its NEPA documents, but it does not require them.

One commenter stated that the BLM's description of impacts for the 11-year period (2017–2027) of analysis in the RIA for the 2017 final delay rule is misleading, as the reduction in the estimated compliance costs is solely due to the delay in compliance. Another commenter stated that some operators have begun compliance before the 2017 proposed delay rule will be finalized, and therefore the net cost savings of deferral will be lower than those outlined in the 2017 proposed delay rule RIA. The BLM adjusted the language in the RIA to reflect the first comment. The BLM disagrees with the second comment. For this 2017 final delay rule, the BLM tracks the shift in impacts over the first 10 years of implementation (after the delay) and compares it against the baseline. The original period of analysis in the RIA prepared for the 2016 final rule was 10 years. We note that certain impacts, such as cost savings and royalty, are different when shifted to the future. The BLM also notes that the estimated impacts attributed to a suspension or delay may be imprecise for several reasons (See RIA section 3.4). Also, while compliance with the requirements suspended or delayed by this 2017 final

delay rule will not be required until January 17, 2019, BLM anticipates that operators will start undertaking compliance activities in advance of the compliance date. Although the BLM is currently considering revisions to the 2016 final rule, it cannot definitively determine what form those revisions will take until it completes the notice-and-comment rulemaking process. Therefore, for the purposes of this analysis, the BLM assumes that the 2016 final rule will be fully implemented starting in January 2019 after the suspension period ends.

Some commenters called the decision to limit the analysis timespan to 10 years arbitrary and too short and expressed concerns that other aspects of the net benefit analysis, such as the definition of the baseline and the benefits of the delay rule, result in undercounting of forgone benefits. The comment specifically stated that the BLM counted beneficial effects in year 2027 as benefits of its proposed delay even though these benefits would have occurred under the 2016 rule as methane reductions would continue. The BLM disagrees. The 10-year timeframe was not arbitrarily chosen. The BLM originally used a 10-year period of analysis in the 2016 final rule to reflect the limited life of the equipment that the rule was requiring and that the additional installations would be covered by the overlapping EPA regulations (see 40 CFR part 60, subparts OOOO or OOOOa). When comparing the 2017 final delay rule impacts to the 2016 rule, it is necessary to look at the equivalent 10 year estimated lifespan of the equipment in addition to the 1-year delay. If, instead, the impacts of the delay rule were constrained to the 10-year span used in the 2016 rule, the rule would be undervalued. If companies are still incurring costs for the delay rule in year 2027, then it is appropriate to count the social benefits that result from those costs. The omission of baseline impacts in the final year of the delay rule analysis is a result of the EPA rule taking effect (see 40 CFR part 60, subparts OOOO or OOOOa). Ascribing emission reduction benefits from the EPA rule to the BLM's 2016 final rule would be inappropriate.

Multiple commenters stated in a joint comment letter that the BLM did not consider information indicating that the costs of the 2016 final rule are actually lower than estimated in the 2016 RIA or that the benefits are actually higher than estimated in the 2016 RIA. The BLM recognizes that, despite the status of the 2016 final rule, operators are taking and will continue to take voluntary action to

reduce the waste of natural gas, especially when taking action is in their best financial interest. Relying solely on a voluntary approach may not achieve the same results in a primarily oil-producing area, for oil wells, for marginal oil wells, or for marginal gas wells. The BLM also recognizes that the experiences of “major” operators may not be the same as small operators.

Multiple commenters disagreed with an alternative net-benefit analysis presented in the 2017 proposed-delay-rule RIA that omits monetized estimates of forgone climate benefits. In response to this and other related comments, the BLM removed the referenced alternative in the Appendix to the RIA that omitted monetized benefits.

National Impacts, Including Energy Security

Commenters stated that while the BLM acknowledges that the delay rule is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners, it fails to address the impacts of reduced royalty revenues to State, local and tribal governments. Another commenter noted that suspension of the 2016 final rule could indirectly impact other industries like those in the outdoor recreation and tourism sectors. Pursuant to Executive Order 12866 and NEPA, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has presented all of the foreseeable impacts that this 2017 final delay rule would have, based on the final analysis of the 2016 rule and to the extent that data and available methodologies permit and consistent with the best science currently available. See Section 4.4.2 of the 2017 RIA for a discussion on royalty impacts. The BLM's EA (at section 4.2.3) discusses the impacts that the 2017 final delay rule would have on recreation.

One commenter stated that the 2016 final rule promotes domestic natural gas production, which in turn supports energy security, national security, and economic productivity. Additionally, commenters stated that the 2016 final rule allows for the creation of cutting-edge technologies and field jobs that would reduce waste and increase income. The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for 1 year. These comments are therefore outside the scope of this rule.

Climate Change

Several commenters cited concerns over climate change in their opposition to the BLM's proposal to delay implementation of the 2016 final rule. The commenters stated that methane is a potent GHG that contributes to global warming and that oil and gas operators should not allow methane to escape into the atmosphere. The commenters stated that climate change has been linked to negative consequences, like more severe droughts and wildfires. The commenters argued that this rule is an example of the U.S. Government taking actions that cause climate change, and that methane pollution has increased from onshore Federal leases in recent years. The commenters argued that the need to reduce methane emissions is an urgent matter and cannot be delayed.

The BLM did not change its proposal in response to these comments. The BLM estimates that the 2017 final rule will result in additional methane emissions of 175,000 tons in Year 1, but no change from the baseline for the 11-year period following the delay. We also estimate additional VOC emissions of 250,000 tons in Year 1, but no change from the baseline for the 11-year period following the delay. See section 4.2 of the 2017 RIA for a full description of the estimated reduction in benefits. As the BLM develops a proposed revision of the 2016 final rule, it will continue to evaluate and address potential environmental impacts. The BLM notes that the 2017 final delay rule will only temporarily delay the 2016 final rule's requirements. In response to concerns that methane emissions may be higher than those disclosed, the BLM notes that, while there is uncertainty in estimating the volumes of gas vented or flared, it has estimated the impacts of this 2017 final delay rule in a manner that is consistent with statute and executive orders and based on the best available information.

Air Quality and Public Health

Many commenters stated that the 2016 final rule will reduce air pollution from oil and gas production, and that subsequently delaying the implementation of the 2016 final rule poses a public health challenge, particularly to the most vulnerable populations and communities, and impacts the environment. Commenters described that the implementation of the 2016 final rule not only results in the capture of methane, but also the capture of VOC emissions, such as benzene, a known carcinogen. The commenters stated that VOC releases degrade our ambient air quality, with

long-term health impacts related to the exposure of low levels of VOC emissions. The BLM acknowledges that there will be a short-term increase in the amount of methane and VOCs emitted during the 1-year delay, relative to the baseline, but there will be essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and 2017 RIA Section 4.2). While the BLM did not monetize the forgone benefits from VOC emissions reductions, it notes that the impact is transitory. The BLM will analyze the costs and benefits, which may result from any changes it proposes, in an upcoming rulemaking, to the 2016 final rule in accordance with Executive Order 13783.

One commenter stated that methane release can trigger life-threatening asthma attacks, worsen respiratory conditions, and cause cancer, which disproportionately affects Hispanic communities. The comment cited the EPA as reporting that Hispanics are among those facing the greatest risk of exposure to air pollutants and are three times more likely to die from asthma than any other racial or ethnic group. The BLM notes that the 2017 final delay rule delays or suspends implementation of the compliance requirements for certain provisions of the 2016 final rule by 1 year and is not expected to materially affect methane emissions as compared to the baseline data analyzed in the 2017 final delay rule RIA. The BLM concluded that the 2016 final rule did not lead to any significant or adverse differential environmental justice impacts (see 2016 final EA section 4.2.7). As the BLM reconsiders the 2016 final rule, in accordance with Executive Order 13783, it will continue to analyze the rule's costs and benefits, including any potential environmental justice impacts.

Rule Process

Several commenters raised concerns about lack of sufficient public engagement throughout this rulemaking process. They asked the BLM to extend the 2017 delay rule comment period to 60 days and to hold one or more public hearings, stating that the 30-day comment period was inadequate given the fundamental, highly technical, and extremely controversial changes to the benefits estimates included in the 2017 proposed delay rule.

The BLM did not change its proposal in response to these comments. The BLM believes it provided adequate public engagement throughout the process through outreach to stakeholders and a 30-day comment period. Given the narrow scope of the

proposal, short delay, and recent comments on the 2016 final rule, the BLM determined a 30-day comment period to be appropriate and public meetings to be unnecessary. The 2017 final delay rule merely suspends and delays regulatory provisions that were very recently the object of public comment procedures. The public was engaged throughout this rulemaking process. The BLM received over 158,000 comments, including approximately 750 unique comments. The BLM is not required to hold public meetings for this rulemaking process.

Commenters stated that, given the lengthy 2016 final rule rulemaking process, a 2-year delay is needed to avoid unnecessary compliance costs and creating regulatory uncertainty for industry. The BLM did not change this rule in response to these comments. To reduce uncertainty, the BLM limited this 2017 final delay rule to the minimum necessary to achieve revision to the 2016 final rule, which it determined to be 1 year. The BLM has already made significant progress in developing a proposed revision of the 2016 rule and the BLM therefore fully expects that the revision will be completed and finalized before January 17, 2019.

Commenters stated that the BLM and the Secretary predetermined the outcome of this rulemaking with statements made and documents filed in Federal court. The BLM disagrees. The BLM is conducting the rulemaking process for the delay rule in accordance with the APA, and the BLM will be revising, as appropriate, the 2016 rule in accordance with the APA. Public statements about the BLM's plan to reconsider the 2016 rule and its intentions behind the proposed delay rule do not amount to final decisions made prior to conducting NEPA.

Commenters stated that the 2017 delay rule is a significant action that warrants an environmental impact statement (EIS), instead of an EA. Commenters state that the EA erroneously includes the 2016 rule implementation in the baseline, failed to analyze the impacts of the proposed action in a meaningful way, and did not include a reasonable range of alternatives. The commenters also believe that the BLM should have published a draft Finding of No Significant Impact (FONSI) for public comment, and that the FONSI does not consider both the context and intensity of the 2017 delay rule, resulting in the failure to take a hard look at localized impacts.

The BLM did not change its proposal in response to these comments. Based

upon a review of the EA and the associated documents referenced in the EA, and considering the criteria for significance provided by the Council on Environmental Quality regulations implementing the NEPA and the comments submitted on the EA, the BLM determined and detailed in the FONSI that the Proposed Action (Alternative B in the EA) will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the potentially affected areas. Therefore, an EIS is not required. For the detailed analysis of the criteria for significance, see the FONSI accompanying today's action. NEPA and its implementing regulations do not require a public review period for the FONSI.

The fact that the BLM chose to include the expected effects of the 2016 final rule in the "baseline" environment does not mean that the BLM's analysis of the environmental impacts of the proposed action was inadequate. In fact, the incorporation of the 2016 final rule into the baseline environment has exactly the opposite effect. Were the BLM not to include the not-yet effective requirements of the 2016 final rule in the baseline, then the BLM's analysis of the proposed suspension action relative to the baseline would necessarily find fewer (and possibly no) impacts, as the suspension action would essentially maintain the environmental status quo.

The EA analyzed Alternative A (No Action) and Alternative B (BLM Proposed Action), which are the reasonable alternatives that would meet the purpose and need of today's action. See Section 2 of the EA for a description of each alternative. Section 2.4 of the EA describes the alternatives considered, but eliminated from further analysis. The 2017 RIA analyzed the impacts for a 6-month and 2-year delay, but they were both found to be not technically or financially feasible, therefore they were not carried forward for analysis.

Commenters stated that the 2017 delay rule is a dramatic substantive change from the 2016 final rule, and that the BLM did not follow proper procedures to make the substantive revision to the 2016 final rule prescribed in *FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 514–16 (2009). The BLM disagrees with the commenters' characterization of the legal standard for amending regulations. As stated above, the BLM has a reasoned explanation for reconsidering the 2016 final rule and delaying implementation of certain provisions of the 2016 rule.

Commenters stated the BLM failed to meet its review/consultation requirements under the Endangered

Species Act (ESA) and the National Historic Preservation Act (NHPA). The BLM disagrees. The BLM has met its review and consultation requirements for both the ESA and NHPA. As stated in section 4.1 of the EA, the BLM informally consulted with the FWS and the FWS concurred with the BLM's determination that the 2017 delay rule may affect, but is not likely to adversely affect, listed species or their associated designated critical habitat. This rulemaking is not a "Federal undertaking" for which the NHPA requires an analysis of effects on historic property. See 54 U.S.C. 306108 and 300320.

Technical Issues

Commenters supported the inclusion of the following provisions of the 2016 final rule in the 2017 delay rule: Section 3162.3, because the requirement is duplicative, conflicting, and/or unnecessary given existing state requirements; Section 3179.6, but the commenter provided no explanation; Section 3179.7, because it is unnecessarily complex and the gas capture percentage requirements could be obviated through other BLM efforts to facilitate pipeline development; Section 3179.9 because the requirement on operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas will impose significant costs; Section 3179.101, because the BLM has failed to consider the technical feasibility of the requirements; Section 3179.102, because it is technically infeasible and duplicative of EPA regulations; Section 3179.204, but the commenter provided no explanation; and Sections 3179.301–305 because the BLM overestimated the benefits and underestimated costs.

Other commenters asserted that the following provisions should not be included in the delay rule: Section 3179.102, because the provision would not require any action from most operators and therefore imposes no burden; section 3179.7, because the 2016 RIA found that the direct quantified benefits to operators that would result from capturing gas that would otherwise have been wasted outweighed the costs of the capture targets in the first 2 years that those targets apply; section 3179.10, because the delay rule provides no information on the effect of such an extension, and specifically, how much royalty revenue would be lost; sections 3179.101 and 3179.102, because the 2017 RIA does not estimate any capital costs to operators associated with these provisions; section 3179.201, because the BLM repeats the 2016 RIA findings

that the cost savings to operators from compliance with the pneumatic controller requirements would substantially exceed the costs of compliance so its motives are unclear; section 3179.204, because the BLM's proposal repeats the 2016 RIA findings that the burden on the operators would be small or nonexistent; and section 3179.202 because the BLM's justification for suspension is inaccurate when describing analogous EPA regulations.

The BLM did not revise its proposal in response to these comments. This final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that the BLM estimated would pose a compliance burden to operators and are being reconsidered due to the cost, complexity, and other implications. The BLM has tailored the final delay rule to target the requirements of the 2016 rule for which immediate regulatory relief is particularly justified. The 2017 final delay rule does not suspend or delay the requirements in subpart 3178 related to the royalty-free use of natural gas, but the only estimated compliance costs associated with those requirements are for minor and rarely occurring administrative burdens. In addition, for the most part, the 2017 final delay rule suspends or delays the administrative burdens associated with subpart 3179. Only four of the 24 information collection activities remain, and the burdens associated with these remaining items are not substantial. See the section-by-section analysis for the BLM's specific justification for delay with regard to each provision.

One commenter stated that the 2017 RIA incorrectly assumes that suspension of the 2016 final rule will result in a return to NTL-4A. The BLM disagrees. The 2017 final rule RIA does not state nor imply an assumption that the suspension of the 2016 final rule will result in a return to NTL-4A. Several States have published regulations and policies that have the effect of limiting the waste of gas from production operations in the States where the production of oil and gas from Federal and Indian leases is most prevalent. See the 2017 RIA at 17 for a summary of these State regulations.

One commenter disagrees with the BLM's description of the requirements at 43 CFR 3179.9 as "imposing a blanket requirement on all operators." The commenter notes that the 2016 final rule differentiates between flares of different volumes by establishing the threshold. The commenter's criticism of terminology does not alter the BLM's underlying point that the requirement

applies to all operators, each of whom has the duty to estimate volumes and measure the volumes if the threshold is met. Thus, the BLM disagrees with the commenter's assertion that the measurement requirements of 43 CFR 3179.9 cannot be characterized as a "blanket" requirement. The BLM believes that a 1-year suspension of 43 CFR 3179.9 is justified as the requirements impose immediate costs and the BLM is considering revising or rescinding the requirements of 43 CFR 3179.9. Also, the commenter refers to meters being inexpensive to install, but does not take into account all the other equipment that would be required under the 2016 final rule. See the 2016 RIA at 2 for an estimate of total costs for the 2016 final rule.

Commenters state that the reference to analogous EPA regulations as the reason for reconsidering requirements at 43 CFR 3179.201 and 43 CFR 3179.203 is inaccurate because the EPA and 2016 final rules regulate different operations. The BLM disagrees. Although 43 CFR 3179.201 and 3179.203 were designed to avoid imposing requirements that conflict with EPA's requirements, this does not mean that overlap with EPA regulations is not important to the BLM's reconsideration of the regulatory necessity of §§ 3179.201 and 3179.203. Because EPA's regulations apply to new, modified, and reconstructed pneumatic controllers and storage vessels, EPA's existing regulations will address the losses of gas from these sources as pneumatic controllers and storage vessels are installed, modified, or replaced over time and become subject to EPA's regulations. In addition, the BLM will reconsider, in an upcoming rulemaking, whether the volumes of gas that would be captured for sale under §§ 3179.201 and 3179.203 actually justify the compliance costs associated with those provisions.

III. Procedural Matters

Regulatory Planning and Review (Executive Orders 12866 and 13563)

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.

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.

This final delay rule temporarily suspends or delays portions of the BLM's 2016 final rule while the BLM reviews those requirements. We have developed this final delay rule in a manner consistent with the requirements in Executive Order 12866 and Executive Order 13563.

After reviewing the requirements of the final delay rule, the OMB has determined that the final delay rule is not an economically significant action according to the criteria of Executive Order 12866. The BLM reviewed the requirements of this final delay 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 delay rule. The RIA has been posted in the docket for the final rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox, enter "RIN 1004-AE54" and click the "Search" button. Follow the instructions at this Web site.

Regulatory Flexibility Act

This final delay rule will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*). The RFA generally requires that Federal agencies prepare a regulatory flexibility analysis for rules subject to the notice-and-comment rulemaking requirements under the APA (5 U.S.C. 500 *et seq.*), if the rule would have a significant economic impact, either 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 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 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, this final delay rule will likely affect a substantial number of small entities.

However, the BLM believes that this final delay rule will not have a significant economic impact on a substantial number of small entities. Although the rule will affect a substantial number of small entities, the BLM does not believe that these effects will be economically significant. This final delay rule temporarily suspends or delays certain requirements placed on operators by the 2016 final rule. Operators will not have to undertake the associated compliance activities, either operational or administrative, that are outlined in the 2016 final rule until January 17, 2019, except to the extent the activities are required by State or tribal law, or by other pre-existing BLM regulations. The screening analysis conducted by the BLM estimates that the average reduction in compliance costs associated with this final delay rule will be a small fraction of a percent of the profit margin for small companies, which is not a large enough impact to be considered significant.

Small Business Regulatory Enforcement Fairness Act

This final delay rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This final delay rule:

(a) Will not 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 significant adverse effects 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 delay 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 delay rule will not have a significant or unique effect on State, local, or tribal governments or the private sector. This final delay rule contains no requirements that apply to State, local, or tribal governments. It temporarily suspends or delays requirements that 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 this final delay rule. This final delay 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 delay rule will not effect a taking of private property or otherwise have taking implications under Executive Order 12630. A takings implication assessment is not required. This final delay rule temporarily suspends or delays many of the requirements placed on operators by the 2016 final rule. Operators will not have to undertake the associated compliance activities, either operational or administrative, that are outlined in the 2016 final rule until January 17, 2019. All such operations are subject to lease terms, which expressly require that subsequent lease activities must be conducted in compliance with subsequently adopted Federal laws and regulations. This final delay 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 this final delay 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 delay rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement. A federalism impact statement is not required.

This final delay 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 will 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 delay rule does not have sufficient federalism implications to

warrant preparation of a Federalism Assessment.

Civil Justice Reform (Executive Order 12988)

This final delay rule complies with the requirements of Executive Order 12988. More specifically, this final delay 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 delay 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 delay rule under the Department's consultation policy and under the criteria in Executive Order 13175 and have identified direct effects on federally recognized Indian tribes that will result from this final delay rule. Under this final delay rule, oil and gas operations on tribal and allotted lands will not be subject to many of the requirements placed on operators by the 2016 final rule until January 17, 2019.

The BLM has conducted an appropriate degree of tribal outreach in the course of developing this final delay rule given that the rule extends the compliance dates of the 2016 final rule, but does not change the policies of that rule. On October 16 and 17, 2017, the BLM sent out 264 rule notification letters with an enclosure to tribes and tribal organizations with oil and gas interests in Alaska (27), Arizona (38), California (5), Colorado (3), District of Columbia (1), Eastern States (2), Idaho (2), Montana/Dakotas (36), New Mexico/Oklahoma/Texas (139), Nevada (1), Utah (7), and Wyoming (3). The BLM then sent 16 follow-up letters to tribes that the letters were returned with the mark "Return to Sender" or, during consultation, BLM was informed that the tribes had not received letters.

The BLM State Directors, as delegated, personally contacted some of the tribes by phone with significant oil and gas interests, including six tribes in Colorado, two tribes in Wyoming, five tribes in the Montanas/Dakotas and two tribes in Arizona.

Through *regulations.gov*, the BLM heard from the Ojo Encino Chapter of

the Navajo Nation, the Mandan, Hidatsa, and Arakara Nation of the Fort Berthold Reservation, the Muscogee (Creek) Nation, the Navajo Nation, Counselor Chapter House, the Fort Berthold Protectors of Water and Earth, the Turtle Mountain Band of Chippewa Indians, Southwest Native Cultures, and the Thlopphlocco Tribal Town Tribal Historic Preservation Office.

The tribes raised several issues, including: Insufficient consultation; loss of royalties from not implementing the 2016 rule; the DOI Secretary, but not the BLM, has a right to regulate Indian land; and, the environmental effects to the Native populations. The tribal comments were summarized and responded to in the supplemental comments and response document and are also referenced above in the "Comments and Responses" section of this 2017 final delay rule.

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. See 44 U.S.C. 3502(3); 5 CFR 1320.3(c) and (k).

OMB has approved the 24 information collection activities in the 2016 final rule and has assigned control number 1004–0211 to those activities. In the Notice of Action approving the 24 information collection activities in the 2016 final rule, OMB announced that the control number will expire on January 31, 2018. The Notice of Action also included terms of clearance.

The BLM requests the extension of control number 1004–0021 until January 31, 2019. The BLM also requests revisions to the burden estimates as described below.

The information collection activities in this final delay rule are described below along with estimates of the annual burdens. Included in the burden estimates are the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each component of the proposed information collection.

2. Summary of Information Collection Activities

Title: Waste Prevention, Production Subject to Royalties, and Resource

Conservation (43 CFR parts 3160 and 3170). Form 3160–5, Sundry Notices and Reports on Wells. OMB Control Number: 1004–0211.

Forms: Form 3160–3, Application for Permit to Drill or Re-enter; and 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 the extension of control number 1004–0021 until January 31, 2019. The BLM requests no changes to the control number except this extension.

Estimated Number of Responses: 64,200.

Estimated Total Annual Burden Hours: 90,170.

Estimated Total Non-Hour Cost: None.

3. Information Collection Request

The BLM requests extension of OMB control number 1004–0211 until January 31, 2019. This extension would continue OMB's approval of the following information collection activities, with the revised burden estimates described below.

Plan To Minimize Waste of Natural Gas (43 CFR 3162.3–1)

The 2016 final rule added a new provision to 43 CFR 3162.3–1 that requires a plan to minimize waste of natural gas when submitting an Application for Permit to Drill or Re-enter (APD) for a development oil well. This information is in addition to the APD information that the BLM already collects under OMB Control Number 1004–0137. The required elements of the waste minimization plan are listed at paragraphs (j)(1) through (j)(7).

The BLM is revising the estimated burdens to operators. The BLM recently included the following annual burden estimates for APDs in a notice announcing its intention to seek renewal of control number 1004–0137, Onshore Oil and Gas Operations and Production (expires January 31, 2018): 3,000 responses, 8 hours per response, and 24,000 total hours. 82 FR 42832, R 42833 (Sept. 12, 2017). The BLM will increase the estimated annual number of responses for waste minimization plans from 2,000 to 3,000, to match the estimates for APDs in control number

1004–0137, and will increase the total burden hours for APDs from 16,000 to 24,000.

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 delay 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).

Request for Approval of Alternative Capture Requirement (43 CFR 3179.8)

Section 3179.8 applies only to leases issued before the effective date of the 2016 final rule and to operators choosing to comply with the capture requirement in § 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis. The regulation provides that operators who meet those parameters may seek BLM approval of a capture percentage other than that which is applicable under 43 CFR 3179.7. The operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

- The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated; and
- The oil and gas production levels of each of the operator's wells on the lease, unit, or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well. In addition, the request must include map(s) showing:
 - The entire lease, unit, or communitized area, and the surrounding lands to a distance and on a scale that shows the field in which the well is or will be located (if applicable),

and all pipelines that could transport the gas from the well;

- All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases, (both on Federal or Indian leases and on other properties) within the map area;
- Identification of all of the operator's wells within the lease from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and
- Identification of all of the operator's wells within the lease from which gas is captured;

The following information is also required:

- Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines; and
- Projected costs of and the combined stream of revenues from both gas and oil production, including: (1) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (2) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Notification of Choice To Comply on County- or State-Wide Basis (43 CFR 3179.7(c)(3)(ii))

Section 3179.7 requires operators flaring gas from development oil wells to capture a specified percentage of the operator's adjusted volume of gas produced over the relevant area. The "relevant area" is each of the operator's leases, units, or communitized areas, unless the operator chooses to comply on a county- or State-wide basis and the operator notifies the BLM of its choice by Sundry Notice (Form 3160-5) by January 1 of the relevant year.

Request for Exemption From Well Completion Requirements (43 CFR 3179.102(c) and (d))

Section 3179.102 lists several requirements pertaining to gas that reaches the surface during well

completion and related operations. An operator may seek an exemption from these requirements by submitting a Sundry Notice (Form 3160-5) that includes the following information:

- (1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
- (2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;
- (3) Data that show the costs of compliance; and
- (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

The rule also provides that an operator that is in compliance with the EPA regulations for well completions under 40 CFR part 60, subpart OOOO or subpart OOOOa is deemed in compliance with the requirements of this section. As a practical matter, all hydraulically fractured or refractured wells are now subject to the EPA requirements, so the BLM does not believe that the requirements of this section would have any independent effect, or that any operator would request an exemption from the requirements of this section, as long as the EPA requirements remain in effect. For this reason, the BLM is not estimating any PRA burdens for § 3179.102.

Request for Extension of Royalty-Free Flaring During Initial Production Testing (43 CFR 3179.103)

Section 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.

Request for Extension of Royalty-Free Flaring During Subsequent Well Testing (43 CFR 3179.104)

Section 3179.104 allows gas to be flared royalty-free for no more than 24 hours during well tests subsequent to the initial production test. The operator may seek authorization to flare royalty-free for a longer period by submitting a

Sundry Notice (Form 3160-5) to the BLM.

Reporting of Venting or Flaring (43 CFR 3179.105)

Section 3179.105 allows an operator to flare gas royalty-free during a temporary, short-term, infrequent, and unavoidable emergency. Venting gas is permissible if flaring is not feasible during an emergency. The regulation defines limited circumstances that constitute an emergency, and other circumstances that do not constitute an emergency. The operator must estimate and report to the BLM on a Sundry Notice (Form 3160-5) volumes flared or vented in circumstances that, as provided by 43 CFR 3179.105, do not constitute emergencies for the purposes of royalty assessment:

- (1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;

- (2) The operator's failure to install appropriate equipment of a sufficient capacity to accommodate the production conditions;

- (3) 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;

- (4) Scheduled maintenance;

- (5) A situation caused by operator negligence; or

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

Pneumatic Controllers—Introduction

Section 3179.201 pertains to any pneumatic controller that: (1) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source; and (2) Has a continuous bleed rate greater than 6 scf per hour. Section 3179.201(b) requires operators to replace each high-bleed pneumatic controller with a controller with a bleed rate lower than 6 scf per hour, with the following exceptions: (1) The pneumatic controller exhaust is routed to processing equipment; (2) The pneumatic controller exhaust was and continues to be routed to a flare device or low pressure combustor; (3) The pneumatic controller exhaust is routed to processing equipment; or (4) The operator notifies the BLM through a Sundry Notice and demonstrates, and the BLM agrees, that such would impose

such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

Notification of Functional Needs for a Pneumatic Controller (43 CFR 3179.201(b)(1)–(3))

An operator may invoke one of the first three exceptions described above by notifying the BLM through a Sundry Notice (Form 3160–5) that use of the pneumatic controller is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, and the Sundry Notice (Form 3160–5) describes those functional needs.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Controller) (43 CFR 3179.201(b)(4) and 3179.201(c))

An operator may invoke the fourth exception described above by demonstrating to the BLM through a Sundry Notice (Form 3160–5), and by obtaining the BLM's agreement, that replacement of a pneumatic controller would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice (Form 3160–5) must include the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including: The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Controller Within 3 Years (43 CFR 3179.201(d))

The operator may replace a high-bleed pneumatic controller if the operator notifies the BLM through a Sundry Notice (Form 3160–5) that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less.

Pneumatic Diaphragm Pumps—Introduction

With some exceptions, § 3179.202 pertains to any pneumatic diaphragm pump that: (1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source. This regulation generally requires replacement of such a pump with a zero-emissions pump or routing of the pump's exhaust gas to processing equipment for capture and sale.

This requirement does not apply to pneumatic diaphragm pumps that do not vent exhaust gas to the atmosphere. In addition, this requirement does not apply if the operator submits a Sundry Notice to the BLM documenting that the pump(s) operated on less than 90 individual days in the prior calendar year.

Showing That a Pneumatic Diaphragm Pump Was Operated on Fewer Than 90 Individual Days in the Prior Calendar Year (43 CFR 3179.202(b)(2))

A pneumatic diaphragm pump is not subject to section 3179.202 if the operator documents in a Sundry Notice (Form 3160–5) that the pump was operated fewer than 90 days in the prior calendar year.

Notification of Functional Needs for a Pneumatic Diaphragm Pump (43 CFR 3179.202(d))

In lieu of replacing a pneumatic diaphragm pump or routing the pump exhaust gas to processing equipment, an operator may submit a Sundry Notice (Form 3160–5) to the BLM showing that replacing the pump with a zero emissions pump is not viable because a pneumatic pump is necessary to perform the function required, and that routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pump) (43 CFR 3179.202(f) and (g))

An operator may seek an exemption from the replacement requirement by submitting a Sundry Notice (Form 3160–5) to the BLM that provides an economic analysis that demonstrates that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice (Form 3160–5) must include the following information:

(1) Well information that must include: (i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and (ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with paragraphs (c) through (e) of § 3179.202; and

(3) The operator's estimate of the costs and revenues of the combined stream of revenues from both the gas and oil components, including: (i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.*, heating value and H₂S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (ii) the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Diaphragm Pump Within 3 Years (43 CFR 3179.202(h))

The operator may replace a pneumatic diaphragm pump if the operator notifies the BLM through a Sundry Notice (Form 3160–5) that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less.

Storage Vessels (43 CFR 3179.203(c) and (d))

A storage vessel is subject to 43 CFR 3179.203(c) if the vessel: (1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian

lease; and (2) Is not subject to any of the requirements of EPA regulations at 40 CFR part 60, subpart OOOO, but would be subject to that subpart if it were a new or modified source.

The operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority that limit the VOC emissions to less than 6 tpy.

If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy, the operator must replace the storage vessel at issue in order to comply with the requirements of this section, and the operator must

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice (Form 3160–5) that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

To support the demonstration described above, the operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease; and

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components, including: The operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over

the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting (43 CFR 3179.204(c) and (e))

The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations. Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of a Sundry Notice (Form 3160–5). This requirement applies to each well the operator operates.

For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 and make them available to the BLM, upon request.

Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume (43 CFR 3179.204(f))

The operator must notify the BLM by Sundry Notice (Form 3160–5), within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

Leak Detection—Compliance With EPA Regulations (43 CFR 3179.301(j))

Sections 3179.301 through 3179.305 include information collection activities pertaining to the detection and repair of gas leaks during production operations. These regulations require operators to inspect all equipment covered under § 3179.301(a) for gas leaks.

Section 3179.301(j) allows an operator to satisfy the requirements of §§ 3179.301 through 3179.305 for some

or all of the equipment or facilities on a given lease by notifying the BLM in a Sundry Notice (Form 3160–5) that the operator is complying with EPA requirements established pursuant to 40 CFR part 60 with respect to such equipment or facilities.

Leak Detection—Request To Use an Alternative Monitoring Device and Protocol (43 CFR 3179.302(c))

Section 3179.302 specifies the instruments and methods that an operator may use to detect leaks. Section 3179.302(d) allows the BLM to approve an alternative monitoring device and associated inspection protocol if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a).

Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice (Form 3160–5) to the BLM that includes the following information: (1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function; (2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded; (3) Records and data from laboratory and field testing, including but not limited to performance testing; (4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the approach specified in the regulations; (5) Tracking and documentation procedures; and (6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

Leak Detection—Operator Request To Use an Alternative Leak Detection Program (43 CFR 3179.303(b))

Section 3179.303(b) allows an operator to submit a Sundry Notice (Form 3160–5) requesting authorization to detect gas leaks using an alternative instrument-based leak detection program, different from the specified requirement to inspect each site semi-annually using an approved monitoring device.

To obtain approval for an alternative leak detection program, the operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

(1) A detailed description of the alternative leak detection program,

including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);

(2) The proposed monitoring protocol; (3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;

(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);

(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and

(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program That Does Not Meet Specified Criteria (43 CFR 3179.303(d))

An operator may seek authorization for an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks compared to the required approach, if the operator demonstrates that compliance with the leak-detection regulations (including the option for an alternative program under 43 CFR 3179.303(b)) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM may approve an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks, but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

To obtain approval for an alternative program under this provision, the

operator must submit a Sundry Notice (Form 3160–5) that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301 through 305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.*, heating value and H₂S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;

(5) The information required to obtain approval of an alternative program under § 3179.303(b), except that the estimated volume of gas that will be lost through leaks under the alternative program must be compared to the volume of gas lost under the required program, but does not have to be shown to be at least equivalent.

Leak Detection—Notification of Delay in Repairing Leaks (43 CFR 3179.304(b))

Section 3179.304(a) requires an operator to repair any leak no later than 30 calendar days after discovery of the leak, unless there is good cause for delay in repair. If there is good cause for a delay beyond 30 calendar days, § 3179.304(b) requires the operator to submit a Sundry Notice (Form 3160–5) notifying the BLM of the cause.

Leak Detection—Inspection Recordkeeping and Reporting (43 CFR 3179.305)

Section 3179.305 requires operators to maintain the following records and make them available to the BLM upon

request: (1) For each inspection required under § 3179.303, documentation of the date of the inspection and the site where the inspection was conducted; (2) The monitoring method(s) used to determine the presence of leaks; (3) A list of leak components on which leaks were found; (4) The date each leak was repaired; and (5) The date and result of the follow-up inspection(s) required under § 3179.304. By March 31 of each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes: (1) The number of sites inspected; (2) The total number of leaks identified, categorized by the type of component; (3) The total number of leaks repaired; (4) The total number of leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak; and (5) A certification by a responsible officer that the information in the report is true and accurate.

Leak Detection—Annual Reporting of Inspections (43 CFR 3179.305(b))

By March 31 of each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

- (1) The number of sites inspected;
- (2) The total number of leaks identified, categorized by the type of component;
- (3) The total number of leaks repaired;
- (4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak; and
- (5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

4. Burden Estimates

The following table details the annual estimated hour burdens on operators for the information activities described above. The table thus estimates the hour burdens which will not be incurred in the 1-year period from January 17, 2018, to January 17, 2019.

Type of response	Number of responses	Hours per response	Total hours (column B × column C)
A.	B.	C.	D.
Plan to Minimize Waste of Natural Gas, 43 CFR 3162.3–1, Form 3160–3	3,000	8	24,000
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	4	200
Notification of Choice to Comply on County- or State-wide Basis, 43 CFR 3179.7(c)(3)(iii)	200	1	200
Request for Approval of Alternative Capture Requirement, 43 CFR 3179.8(b), Form 3160–5 ..	50	16	800

Type of response	Number of responses	Hours per response	Total hours (column B × column C)
A.	B.	C.	D.
Request for Exemption from Well Completion Requirements, 43 CFR 3179.102(c) and (d), Form 3160–5	0	0	0
Request for Extension of Royalty-Free Flaring During Initial Production Testing, 43 CFR 3179.103, Form 3160–5	500	2	1,000
Request for Extension of Royalty-Free Flaring During Subsequent Well Testing, 43 CFR 3179.104, Form 3160–5	5	2	10
Reporting of Venting or Flaring, 43 CFR 3179.105, Form 3160–5	250	2	500
Notification of Functional Needs for a Pneumatic Controller, 43 CFR 3179.201(b)(1)–(3), Form 3160–5	10	2	20
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3179.201(b)(4) and 3179.201(c) (Pneumatic Controller), Form 3160–5	50	4	200
Showing in Support of Replacement of Pneumatic Controller within 3 Years, 43 CFR 3179.201(d), Form 3160–5	100	1	100
Showing that a Pneumatic Diaphragm Pump was Operated on Fewer than 90 Individual Days in the Prior Calendar Year, 43 CFR 3179.202(b)(2), Form 3160–5	100	1	100
Notification of Functional Needs for a Pneumatic Diaphragm Pump, 43 CFR 3179.202(d), Form 3160–5	150	1	150
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pump), 43 CFR 3179.202(f) and (g), Form 3160–5	10	4	40
Showing in Support of Replacement of Pneumatic Diaphragm Pump within 3 Years, 43 CFR 3179.202(h), Form 3160–5	100	1	100
Storage Vessels, 43 CFR 3179.203(c), Form 3160–5	50	4	200
Downhole Well Maintenance and Liquids Unloading Documentation and Reporting, 43 CFR 3179.204(c) and (e), Form 3160–5	5,000	1	5,000
Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume, 43 CFR 3179.204(f), Form 3160–5	250	1	250
Leak Detection Compliance with EPA Regulations, 43 CFR 3179.301(j), Form 3160–5	50	4	200
Leak Detection Request to Use an Alternative Monitoring Device and Protocol, 43 CFR 3179.302(c), Form 3160–5	5	40	200
Leak Detection Operator Request to Use an Alternative Leak Detection Program, 43 CFR 3179.303(b), Form 3160–5	20	40	800
Leak Detection Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program that Does Not Meet Specified 43 CFR 3179.303(d), Form 3160–5	150	20	3,000
Leak Detection Notification of Delay in Repairing Leaks, 43 CFR 3179.304(a), Form 3160–5	100	1	100
Leak Detection Inspection Recordkeeping and Reporting, 43 CFR 3179.305	52,000	.25	13,000
Leak Detection Annual Reporting of Inspections, 43 CFR 3179.305(b), Form 3160–5	2,000	20	40,000
Totals	64,200	.....	90,170

National Environmental Policy Act

The BLM prepared an environmental assessment (EA) to determine whether this final delay rule will 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.*). The BLM has determined that this final delay rule does not constitute a major Federal action significantly affecting the quality of the human environment. A detailed statement under NEPA is not required because the BLM reached a FONSI.

The EA and FONSI have been placed in the file for the BLM's Administrative Record for the rule. The EA and FONSI have also been posted in the docket for the rule on the *Federal eRulemaking Portal*: <https://www.regulations.gov>. In the Searchbox, enter "RIN 1004-AE54" and click the "Search" button. Follow the instructions at this Web site.

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

This final delay 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 (OIRA) as a significant energy action."

This final delay rule temporarily suspends or delays certain requirements in the 2016 final rule and reduces compliance costs in the short-term. The BLM determined that the 2016 final rule will not impact the supply, distribution, or use of energy and so the suspension or delay of many of the 2016 final rule's requirements until January 17, 2019, will likewise not have an impact on the supply, distribution, or use of energy. As such, we do not consider this final delay rule to be a "significant energy action" as defined in Executive Order 13211.

Authors

The principal authors of this final delay rule are: James Tichenor and Erica Pionke of the BLM Washington Office; Adam Stern of the DOI's Office of Policy and Analysis; assisted by Faith Bremner, Jean Sonneman, and Charles Yudson 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 recordkeeping requirements; Royalty-free use; Venting.

Dated: December 4, 2017.

Katharine S. MacGregor,

Deputy Assistant Secretary—Land and Minerals Management, Exercising the Authority of the Assistant Secretary—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.

- 2. Amend § 3162.3–1 by revising paragraph (j) introductory text to read as follows:

§ 3162.3–1 Drilling applications and plans.

(j) Beginning January 17, 2019, when submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a

complete and adequate waste minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The waste minimization plan must include the following information:

* * * * *

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. Amend § 3179.7 by revising paragraphs (b) and (c) to read as follows:

§ 3179.7 Gas capture requirement.

* * * * *

(b) Beginning January 17, 2019, the operator's capture percentage must equal:

(1) For each month during the period from January 17, 2019, to December 31, 2020: 85 percent;

(2) For each month during the period from January 1, 2021, to December 31, 2023: 90 percent;

(3) For each month during the period from January 1, 2024, to December 31, 2026: 95 percent; and

(4) For each month beginning January 1, 2027: 98 percent.

(c) The term “capture percentage” in this section means the “total volume of gas captured” over the “relevant area” divided by the “adjusted total volume of gas produced” over the “relevant area.”

(1) The term “total volume of gas captured” in this section means: For each month, the volume of gas sold from all of the operator's development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term “adjusted total volume of gas produced” in this section means: The total volume of gas captured over the month *plus* the total volume of gas flared over the month from high pressure flares from all of the operator's development oil wells that are in production in the relevant area, *minus*:

(i) For each month from January 17, 2019, to December 31, 2019: 5,400 Mcf times the total number of development oil wells “in production” in the relevant area;

(ii) For each month from January 1, 2020, to December 31, 2020: 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month from January 1, 2021, to December 31, 2021: 1,800 Mcf times the total number of development

oil wells in production in the relevant area; and

(iv) For each month from January 1, 2022, to December 31, 2022: 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month from January 1, 2023, to December 31, 2024: 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month from January 1, 2025, to December 31, 2025: 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month after January 1, 2026: 750 Mcf times the total number of development.

* * * * *

- 5. Amend § 3179.9 by revising paragraph (b)(1) introductory text to read as follows:

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

* * * * *

(b) * * *

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning January 17, 2019, the operator must either:

* * * * *

- 6. Amend § 3179.10 by revising paragraph (a) to read as follows:

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of January 17, 2017, will continue in effect until January 17, 2019.

* * * * *

- 7. Amend § 3179.101 by adding paragraph (c) to read as follows:

§ 3179.101 Well drilling.

* * * * *

(c) The operator must comply with this section beginning January 17, 2019.

- 8. Amend § 3179.102 by adding paragraph (e) to read as follows:

§ 3179.102 Well completion and related operations.

* * * * *

(e) The operator must comply with this section beginning January 17, 2019.

- 9. Amend § 3179.201 by revising paragraph (d) to read as follows:

§ 3179.201 Equipment requirements for pneumatic controllers.

* * * * *

(d) The operator must replace the pneumatic controller(s) by January 17, 2019, as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from January 17, 2017, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from January 17, 2017.

* * * * *

- 10. Amend § 3179.202 by revising paragraph (h) to read as follows:

§ 3179.202 Requirements for pneumatic diaphragm pumps.

* * * * *

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device by January 17, 2019, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from January 17, 2017, the operator must notify the BLM through a Sundry Notice and replace the

pneumatic diaphragm pump no later than 3 years from January 17, 2017.

* * * * *

- 11. Amend § 3179.203 by revising paragraph (b) and paragraph (c) introductory text to read as follows:

§ 3179.203 Storage vessels.

* * * * *

(b) Beginning January 17, 2019, and within 30 days after any new source of production is added to the storage vessel after January 17, 2019, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, by January 17, 2019, or by January 17, 2020, if the operator must

and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

* * * * *

- 12. Amend § 3179.204 by adding paragraph (i) to read as follows:

§ 3179.204 Downhole well maintenance and liquids unloading.

* * * * *

(i) The operator must comply with this section beginning January 17, 2019.

- 13. Amend § 3179.301 by revising paragraph (f) to read as follows:

§ 3179.301 Operator responsibility.

* * * * *

(f) The operator must make the first inspection of each site:

- (1) By January 17, 2019, for all existing sites;
- (2) Within 60 days of beginning production for new sites that begin production after January 17, 2019; and
- (3) Within 60 days of the date when an existing site that was out of service is brought back into service and re-pressurized after January 17, 2019.

* * * * *

[FR Doc. 2017-26389 Filed 12-7-17; 8:45 a.m.]

BILLING CODE 4310-84-P

Attachment 16

BLM, Public Comments and Responses on the Waste Prevention-Delay Rule (Dec. 1, 2017)

Public Comments and Responses on the Waste Prevention-Delay Rule

December 1, 2017 –COMMENTS AND RESPONSES

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Industry Impacts

Comment 1: Commenters state that this 2017 final delay rule has been thoroughly studied and will have negligible financial impact on most producers.

Response: Since late January 2017, President Trump issued two Executive Orders (E.O.) that necessitated a review of the 2016 final rule by the Department. On January 30, 2017, the President issued E.O. 13771, entitled, “Reducing Regulation and Controlling Regulatory Costs,” which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. In addition, on March 28, 2017, the President issued E.O. 13783, entitled, “Promoting Energy Independence and Economic Growth.” Section 7(b) of E.O. 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for “consistency with the policy set forth in section 1 of [the] order and, if appropriate...publish for notice and comment proposed 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, on March 29, 2017, Secretary Zinke issued Secretarial Order (S.O.) 3349, entitled “American Energy Independence,” which, among other things, directs the BLM to review the 2016 final rule to determine whether it is fully consistent with the policy set forth in section 1 of E.O. 13783.

As directed by the E.O.’s and the S.O., the BLM conducted an initial review of the 2016 final rule and found that it appears to be inconsistent with the policy in section 1 of E.O. 13783 because some provisions of the 2016 final rule appear to add considerable regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. In addition, the BLM has concerns regarding the statutory authority, cost, complexity, feasibility, and other implications of the 2016 final rule. Following its initial review, BLM is reviewing the 2016 final rule to develop an appropriate proposed revision of the 2016 final rule that is intended to align the 2016 final rule with section 1 of E.O. 13783.

While the BLM is developing a proposed revision to the 2016 final rule, the 2017 final delay rule will temporarily suspend or delay certain requirements contained in the 2016 final rule by one year, until January 17, 2019. The 2017 final delay rule intends to avoid imposing likely considerable and immediate compliance costs on operators for

requirements that may be rescinded or significantly revised in the near future. The 2017 final delay rule also aims to avoid expending agency resources on implementation of activities for potentially transitory requirements. The BLM has tailored the 2017 final delay rule to target the requirements of the 2016 final rule for which immediate regulatory relief appears to be particularly justified. Specifically, the 2017 final delay rule will suspend the following requirements of the 2016 final rule for a period of one year: 43 C.F.R. §§ 3162.3-1(j), 3179.7, 3179.9(b), 3179.10(a), 3179.101, 3179.102, 3179.201, 3179.202, 3179.203, 3179.204, and 3179.301. As detailed in the Regulatory Impact Analysis (RIA) that accompanies this 2017 final delay rule, together, these provisions are responsible for the vast majority of the compliance costs associated with the 2016 final rule. Suspending or delaying the targeted requirements of the 2016 final rule for one year (until January 17, 2019) is expected to substantially reduce compliance costs during the period of the suspension or delay. More specifically, and as described in detail in section 4.1 of the RIA, the BLM has estimated a reduction in compliance costs of \$114 million (using a 7% discount rate to annualize capital costs) or \$110 million (using a 3% discount rate to annualize capital costs) during the one-year delay.

Comment 2: Several commenters state that, contrary to industry claims about regulatory burden, the 2016 final rule takes reasonable steps to limit resource waste. Commenters state that the BLM 2016 final rule is a common sense approach to reduce wasteful emissions, relying on proven, readily-available and cost-effective technologies and processes to rein in methane waste. Commenters state that the 2016 final rule is a needed update to antiquated BLM regulations.

Response: Please see the response to Comment 1. In accordance with E.O. 13783, BLM is committed to furthering the national interest by promoting 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 one-year delay provides regulatory certainty while the BLM reconsiders certain aspects of the 2016 final rule, and ensures that both the industry and the government avoid unnecessary costs to comply with transitory requirements that are being revisited and may change in the near future, if appropriate. To the extent that the comments are directed at a proposal to amend the substantive provisions of the 2016 final rule, they are beyond the scope of this rulemaking.

Comment 3: Multiple commenters state that implementation of the 2016 final rule has already started, so many companies are already in compliance. Commenters state that methane collection has proven to be a profitable venture, that recovered methane is in demand and can

then be sold, and the cost of implementation is recouped relatively quickly. Commenters state that this is a win-win situation as the companies involved increase their profits.

Response: BLM commends companies that are taking proactive steps and notes that the one-year delay in implementing the compliance requirements for certain provisions of the 2016 final rule does not preclude oil and gas companies from continuing to take cost-effective steps to enhance production and revenue from leases on Federal and Indian lands. As explained in the preamble accompanying the 2017 proposed and final delay rule, the purpose of the delay is to avoid imposing likely considerable and immediate compliance costs on operators for requirements that may be rescinded or significantly revised in the near future.

Comment 4: One commenter asserts that the industry is performing well financially and does not regard the 2016 final rule as burdensome. One commenter states that it is evident from available data that jobs have not been lost and that drilling activity is increasing. As such, the commenter does not understand the current attempt to suspend aspects of this important rule.

Response: Please see the response to Comments 1. Also, the RIA that accompanies this rule documents the respective costs and benefits of delaying compliance requirements for certain provisions of the 2016 final rule and shows that the avoided costs exceed the forgone benefits. As it did for the 2016 final rule, the BLM will assess the burden, economic impacts, and financial conditions of the industry as it develops an appropriate proposed revision of the 2016 final rule that aligns with section 1 of E.O. 13783. To the extent that the comments are directed at a proposal to amend the substantive provisions of the 2016 final rule, they are beyond the scope of this rulemaking.

Comment 5: Commenters state that the BLM's analysis for the 2016 final rule showed that the benefits of that rule far outweigh its costs for business and taxpayers. One commenter specifically states that the total monetized benefits of the 2016 final rule range from \$209 million to \$403 million per year through 2026, outweighing the costs of \$114 million to \$275 million per year from 2017 to 2026, consisting of cost savings from recovery and sale of natural gas as well as avoided climate harms from methane emission reductions. Another commenter cites BLM's own conclusion that the 2016 final rule results in "net benefits ranging from \$46 million to \$199 million per year." The same commenter further notes that these gains are large compared to the modest average annual compliance costs, which average out to just \$55,800 per year for even the smallest companies, or only around 0.15% of per company profits.

Response: See the response to Comment 1. For this action, BLM has analyzed the costs and benefits of delaying implementing the compliance requirements for certain provisions of the 2016 final rule by one year. The analysis, which is detailed in the 2017

final delay rule RIA, is based on many of the same methods and assumptions BLM used for the 2016 final rule analysis, and concludes that the benefits of the 2017 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). Apart from the concern over costs, the 2016 RIA also may have overestimated benefits by the use of a social cost of methane that attempts to account for global rather than domestic climate change impacts. A main departure from the 2016 final rule analysis is the use of a social cost of methane that accounts for domestic rather than global climate change impacts. The value of domestic impacts is significantly lower than global impacts and their use in this analysis results in a lower valuation of the cost of methane emissions. Section 5 of E.O. 13783, issued by the President on March 28, 2017, withdrew the Technical Support Documents upon which the RIA for the 2016 final rule relied for the valuation of changes in methane emissions. The E.O. further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in OMB Circular A-4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). The social cost of methane (SC-CH₄) estimates used for the 2017 final delay rule analysis are interim values for use in regulatory analyses while estimates of the impacts of climate change to the U.S. are developed. The estimates are also consistent with OMB Circular A-4, which states that “[y]our analysis should focus on benefits and costs that accrue to citizens and residents of the United States.”

Comment 6: Some commenters assert that the technology to monitor methane is inexpensive and affordable, and that oil and gas producers should use these reasonable ways to capture and sell natural gas instead of flaring, venting, or leaking it. A commenter cites one study that estimates the cost to reduce methane emissions by 40% at approximately one penny per thousand cubic feet of gas produced. The commenter cites a second study issued by the International Energy Agency that indicates that it is feasible for operators to reduce methane emissions by 75% with currently available technology, and that as much as two-thirds of such reductions can be achieved at no net cost. Another commenter cites a 2014 study that estimated an industry cost savings from replacing high-bleed pneumatic controllers with low-bleed versions of \$2.65 per million cubic feet of avoided methane emissions.

Response: BLM generally agrees that technology is readily available that helps reduce the amount of natural gas lost during production operations or from fugitive leaks. In fact, many of the oil and gas companies operating leases on Federal and Indian land already use such technologies where it is economically justified. For example, operators may use low-bleed continuous pneumatic controllers to generate revenue at sites from

which gas is captured and sold when the sale price of gas is generally higher than it is now. The one-year delay in implementing the compliance requirements for certain provisions of the 2016 final rule does not prevent such companies from continuing to adopt the technologies voluntarily. However, the 2017 final delay rule ensures that both the industry and the government avoid unnecessary costs to comply with potentially transitory requirements that are being revisited and may change in the near future, if appropriate.

Comment 7: Multiple commenters state that the leading oil and natural gas companies and several states, including Colorado, Wyoming, and Ohio, have successfully adopted programs to reduce methane and other air pollution. One commenter states that voluntary actions initiated by companies to reduce methane leaks have increased corporate revenues by over \$264 million, according to the EPA. The commenter adds that one study examined a range of proven, cost-effective methane emissions reduction technologies and best practices, that have a potential to reduce emission by more than 25 billion cubic feet of whole gas annually, or nearly 40% of total natural gas emissions. Another commenter adds that after Colorado adopted the nation's first-ever rule to cut methane waste and pollution, with support from both environmental advocates and oil and gas operators three years ago, the state's oil and gas industry has continued to grow - Colorado's oil production increased by 22%, natural gas production is up 3%, and the number of oil and gas wells also increased by 4%, according to annual production data from the Colorado Oil and Gas Conservation Commission. The commenter therefore urges the BLM to abandon its attempts to delay, revise or repeal the 2016 final rule. Another commenter states that since the implementation of Colorado's Regulation 7, the most comprehensive set of methane waste regulations at the state level that are comparable to the 2016 final rule, no lawsuits have ever been filed to stop its implementation. The commenter asserts that seven out of 10 oil and gas operators said that the benefits of Colorado's Regulation 7 outweighed its costs.

Response: The BLM recognizes the state and industry initiatives to reduce methane waste. This rule does not interfere with those efforts. The one-year delay provided by this rule promotes regulatory certainty while the BLM reconsiders certain aspects of the 2016 final rule, and ensures that both the industry and the government avoid unnecessary costs to comply with transitory requirements that are being revisited and may change in the near future, if appropriate.

Comment 8: One commenter states that the long-term prevention of energy waste outweighs the additional burden that smaller companies may face from the cost of complying with the 2016 final rule.

Response: See the response to Comment 1. Over the 11-year evaluation period (2017-2027), the BLM estimates total net benefits ranging from \$35-52 million (NPV and interim social cost of methane using a 7% discount rate) or \$19-29 million (NPV and interim domestic social cost of methane using a 3% discount rate) (See 2017 RIA Section I). Thus, the RIA for the 2017 final delay rule concludes that the benefits of this final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). The policy set forth in E.O. 13783 is aimed at ensuring the “clean” and “prudent” (i.e., not wasteful) development of energy resources. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule’s costs and benefits.

Comment 9: Several commenters state that compliance costs are a cost of access to public resources, that compliance costs are a part of doing business, and the compliance costs will be passed on to consumers anyway.

Response: We agree that costs of compliance with regulations, whether Federal, state, local, or Tribal, are costs of developing oil and gas on Federal or Indian lands; however, that does not render all possible regulations necessary or justified by benefits. We have decided to reevaluate the 2016 final rule’s requirements to further examine whether the benefits exceed the costs. This one-year delay rule provides regulatory certainty while the BLM reconsiders certain aspects of the 2016 final rule, and ensures that both the industry and the government avoid unnecessary costs to comply with potentially transitory requirements that are being revisited and may change in the near future, if appropriate. Impacts on consumers as well as producers will be analyzed and addressed during development of the revised 2016 rule and discussed in the RIA.

Comment 10: Commenters state that industry cannot claim that natural gas is a valuable resource for which they demand land access, and simultaneously claim license to vent the same gas into the atmosphere, or burn it in the open air. If the industry is not economically motivated to invest in sealing their pipelines, wellheads, and mine shafts properly, and getting that gas into the appropriate conveyance into production, rather than disposing of the resource in situ, then the price of natural gas must not be high enough to justify industry demands for access rights to gas deposits in the first place. BLM must require applicants for leases and permits to incorporate the cost of methane abatement into deciding whether a given project is profitable and in the public interest, just as electricity utilities consider this cost in choosing whether to initiate, maintain, or close power plants. The commenters state that people are tired of endless giveaways to industry.

Response: As previously noted, we agree that there are technologies to reduce loss of methane from oil and gas production operations. Today’s rulemaking action, however, is

limited to providing a one- year delay in implementing compliance requirements for certain provisions of the 2016 final rule. Therefore, commenter's assertions about the right of access and the scope of the MLA “public interest” determination are outside the scope of the current rulemaking action.

Comment 11: One commenter states that, as a recipient of oil and gas royalties, this commenter will gladly accept a reduction in royalties to pay for reductions in methane emissions.

Response:. We appreciate the commenter’s commitment to reducing of loss of natural gas. However, a reduction in royalties to compensate operators for measures to prevent waste are outside the scope of this rulemaking.

Comment 12: Commenters state that the RIA for the 2016 final rule indicates that compliance with that rule would pose a substantial compliance burden on the industry. Several commenters indicate that BLM underestimated the compliance costs of the 2016 final rule. One commenter cites an annual estimated cost of the 2016 proposed rule at \$1.26 billion compared to BLM’s highest annual estimate of benefit of \$384 million and an industry group’s annual estimate of benefit at \$90 million annually.

Response: In the RIA for the 2016 final rule, the BLM estimated that the requirements of the 2016 final rule would impose compliance costs, not including potential cost savings for product recovery, of approximately \$114 million to \$279 million per year (2016 RIA at 4). As stated in the preamble to today’s action, the BLM conducted an initial review of the 2016 final rule and found that it appears to be inconsistent with the policy in section 1 of E.O. 13783. The BLM found that some provisions of the rule appear to add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Following up on its initial review, the BLM is currently reviewing the 2016 final rule to develop an appropriate proposed revision—to be promulgated through notice-and-comment rulemaking—that would propose to align the 2016 final rule with the policies set forth in section 1 of E.O. 13783.

Comment 13: Commenters state that BLM's suspension of the 2016 final rule will conserve resources of the Federal government and the regulated community.

Response: We agree and thank those commenters for supporting this rule.

Comment 14: One commenter states that a delay from the 2016 rule will cause further uncertainty in the marketplace, penalizing companies that are making the investment to seize the initiative to reduce their methane emissions and leaving them at a competitive disadvantage against companies that drag their feet on compliance. The commenter states that the delay rule

will also slow the development of a robust domestic market for methane mitigation technologies, which is important to the growth of methane mitigation companies in the U.S. As the global production of natural gas is forecast to grow, any such delay will handicap the competitive position of American methane mitigation companies by denying them the American domestic market they need for their products and services.

Response: The BLM recognizes the commenter's concerns, but it does not believe the this rule to delay requirements for a year rises to the level of putting firms that undertake voluntary action at a competitive disadvantage to those that do not. We also recognize that there may be a small, though probably insubstantial, positive impact on investment and employment due to the reduction in compliance burdens (see section 4.1 of the RIA). BLM notes that the one-year delay in implementing the compliance requirements for certain provisions of the 2016 final rule does not preclude oil and gas companies from continuing to take cost-effective steps to enhance production and revenue from leases on Federal and Indian lands. As explained in the preamble, the purpose of the delay is to avoid imposing likely considerable and immediate compliance costs on operators for requirements that may be rescinded or significantly revised in the near future.

Comment 15: Multiple organizations state that given the clear and substantial economic harm facing industry and mineral owners, including the Federal mineral estate, it is logical that the rule's effectiveness be delayed while reconsideration is underway. The commenters add that if the 2016 final rule provisions go into effect but are later changed, industry will have no way to recover these one-time capital expenditures on requirements that may be rescinded or significantly revised in the near future.

Response: We agree that, without today's delay rule, operators could be required to make expenditures that a future rulemaking would not require, and that those operators would not have any way to recover those expenditures, other than sale of the natural gas. Today's rule delays requirements for such expenditures to provide time for the BLM to re-assess whether they should be amended or rescinded. The 2017 final delay rule also aims to avoid expending agency resources on implementation of activities for potentially transitory requirements.

Comment 16: One comment provided by an organization states that it has identified over 250 Federal sites within its portfolio that must be inspected in order to comply with the 2016 final rule deadline of January 17, 2018, and estimates that it will incur expenses in excess of \$375,000 in the calendar year 2018 to comply with the semi-annual inspection requirements of the rule. The organization asserts that by delaying the inspection requirements until 2019, it (and other operators) would get an opportunity to compare the cost of compliance as to each

well with the benefit of continuing oil production, and will be able to decide whether to shut-in wells that would no longer be commercially viable.

Response: The BLM appreciates the quantitative analysis of the cost of inspection for the one year that would be delayed under today's final delay rule.

Comment 17: Several commenters cite prior findings of the Government Accountability Office (GAO) as supporting the 2016 final rule. In 2008 and 2010, the GAO acknowledged the pervasive problem of preventable natural gas waste and associated air pollution on public and tribal lands and an outdated royalty system in need of "comprehensive reassessment." Another commenter cited the GAO's 2010 report recommending the BLM update its regulations to help capture gas that is economically recoverable using available technologies and the GAO's 2016 report recommending the BLM give operators better emissions estimation guidance to support accurate collection of royalties on wasted gas, where appropriate.

Response: The BLM is familiar with the GAO findings and will continue to take corrective actions consistent with its recommendations. The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year.

Comment 18: One commenter states that the costs associated with existing wells, particularly existing wells that are considered "stripper wells" producing small amounts of oil or natural gas, will increase by requiring retrofitting of new equipment and, if BLM's retroactive requirements become effective, existing and future wells in Wyoming will become uneconomic and will result in premature plugging of existing wells and possibly a decrease in the number of new wells drilled. In addition to impacts on the industry, premature plugging of wells will result in lost economic opportunities for Wyoming state and local governments as well as Federal royalties. The commenter states that the U.S. Supreme Court has a well-established ban on impermissible retroactive statutes and regulations that burden private rights. Another commenter states that the 2016 final rule will impact cause marginal wells in the states of New Mexico to be shut-in, thereby ceasing production and reducing benefits to the industry and the state's economy. The commenters therefore supports the delay and suspension of certain requirements of the 2016 final rule.

Response: The BLM appreciates the commenters' support for today's final rule. Much of those comments, though, are critiques of the consequences of the 2016 rule, and thus are outside the scope of this rulemaking.

Comment 19: One commenter states that the oil and gas industry is currently reducing emissions through voluntary actions, and that the BLM is itself an obstacle to methane capture

through unnecessary permit delays. The commenter therefore endorses the proposed rule to delay and suspend the most onerous and duplicative measures of the 2016 final rule.

Response: The BLM thanks the commenter for supporting today's delay rule.

Comment 20: One commenter argues that there is a disparity between the broad negative impacts of the rule on public welfare through “wasted gas, diminished royalties, and harmful impacts for public health and the environment” with BLM’s own conclusion that the rule would not “substantially alter the investment or employment decisions of firms.”

Response: Please see the RIA and EA for today's rule, which explain that the delay will avoid requiring expenditures that might soon be deemed unnecessary, while imposing only modest burdens on royalty owners, public health and the environment.

Legal Authority

Comment 21: Several commenters state that the BLM’s 2016 final rule is needed in addition to the EPA rule that controls methane pollution. The commenters state that the BLM 2016 final rule differs in its coverage, and specifically aims to avoid waste of public energy resources and loss of royalty revenues to governments. Commenters state that the 2016 final rule updates earlier BLM requirements more clearly and specifically define when loss of gas is subject to royalties, which is not addressed by the EPA rule. Several commenters cite a February 3 “CRS Insight” report by the Congressional Research Service which describes the separate purposes of the EPA and BLM rules.

Response: This one-year 2017 final delay rule does not substantively change the 2016 final rule, it simply postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. This comment is therefore outside the scope of the current action. However, as BLM develops an appropriate proposed revision of the 2016 final rule that aligns with section 1 of E.O. 13783, it will continue to assess the relationship between the 2016 final rule and other Federal regulations.

Comment 22: Multiple commenters state that BLM's 2016 final rule infringes on State and tribal authority, and in some cases, duplicates what States and tribes are already doing to protect environmental health and safety. The commenters state that the Federal Government should be deferential to the States when taking action that affects the policymaking discretion of the States and should act only with the greatest caution where State or local governments have identified uncertainties regarding the constitutional or statutory authority of the Federal Government. One additional commenter further notes that any regulatory preemption of State law should be

restricted to the minimum level necessary to achieve the objectives of the statute under which the regulations were promulgated.

Response: Nothing in the 2017 final delay rule affects the relationship between Federal, State, local or tribal governments. That comment is therefore outside the scope of the current action.

Comment 23: One commenter cites the ongoing litigation between the State of Wyoming and BLM as evidence that BLM exceeded its statutory authority with respect to the 2016 final rule. The commenter further states that the State of Wyoming has jurisdiction under the Clean Air Act over air quality and is appropriately exercising its authority in this area.

Response: This one-year 2017 final delay rule does not substantively change the 2016 final rule, it simply postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. This comment is therefore outside the scope of the current action.

Comment 24: Multiple commenters state that the BLM lacks authority to regulate the emission of gas from oil and gas operations out of a concern about the effect those emissions may have on climate change. Commenters state that the EPA has exclusive Federal jurisdiction to regulate air quality, air emissions, and source performance standards under the Clean Air Act, and that the BLM's authority is generally limited to waste prevention and royalty assessment under the Mineral Leasing Act (MLA).

Response: BLM appreciates the commenter's perspective on the need to reconsider the BLM's scope of authority to regulate the emissions resulting from oil and gas operations. This 2017 final delay rule action is limited to providing a one year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current 2017 final delay rulemaking action.

Comment 25: One commenter states that the Federal and Indian mineral leasing statutes share a common purpose of promoting the development of Federal and Indian oil and gas resources for the financial benefit of the public and Indian mineral owners. In order to ensure that the development of Federal and Indian oil and gas resources will not be unnecessarily hindered by regulatory burdens, the commenters claim that the BLM should reconsider the 2016 final rule.

Response: This comment is outside the scope of this rulemaking.

Comment 26: One commenter states that the BLM lacks authority to require the oil and gas industry to reduce emissions, except as those reductions may occur as an incident of an

otherwise lawful measure to prevent the “waste” of gas adopted pursuant to BLM’s authority under the Mineral Leasing Act (“MLA”) of 1920. If the oil or gas cannot be practically and economically captured, then it is not “waste,” and BLM has no authority to regulate, according to that commenter. Considering the authority question of the 2016 final rule, the BLM’s decision to re-evaluate is a prudent approach.

Response: BLM appreciates the commenter’s support for today’s delay rule. Much of the comment, however, is outside the scope of the current 2017 final delay rulemaking action.

Comment 27: Multiple commenters address BLM’s statement in the 2017 draft RIA that, “BLM does not consider the monetized benefits of avoiding GHG emissions as a statutory basis under the MLA for rulemaking in this area” because the MLA “does not include climate-related benefits from changes in GHG emissions as factors that the BLM should consider in exercising” waste prevention authority. The commenters state that this is incorrect and inconsistent with BLM’s statutory obligations as one of the purposes of the MLA is “safeguarding the public welfare,” which encompasses environmental harms. In addition, under the FLPMA, BLM must manage public lands for multiple use and “in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” The commenters cite multiple circumstances in which courts have rejected arguments that Federal agencies are unable to consider the benefits of greenhouse gas reductions when evaluating regulatory actions, and in many cases are required to do so.

Response: The BLM relies upon its final RIA and EA for this final rule. Whether and how the MLA or FLPMA require the BLM to monetize benefits of avoided GHG emissions is outside the scope of this rulemaking, which is limited to a one-year delay in implementing certain provisions of the 2016 rule.

Comment 28: One commenter states that Federal oil and gas lessees have a right to develop the oil and gas resources on their leases, subject to the requirement that they take “reasonable precautions” to prevent the “waste” of those resources, and that they comply with other applicable Federal laws and regulations, like the ones adopted by EPA to regulate air emissions. The fact that several of the emission requirements in this rule are stated to be satisfied by compliance with the EPA New Source Performance Standard (NSPS), OOOOa makes it very clear that BLM has deviated from its waste authority into EPA’s air emissions arena. In particular, according to some commenters, EPA NSPS OOOOa already required methane based Leak Detection and Repair (LDAR) for new and modified facilities built/modified after September 18, 2015 .

Response: The comments are a critique of the 2016 rule and are outside the scope of this rulemaking.

Comment 29: One commenter states that there is no justification for the royalty increases in noncompetitive or competitive leases that would be reinstated with the 2016 final rule. A commenter argues that, in addition, BLM currently does not allow commingling of oil or gas with different Federal royalty interest so such changes could result in the need to construct separate facilities for measurement of these new royalty leases. Another commenter states that, under the 2016 rule, it may not be possible for an operator to persuade the state to request a variance for a specific operator, especially if the request is only for a portion of the state (section 3179.401). An operator should have the flexibility to offer an alternative approach if reasonable for consideration by the State BLM Director.

Response: This one-year 2017 final delay rule does not substantively change the 2016 final rule, it simply postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. These comments are therefore outside the scope of the current rulemaking.

Comment 30: Multiple commenters state that BLM lacks either implicit or explicit legal authority to suspend standards for the purpose of reconsidering them. Commenters state that BLM may not avoid its statutory responsibilities by delaying the implementation of its own rules. Commenters state that BLM's current process upends administrative law rules and undermines the very purpose of notice-and-comment rulemaking by seeking to suspend standards now while purporting to consider and explain the reasons for halting the Rule later. One commenter states that a hasty rulemaking to suspend a duly promulgated regulation, based principally upon a new Secretary's desire to rethink the regulation—*without* thorough study, input, and explanation—undermines the whole premise of ensuring that standards are amended only after a deliberative process. One commenter states that the rule is arbitrary and capricious. This commenter states that reasoning behind this 2017 final delay rule is outside the scope of the Federal Land Policy and Management Act, and it should not be promulgated in place of the 2016 final rule.

Response: As stated in the preamble, the BLM has ample legal authority to modify or otherwise revise the existing regulation in response to substantive concerns regarding cost and feasibility under the authority granted by the MLA, the MLAAL, FOGRMA, FLPMA, the IMLA, the IMDA, and the Act of March 3, 1909. 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. None of these statutes state that the BLM's exercise of its rulemaking authority may not take the form of a temporary suspension of previously promulgated requirements. Today's 2017 final delay

rulemaking provides a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule, and is an important component of the BLM's reconsideration of the 2016 final rule. The BLM has not acted arbitrarily and capriciously in promulgating today's final rule; the preamble, RIA, responses to comments, and other associated documents collectively and adequately explain the rationales and factual bases for each provision in the rule, the relevant factors that the BLM considered, and the reasons why the BLM did not consider certain other factors.

Comment 31: While BLM can reconsider its past policy decisions, any regulatory revision must be grounded in the statute and set forth good reasons supporting the change. In contravention of its statutory authority under the Mineral Leasing Act, the Suspension Proposal would increase waste and BLM has not (and could not) provide good reasons supporting this unlawful action. Another commenter further notes that the rule would suspend compliance dates without offering a substitute mechanism to prevent waste, despite the fact that BLM continues to propose and approve new oil and gas leases and drilling permits and that existing equipment continues to emit large quantities of methane. The commenters note that BLM has long regulated venting and flaring of natural gas produced on public lands and determined when operators must pay royalties to the Federal government for wasted gas. One commenter states that there is a strong argument that E.O. 13783 calls for agency action that exceeds the statutory scope of the FLPMA.

Response: The BLM agrees that it has a duty to prevent waste of oil and gas from Federal and Indian leases. The statutes, however, commit to the Secretary's discretion how to define "waste" and how to prevent it. No applicable statute requires the Secretary to impose regulatory burdens on oil and gas operators that are disproportionate to the benefits that they might achieve. E.O. 13783 does not require the BLM to violate any statute. A regulation that imposes burdens required by statute would be "necessary" under that Executive Order, and thus would not require further administrative review.

Comment 32: One commenter states that this rule was proposed shortly after the U.S. District Court denied industrial petitioners a preliminary injunction to stay the 2016 final rule until the case was decided on the merits. The BLM is essentially using rulemaking to mirror a judicial function, which it is not authorized to do.

Response: For the reasons as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule, see the preamble to today's 2017 final delay rulemaking and response to comment 1. Contrary to the commenter's belief, the BLM is not using rulemaking to mirror a judicial function. The BLM is exercising its inherent authority to reconsider the 2016 final rule. The district court's

decision on the preliminary injunction motion is not binding on BLM's regulatory authority.

Comment 33: One commenter states that the patchwork of varied state regulations is not a substitute for comprehensive Federal requirements. A commenter asserts that States lack the Federal government's statutory requirements and public trust responsibility, allow new state leadership to revise state regulations. Another commenter disagrees with BLM's assertions in the proposed rule and supporting documents that existing State regulations might be sufficient to meet its legal obligations under FLPMA and the MLA.

Response: We agree that states implement different statutory authorities, and have not approached waste prevention uniformly. Nonetheless, the preamble, RIA, and EA for today's final rule explain the justification for delaying the implementation of certain provisions of the 2016 rule. To the extent the comments are directed at a proposed amendment of the 2016 rule, they are beyond the scope of this rulemaking.

Comment 34: One commenter states that 2016 final rule is both authorized and required by both the Mineral Leasing Act of 1920 (MLA) and the Federal Land Policy and Management Act (FLPMA). The commenter states that the MLA requires the Secretary of the Interior to enforce leaseholders' use of "all reasonable precautions to prevent waste of oil or gas developed in the land and require leaseholders to comply with rules "for the prevention of undue waste." Another commenter further notes that MLA's use of 'all' to modify the term 'reasonable precautions' shows that Congress intended BLM to aggressively control waste; such that, BLM may not forego reasonable and effective measures limiting venting, flaring and leaks for the sake of administrative convenience or to enhance the bottom lines of operators. The same commenter states the rule violates the MLA as it effectively creates a new regulatory regime devoid of any requirements that operators take *any* reasonable precaution to minimize waste—let alone take *all* reasonable precautions. Under the FLPMA, the commenter cites the requirement of the Secretary of the Interior to, "by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of [public] lands." The commenter further highlights the FLPMA's requirement to manage public lands in accordance with the principles of "multiple" use and "sustained yield." Finally, the commenter cites the FLPMA as authorizing BLM to "regulate ... the use, occupancy, and development of" public lands via "published rules" and to "promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to the public lands."

Response: Commenters are incorrect in their assertion that the 2016 final rule is required by both the MLA and FLPMA. Neither the MLA nor FLPMA mandate that BLM maintain the regulatory provisions being suspended for a year in the final rule. As stated in the preamble, today's final rule is promulgated pursuant to the authority

granted by the MLA, the MLAAL, FOGDMA, FLPMA, the IMLA, the IMDA, and the Act of March 3, 1909. 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. None of these statutes state that the BLM's exercise of its rulemaking authority may not take the form of a temporary suspension of previously promulgated requirements.

Comment 35: One commenter states that while BLM is entitled to change its policy positions, BLM has an obligation to adequately explain the reason for the change and its rejection of its earlier factual findings, and the commenter argues that the notice of proposed rulemaking failed to explain the reasons for the delay.. Another commenter similarly states that the BLM's decision is arbitrary and capricious because BLM fails to offer any explanation or factual support for the dramatic change in its conclusion regarding the burden of the 2016 final rule on industry. Additionally, the commenter states that BLM's rationale of providing immediate regulatory relief is unsupported based on BLM's own analysis which indicated that the provisions would pay for themselves in a short period of time.

Response: For the reasons as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule, see the preamble to today's 2017 final delay rulemaking and response to Comment 5, above. The BLM does not believe it has acted arbitrarily and capriciously in promulgating today's final rule; the preamble, RIA (which analyzes available information about burdens and benefits), responses to comments, and other associated documents collectively and adequately explain the rationales and factual bases for each provision in the rule, the relevant factors that the BLM considered, and the reasons why the BLM did not consider certain other factors.

Comment 36: One commenter states that it is difficult to comment on BLM's justification of its proposed suspension under requests E.O. 13771 because BLM does not disclose the deregulatory value assigned to the proposed or identify what, if any, regulation the agency might promulgate, in combination with another deregulatory action, if the 2016 final rule is repealed.

Response: The BLM believes this comment is referring to 2(c) of E.O. 13771, which requires two deregulatory actions to offset each new regulation. E.O. 13771 defines a "deregulatory action" as an action that has been finalized and has total costs less than zero. Pursuant to this E.O., the 2017 final delay rule is considered a deregulatory action. Therefore, there is no need for an offset.

Comment 37: One commenter states that the rule is inconsistent with Section 1 of E.O. 13783. The commenter notes that BLM previously identified the same purposes for the 2016 final rule

as cited in Section 1 of E.O. 13783 – national security, domestic energy development, and economic growth. In addition, the commenter states that the delay in fact imposes a burden on regulated entities because it creates regulatory uncertainty, further harming domestic energy production and affirmatively violating E.O. 13783.

Response: The BLM disagrees with the commenter. The BLM does not believe that the 2017 final delay rule substantially alters the investment or employment decisions of firms. The RIA for the 2016 final rule determined that the rule would not substantially alter the investment or employment decisions of firms, and therefore delaying the 2016 final rule would likewise not be expected to impact those decisions. The BLM also recognizes that there may be a small positive impact on investment and employment due to the reduction in compliance burdens (see 2017 final delay RIA section 4.1). However, since the magnitude of the reductions would be relatively small, these impacts are not expected to be substantial.

Comment 38: One commenter states that reconsideration does not justify postponing compliance. The commenter states that BLM has identified no new circumstances or changes to the record underlying its promulgation of the 2016 final rule that would justify the rule. The commenter cites to the BLM’s decision to “not revisit the estimated compliance costs of the 2016 final rule” as evidence that no new circumstances or changes to the record have occurred. Another commenter states that the BLM must offer a justification for staying the compliance deadlines “*before* engaging in a search for further evidence.” *State Farm*, 463 U.S. at 151 (emphasis added). The original commenter continues stating that even if BLM were to identify specific problems, the appropriate resource is to propose amendments targeting such issues rather than suspending compliance requirements for specific provisions, or the entire rule.

Response: The BLM disagrees with the commenter. The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. The one-year delay is necessary to provide regulatory certainty while the BLM reconsiders certain aspects of the 2016 final rule, and ensures that both the industry and the government avoid unnecessary costs to comply with transitory requirements that are being revisited and may change in the near future, if appropriate. For the “justification” as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule, see the preamble to today’s 2017 final delay rulemaking and response to Comment 1.

Comment 39: One commenter suggests that keeping the Rule in place would assist BLM’s review because BLM could then gather data on how effective the 2016 final rule is at fulfilling the statutory waste prevention mandate and that data could inform BLM’s thinking on how the

rule might be revised, if at all, to better serve that mandate through actual experience. BLM's failure to even consider this possibility renders the rule arbitrary and capricious.

Response: The BLM appreciates the commenter's suggestion. For the reasons as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule, see the preamble to today's 2017 final delay rulemaking and response to Comment 1. The BLM does not believe it has acted arbitrarily and capriciously in promulgating today's final rule; the preamble, RIA, responses to comments, and other associated documents collectively and adequately explain the rationales and factual bases for each provision in the rule, the relevant factors that the BLM considered, and the reasons why the BLM did not consider certain other factors.

Comment 40: One commenter states that the 2016 final rule should not apply to a "communitization agreement" (CA) where the Federal government holds minority interests not directly impacted by development, and that BLM's attempt to regulate all lands within a CA impedes North Dakota's authority. BLM also has limited authority over non-Federal and non-Indian sites within federally-supervised units and CAs.

Response: The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. This comment is therefore outside the scope of the current 2017 final delay rulemaking action.

Tribal Issues

Comment 41: Some commenters state that the proposed delay rule does not address the primary issue in the 2016 final rule for energy development on Indian lands. Commenters state that BLM should discontinue attempts to inappropriately regulate activities on Indian lands according to public lands standards. While the proposed delay rule would provide some relief from the underlying 2016 final rule, BLM continues to exceed its limited authority provided in the Federal Lands Policy and Management Act of 1976 (FLPMA). Both the proposed rule and the 2016 final rule are not and should not be applicable to Indian lands.

Response: The comment is outside the scope of this rulemaking, which is limited to a one-year delay of the implementation of certain provisions of the 2016 final rule.

Comment 42: Some commenters state that the Secretary of the Interior should engage Indian tribes in government-to-government consultation and support tribal efforts to regulate venting and flaring ourselves.

Response: The BLM agrees with the commenters' assertions about the importance of government-to-government consultation. The BLM engaged in stakeholder outreach in the course of developing this final delay rule. BLM believes its degree of outreach was appropriate given that the final delay rule extends the compliance dates of the 2016 final rule, but does not change the policies of that rule. The BLM sent letters to all tribal governments with major oil and gas interests, as well as individual Indian mineral owners that have expressed to BLM in the past that they want to be notified of such actions. Those letters offered consultation to inform the development of this final delay rule. Several tribal stakeholders have provided feedback on today's action via comments submitted during the comment period.

Comment 43: Commenters state that, in contrast to the 2016 rule, BLM has provided few opportunities for tribes and individual mineral owners to consult about the proposed delay rule. Commenters state that BLM claims that the amount of Tribal outreach conducted is appropriate because the proposed rule only suspends the 2016 rather than altering it. However, Tribes and their members will receive lower royalty payments as long as the 2016 rule is not enforced, whether it is delayed or rescinded. The temporary nature of the proposed suspension has no bearing on BLM's duty to consult Indian mineral owners prior to taking actions that impact their oil and gas resources.

Response: The BLM agrees with the commenters that the nature of the proposed action has no bearing on BLM's duty to consult with Indian mineral owners. For this action, the BLM did offer consultation.

Comment 44: One tribe comments that it has its own laws regulating flaring on its Reservation. The commenter argues that its laws would regulate flaring and also ensure that the tribe benefits from its oil and gas resources. Neither the proposed delay rule nor the underlying 2016 final rule "effectively utilize the capabilities" of the MHA Nation in regulating the flaring and venting of gas as directed by FOGPMA, because the proposed delay rule and 2016 final rule gives no deference to tribal authority, according to the commenter.

Response: The comment is beyond the scope of this rulemaking, but is substantively directed at the 2016 rule.

Comment 45: Another tribe comments that it would be in the best interest of tribes nationally for BLM to set minimum standards that regulations oil and gas development and protects usable water sources. The commenter states that future regulation should default to Tribal law, while setting minimum requirements to protect assets held on behalf of Tribes across the Nation. The commenter states that developing such standards helps to avoid future regulatory vacuums that

could expose the Federal government to mismanagement suits due to new technology development, land misuse, or water contamination.

Response: The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Comment 46: One commenter states that the 2016 final rule “helps to meet the Secretary’s statutory trust responsibilities with respect to the development of Indian oil and gas interest,” in part because the 2016 final rule helps to “ensure that the extraction of natural gas from Indian lands results in the payments of royalties to Indian mineral owners, rather than the waste of owners’ mineral resources. One commenter states the 2016 final rule meets BLM’s statutory trust responsibilities because “tribal members and individual Indian mineral owners who live near Indian oil and gas development will realize environmental benefits as a result of this rule’s reductions in flaring and air pollution from Indian oil and gas development.”

Response: The comments are in support of the 2016 rule, and are outside the scope of this rulemaking. Nonetheless the BLM construes them to be opposed to this delay rule.

Lost Gas Volumes

Comment 47: The waste prevention rule addresses the severe problem of waste of publicly owned resources and attendant pollution, and the suspension proposal will have substantial costs for the American public. Many commenters state that the 2017 final delay rule will result in waste of natural gas through venting, flaring, and leaking of natural gas from oil and gas operators. The commenters state that the valuable energy resources being wasted could otherwise be productively used, which would subsequently increase revenues for taxpayers in the form of royalty. One commenter states that the 2017 final delay rule will not benefit the majority of American taxpayers, as burning off useful fuel will not allow taxes to be collected on resources taken from our land.

Response: The BLM acknowledges that delaying implementation of compliance requirements for certain provisions of the 2016 final rule could result in incremental flaring of gas during the one-year interim period when compared to the baseline. The BLM presents its analysis of the trade-offs in the EA and RIA that accompany this 2017 final delay rulemaking. As described in detail in section 3 of the RIA, these analyses show that the environmental benefits (i.e. reduced methane emissions) and forgone savings from recovered product during the interim delay period are small, particularly when compared to the avoided compliance costs (i.e. cost of technology needed to comply with the rule). In the short-term, the one-year 2017 delay is expected to decrease natural gas production from Federal and Indian leases due to the continued venting or

flaring of the gas, and consequently to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners. However, over 11 years of implementation (2017-2027), the BLM expects a small increase in total royalties due to production slightly shifting into the future when commodity prices are projected to be higher. As BLM reconsiders the final 2016 rule in accordance with E.O. 13783, it will continue to assess impacts on royalty revenues.

Comment 48: One commenter states that between 2009 and 2015, oil and gas producers on Federal and tribal lands wasted enough gas through venting, flaring, and leaks to power about 6.2 million households for a year. One commenter states that studies show that 9% of gas extracted in the Uinta Basin is lost as fugitive methane. Other commenters state that each year, oil and gas companies waste \$330 million-worth of natural gas on our public and tribal lands through venting, flaring and leaks. One commenter states that since 2013, more than \$1.8 billion-worth of natural gas has been wasted. Not only do these practices waste publicly-owned energy resources, but they cost taxpayers tens of millions of dollars in revenue each year that could go towards roads and bridges, schools, conservation, or local improvement projects. Similarly, another commenter suggests that the reduced methane pollution from new and existing sources on public and tribal lands would secure enough gas between now and 2026 to supply up to 760,000 households and eliminate the climate-changing pollution of up to 940,000 vehicles. Another commenter cites the 2016 final rule estimates of the increasing numbers of applications to vent or flare gas.

Response: There is uncertainty regarding the quantity and value of gas that is vented or flared on Federal or tribal lands. The BLM reviewed data from the Office of Natural Resources Revenue (ONRR) and 2016 greenhouse gas (GHG) Inventory to develop estimates of the average volume of gas vented and flared. See the 2016 RIA for a complete discussion of the methodology and data used to estimate lost gas volumes (2016 RIA at 15). BLM provides estimates of the average volume of gas vented and flared based on 2014 data (110 Bcf). BLM provides estimates of the benefits forgone by the one-year delay in the 2017 final delay rule RIA. Based on revised assumptions regarding the impacts of methane emissions (please see the response to Comment 5), BLM estimates that the 2017 final delay rule reduces the cost savings over the one-year period of analysis by \$21 million and reduces the environmental benefits over that same period by \$0.3 million (using 3% discount rates). As shown in detail in section 3 the 2017 final delay RIA, these benefits are outweighed by estimated reductions in compliance costs of \$40 to \$49 million. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule's costs and benefits.

Comment 49: A few commenters state that wasting energy resources is not helping the country become energy independent.

Response: In accordance with E.O. 13783, BLM is committed to furthering the national interest by promoting “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.” Thus, the policy set forth in E.O. 13783 is aimed at ensuring the “clean” and “prudent” (i.e., not wasteful) development of energy resources. The one-year 2017 final delay rule provides regulatory certainty while the BLM reconsiders certain aspects of the 2016 final rule, and ensures that both the industry and the government avoid unnecessary costs to comply with potentially transitory requirements that are being revisited and may change in the near future, if appropriate.

Comment 50: One commenter states that the 2016 final rule has strong bipartisan support among the public. The commenter cites a bipartisan poll by Colorado college which found that 80% of westerners’ support action to cut natural gas waste on public lands, and a broad and diverse array of western stakeholders supported the BLM natural gas waste rule. The commenter therefore urges the BLM to abandon its attempts to delay, revise or repeal the 2016 final rule.

Response: See Section I of the preamble to the 2017 final delay rule and the response to Comment 1, which explains in detail the reasons for why implementation of certain requirements of the 2016 rule should be suspended or delayed while BLM reconsiders it in accordance with E.O. 13783.

Comment 51: One commenter states that BLM’s estimate of 462 billion cubic feet of natural gas vented or flared by Federal oil and gas lessees between 2009 and 2015 on public and tribal lands is likely underestimated. This figure includes wasted gas vented or flared from wells and associated equipment – sometimes by design, but also often due to improper functioning. This figures does not account for the significant amount of gas that leaks from wells and storage site equipment. Capturing this wasted gas would save millions of dollars in lost royalty revenues for Federal, state, and tribal governments that could be used for schools, healthcare, and infrastructure.

Response: There is uncertainty regarding the quantity and value of gas that is vented or flared on Federal or tribal lands. The BLM reviewed data from the ONRR and 2016 GHG Inventory to develop estimates of the average volume of gas vented and flared. See the 2016 RIA for a complete discussion of the methodology and data used to estimate lost gas volumes (2016 RIA at 15). As BLM reconsiders the 2016 final rule in

accordance with E.O. 13783, the BLM will review and, as needed, update its estimates to reflect available data, including relevant data provided in public comments.

Rule Benefits

Comment 52: Several commenters state that the 2016 final rule is feasible from both an economic and public health perspective by being a cost-saving measure that also protects the air quality, and therefore its implementation should not be delayed. Some commenters refer to the 2016 final rule RIA to highlight that the benefits of the rule outweigh its costs. The commenters state that the relevant equation is whether we provide benefits to all Americans, the environment, America's schools and school children, reducing public health hazards and wasting valuable natural gas that companies should be delivering for sale to customers, or do we subsidize further an already heavily subsidized small minority of very wealthy people whose only interest is money.

Response: Please see the response to Comment 5.

Comment 53: Multiple commenters took issue with the approach BLM used to calculate the forgone benefits of methane emissions reductions in terms of the social cost of methane in the 2017 delay rule analysis. In particular, commenters suggest that the RIA for the delay rule: a) should rely on estimates of the global value of the social cost of methane and not the “domestic-only” value and; b) that a 7% discount rate is not justifiable for use in discounting these benefits and a 3% discount rate would be appropriate and consistent with OMB Circular A-4 . Multiple comments assert that the BLM’s approach to generate an interim domestic value of the social cost of methane is not consistent with recommendations provided by the National Academies of Sciences, Engineering and Medicine (NASEM), nor were the BLM estimates subject to scientific peer review or public comment. The comment suggests that BLM should either attempt to apply the NASEM recommendations to calculate the social cost of methane or else rely on the previous estimates from the RIA for the 2016 final rule . Multiple comments suggest that BLM clarify in the RIA that the conclusion that the cost savings are greater than the benefits forgone reflect differences in the measures used to value emissions reductions benefits and that relying on measures of the global (as opposed to domestic) social cost of methane would result in a finding that the delay rule would have net costs to society . Several comments describe that reliance on estimates of the domestic rather than global social cost of methane is inappropriate as it omits important interactions and considerations, such as international trade and investment, related to the global nature of climate change and does not reflect the true impact on US citizens . Several comments suggest that BLM present the global estimates of social cost of methane alongside the domestic estimates as a range of potential impacts. With respect to the discount rate, multiple comments describe that a 7% discount rate is inappropriate for discounting the social cost of methane emissions, with one commenter qualifying the choice

as “arbitrary” and inconsistent with Circular A-4 requirements and best economic practice. The integrated assessment models used to generate the estimates of the social costs of methane in BLM’s RIA for the delay rule reflect the effective impact on people’s consumption as opposed to investment. The appropriate discounting method would therefore be to discount at the “consumption rate of interest”, which according to OMB’s current guidance is 3%. The comment further states that none of the researchers whose model results were used to generate the interim values employs a discount rate as high as 7%, instead rely on 3% with sensitivity analysis using 2.5% and 5%. In addition the Council of Economic Advisors support a rate lower than 3% (at most 2%) for the consumption rate of discount.

Response: For a detailed explanation on the assumptions and methodologies used in the analysis for the 2017 final delay rule RIA, as well as the explanation of the discounts rates applied, see the preamble to today’s action, the 2017 RIA, and the response to Comment 5.

Comment 54: Multiple commenters cite recent research to suggest that governmental policy decisions with implications for climate change deserve a very small, or declining, or even negative discount rate because the future harms of climate change are deeply uncertain, stretch far into the future, affect future generations involuntarily, and potentially involve extraordinarily large risks, including the remote but possible risk of human extinction. One commenter further states that, because climate mitigation costs imposed today are likely to most benefit our children, grandchildren, and future generations, the choice of a discount rate is fundamentally an ethical one. Taking into account the intergenerational, long-term, and catastrophic effects of climate change, ethical principles weigh against the use of a high, private discount rates for decisions such as governmental policies affecting future methane emissions. Commenters cites Circular A-4 that, “[p]rivate market rates provide a reliable reference for determining how society values time within a generation, but for extremely long time periods no comparable private rates exist.” Because no comparable private rates exist for evaluating the effects of massive and uncertain harms, including but not limited to adverse health effects, sea level rise, impaired agriculture, loss of biodiversity, social disruption, and more, there is no defensible basis for using private rates as comparable in evaluating future costs and benefits of climate policies. In addition, commenters cite research on uncertainty that suggests that policy should be directed at reducing the risks of worst-case outcomes, not at balancing the likely values of costs and benefits. The commenter states that the urgent priority is to protect ourselves against those worst cases, not to fine-tune expenditures to the most likely level of damages.

Response: The analysis presented in the RIA for the 2017 final delay rule of impacts intends to account for future intergenerational impacts by including a discount rate that reflects the rate at which society discounts future consumption (within the confines of Circular A-4). BLM uses both a 3% and a 7% discount rate in the analysis presented in

the 2017 final delay rule. The 7% rate is intended to represent the average before-tax rate of return to private capital in the U.S. economy. The 3% 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. The use of both discount rates is consistent with the guidance contained in OMB Circular A-4.

Comment 55: One commenter states that the BLM inappropriately applies research Nordhaus (2017) to estimate domestic values for the social cost of methane as 10% of global values. Nordhaus does not necessarily recommend using regional social costs of carbon as an evaluative or policy tool. In addition, Nordhaus uses regional percentage shares of 7%, 10%, 15% and 17%, with no specific recommendation to use 10%. Finally, the Nordhaus paper evaluates regional shares for social costs of carbon and not of methane. The commenter states this should be noted.

Response: The BLM disagrees with the commenter that the BLM inappropriately applies research from Nordhaus (2017) to estimate domestic values for the social cost of methane as 10% of global values. Nordhaus (2014) states that this value is “approximately the same for the two other major regional models (FUND and PAGE).” Although the regional shares reported in Nordhaus (2017) are specific to SC-CO₂, they still provide a reasonable interim approach for approximating the U.S. share of marginal damages from methane emissions. The 2017 final delay rule RIA section 7 does note that the direct transfer of the domestic share from the SC-CO₂ may understate the U.S. share of the global SC-CH₄ estimates based on DICE due to the combination of three factors: a) regional damage estimates are known to be highly correlated with output shares (Nordhaus 2017, 2014), b) the U.S. share of global output decreases over time in all five EMF-22 based socioeconomic scenarios used for the model runs, and c) the bulk of the temperature anomaly (and hence, resulting damages) from a perturbation in emissions in a given year will be experienced earlier for CH₄ than CO₂ due to the shorter lifetime of CH₄ relative to CO₂.

Comment 56: Multiple comments state that the interim domestic social cost of methane used by BLM fails to adequately account for the costs associated with trade impacts caused by climate change. The comment describes that evidence is overwhelming that the performance of the U.S. economy, including levels of domestic employment and the profitability of U.S. companies, are affected by global trade and investment. Domestic economic impacts from climate change abroad could result in damage to U.S. overseas assets, slow inward foreign direct investment, reduce corporate profits, and reduce returns on U.S. financial investments in other countries. In addition, climate change will have adverse impacts on the domestic and foreign infrastructure on which U.S. trade depends. Commenters describe that BLM reports that its domestic-only estimates are “calculated directly” from the models FUND and PAGE and for the

model DICE, BLM simply assumes that the U.S. damages are 10% of global damages. BLM is using these models in a way that they were not designed for and in ways that their designers specifically caution against. Commenters cite the recent National Academy of Sciences report on improving estimates of the social cost of carbon, which states, “Correctly calculating the portion of the SC-CO₂ that directly affects the United States involves more than examining the direct impacts of climate that occur within the country’s physical borders, which is what the 7-23 % range [estimating the share of the global economy accounted for by the U.S.] is intended to capture. Climate damages to the United States cannot be accurately characterized without accounting for consequences outside U.S. borders. In addition, the United States could be affected by changes in economic conditions of its trading partners: lower economic growth in other regions could reduce demand for U.S. exports, and lower productivity could increase the prices of U.S. imports. The current SC-IAMs do not fully account for these types of interactions among the United States and other nations or world regions in a manner that allows for the estimation of comprehensive impacts for the United States.” The comment describes that the National Academies report concludes that developing domestic-only social costs of carbon is feasible but could not be based on the Integrated Assessment Models currently used to estimate the social cost of carbon and that it is therefore unacceptable that the BLM applied this method that has been discredited in the literature. In addition, commenters note that OMB concluded in 2015, along with several other agencies, that “good methodologies for estimating domestic damages do not currently exist.” The commenters conclude that BLM is obligated to include in its domestic measure of the social cost of methane, the potential for disruptions in trade and investment due to climate impacts on our trading and investment partners, and the damages such disruptions would have on the U.S. economy, as well as to conduct a careful and transparent analysis using quantitative methods where existing techniques and modeling tools are available and qualitative analyses where such tools are unavailable.

Response: Please see the response to Comment 5.

Comment 57: One commenter opposes the use of the social cost of methane to analyze this action given the lack of accuracy and remaining questions, noting that its use goes against the need to produce an analysis that is “based on the best available science and economics.” The commenter requested that BLM omit benefits related to the social cost of methane.

Response: Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available. The SC-CH₄ estimates presented here 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.

Comment 58: Multiple commenters suggest that BLM rely on work of the IWG (models, inputs, assumptions, statistical methodologies, and even values) regarding the social cost of methane, noting that E.O. 13783 does not prohibit such use, and IWG’s work continues to represent the best available estimates. One commenter states that the IWG estimates of the social cost of methane were developed to be consistent with OMB Circular A-4 and that the BLM’s use of the interim domestic values are not consistent with guidance provided in Circular A-4. One commenter provides supporting literature to highlight that IWG estimates are the products of the most widely peer-reviewed models and best available data, and therefore meet the criterion in E.O. 13783 for using the “best available science and economics” to monetize climate effects. Another commenter describes that the BLM should rely on the robust scientific and peer-reviewed analyses by the IWG and that BLM’s replacement of its well-reasoned use of the IWG social cost of methane value with an unvetted and outcome-driving “interim domestic” value is arbitrary and capricious, and therefore unlawful.

Response: Section 5 of E.O. 13783, issued by the President on March 28, 2017, withdrew the Technical Support Documents upon which the RIA for the 2016 final rule relied for the valuation of changes in methane emissions. The E.O. further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in OMB Circular A-4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). The social cost of methane (SC-CH₄) estimates used for the 2017 final delay rule analysis are interim values for use in regulatory analyses while estimates of the impacts of climate change to the U.S. are developed.

Comment 59: Commenters recommend that BLM should rely on the most recent versions of the IAMs. In particular, BLM should use the more recent updates of the DICE model (DICE-2013R and DICE-2016R) instead of the DICE 2010 model BLM cited. This update will increase the social cost of greenhouse gases and enable better specification of the uncertainty. Commenters assert that BLM has failed to use the best available science and economics as required by E.O. 13783 in not relying on the updated models or the recommendations of the National Academies of Science regarding their use.

Response: The BLM believes that the RIA for this rule appropriately describes the uncertainties surrounding the social cost of greenhouse gases and that the values could be higher or lower than the interim domestic values used in the analysis.

Comment 60: Commenters cite issues regarding the use of 7% discount rate (see Comment 5), stating that preserving intergenerational considerations and interests are part of BLM’s statutory

authority under the Federal Land Policy and Management Act. By applying a 7% discount rate, BLM is ignoring the welfare of future generations of Americans. Further, uncertainty over the long time horizon of climate effects point to using a lower discount rate. Another commenter states that the use of such high discount rates apply to decisions regarding private capital investments and are inappropriate in the context of costs and benefits to the broader public welfare, particularly in the context of long term, intergenerational impacts such as climate change mitigation. The commenter states that BLM justifies use of these discount rates by relying on OMB's Circular A-4 but that Circular A-4 itself is explicit that use of the 7% discount rate is not appropriate in cases – such as climate change harms – involving “intergenerational discounting,” or costs and benefits involuntarily imposed on future generations. The commenter further states that IWG document regarding the social cost of carbon, created with participation by OMB, states: “Circular A-4 is a living document . . . [T]he use of 7 percent is not considered appropriate for intergenerational discounting. There is wide support for this view in the academic literature, and it is recognized in Circular A-4 itself.” OMB Circular A-4, although contemplating the use of 3% and 7% discount rates in certain contexts, is explicit that agencies must “[u]se sound and defensible values or procedures to monetize benefits and costs, and ensure that key analytical assumptions are defensible.”³¹ Circular A-4 further requires that agencies must “state in your report what assumptions were used, such as . . . the discount rates applied to future benefits and costs,” and to explain the basis for those assumptions. The commenter states that BLM has not provided this explanation .

Response: The analysis presented in the RIA for the 2017 final delay rule of impacts intends to account for future intergenerational impacts by including a discount rate that reflects the rate at which society discounts future consumption (within the confines of Circular A-4). BLM uses both a 3% and a 7% discount rate in the above analysis. The 7% rate is intended to represent the average before-tax rate of return to private capital in the U.S. economy. The 3% 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. The use of both discount rates is consistent with the guidance contained in OMB Circular A-4.

Comment 61: One commenter states that the RIA for the delay rule quotes his publication out of context and uses these quotes to draw a conclusion that he rejects in the same publication. Specifically, the commenter notes that the RIA relies on his expert opinion about the uncertainty associated with Integrated Assessment Models (IAMs) to justify setting the social cost of methane to zero until the uncertainty is resolved. He asserts that this publication concludes that uncertainty about the social cost of methane does not imply that the value should be set to zero and that there is no rational basis for doing this.

Response: The appendix to the RIA for the 2017 final delay rule has been modified in response to this comment.

Comment 62: A comment provided jointly by multiple organization states that BLM fails to follow prescribed practices for dealing with uncertainty. BLM admits that the probability distributions for the social costs of methane feature “long right tails,” but then does nothing to address the catastrophic risks represented by those tails. BLM should have followed the procedures prescribed by Circular A-4 to address uncertainty, which include formal probabilistic analysis and encourages agencies to disclose the full probability distribution of potential consequences, including upper and lower bounds, as well as central estimates. This includes running a scenario with a 2.5% or lower discount rate, or else a declining discount rate, as well as addressing uncertainty over catastrophic damages, tipping points, option value, and risk aversion by presenting an estimate at the 95th percentile. By failing to run such sensitivity analysis, the commenters state that BLM overlooks how different assumptions would change its cost-benefit calculation. The stated uncertainties associated with the IAMs used by BLM result in an underestimate of the social cost of carbon by not accounting for a host of fundamental features of the climate problem and not sufficiently modeling uncertainty. Rather than being a reason not to take action, the commenters state that uncertainty increases the social cost of carbon and should lead to more stringent policy to address climate change.

Response: The BLM disagrees with the commenters. See the 2017 final delay rule RIA appendix for a comprehensive discussion on the underlying uncertainties of the social cost of methane used in this analysis.

Comment 63: Several commenters state that BLM failed to analyze non-monetized impacts at all. For example, the commenters state BLM neglected to analyze the loss of public health and safety benefits generated by the implementation of the 2016 final rule. Public health benefits occur because the waste prevention requirements of the 2016 final rule reduce air pollution from volatile organic compounds (VOC)s, fine particulate matter, and other hazardous air pollutants. BLM also neglects to analyze the impacts of the proposed suspension on worker safety, which was one of the purposes of the 2016 final rule (see 81 FR 83049, “[T]he requirement to flare rather than vent associated gas is justified as a safety measure under the MLA.”). BLM improperly considered only the monetized costs and benefits of the suspension rule, failing to analyze the lost public health and safety benefits. The commenters state that this is in violation of E.O. 12866, which states an, “agency shall assess both the costs and benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” Commenters state that Circular A-4 requires that, “When there are important non-monetary values at stake, you should also identify them in your analysis.” and

that agencies must, “Include a summary table that lists all the unquantified benefits and costs, and use your professional judgement to highlight (e.g., with categories or rank ordering) those that you believe are most important.” Circular A-4 cautions that the most efficient alternative will not necessarily be the one with the largest monetized or quantified net benefits.

Response: Commenters incorrectly state that BLM failed to analyze non-monetized impacts. The EA that accompanies today’s action, analyzes the No-Action and BLM Proposed Action effects on climate change, air quality, noise and light impacts, wildlife resources (threatened and endangered species and critical habitat), and socioeconomics. The EA, where appropriate, incorporates by reference the 2016 final rule EA analysis. Circular A-4 recommends approaches the agencies may take in its NEPA documents, but it does not require them.

Comment 64: One commenter states that the BLM’s description of impacts for the 11-year period (2017-2027) of analysis in the RIA for the 2017 final delay rule is misleading, as the reduction in the estimated compliance costs is solely due to the delay in compliance. The commenter states that while the 2017 proposed delay rule and its RIA initially mention that the 2016 final rule compliance costs will occur in 2018 due to the proposed delay, the 2017 proposed delay rule misleadingly concludes that the delay would “substantially reduce compliance costs during the period of the suspension or delay.” The reduction in net compliance costs is therefore due to discounting and does not reflect a reduction in current-dollar compliance costs. The commenter suggests that the BLM should clarify that the source of the differences in compliance costs between the RIA for the 2016 final rule and the RIA for the 2017 delay rule result from discounting and not from an actual reduction in the costs of compliance.

Response: For this 2017 final delay rule, we track this shift in impacts over the first 10 years of implementation (after the delay) and compare against the baseline. The original period of analysis in the RIA prepared for the 2016 final rule was 10 years. We note that certain impacts, such as cost savings and royalty, are different when shifted to the future. We also note that the estimation the impacts attributed to a suspension or delay may be imprecise for several reasons (See RIA section 3.4). First, operators are likely to have suspended certain compliance activities in light of the BLM’s recent postponement of the future compliance dates in the 2016 final rule. See 82 FR 27430 (June 15, 2017). Also, while compliance with the requirements suspended or delayed by this 2017 final delay rulemaking will not be required until January 17, 2019, operators are still expected to start undertaking compliance activities in advance of the compliance date. The exact time period for which to measure the impacts of this 2017 final delay rule is imprecise.

Comment 65: Commenters call the decision to limit the analysis timespan to 10 years arbitrary and too short and expressed concerns that other aspects of the analysis such as the definition of the baseline and incremental benefits results in a significant undercounting of forgone benefits by nearly \$200 million. The comment specifically states that BLM counted beneficial effects in year 2027 as benefits of its proposed delay even though these benefits would have occurred under the 2016 rule as methane reductions would continue. Commenters further note that some of the methane reduction benefits of the 2016 final rule only take full effect starting at the end of the 10-year period. The commenter suggests that BLM instead calculate the forgone benefits by subtracting the benefits of the 2016 final rule for the year 2017; in so doing BLM will find that it has undercounted the total monetized forgone climate benefits of the 2017 delay rule by \$187-\$188 million. The commenters also recommend a much longer period of analysis (300 years) for climate effects, stating that this is required by best economic practices. In 2017, the National Academies of Sciences issues a report stressing the importance of a longer time horizon for calculating the social costs of greenhouse gases stating, “[i]n the context of the socioeconomic, damage, and discounting assumptions, the time horizon needs to be long enough to capture the vast majority of the present value of damages.” A 3% or lower discount rate for climate change implies the need for a 300-year horizon to capture all significant values.

Response: The BLM disagrees. The 10-year timeframe was not arbitrarily chosen. The BLM originally used a 10-year period of analysis in the 2016 final rule to reflect the limited life of the equipment that the rule was requiring and that the additional installations would be covered by the overlapping EPA regulations. For example, the 2016 final rule may have required the installation of a new low bleed pneumatic controller if the existing controller was out of compliance. The 10-year timeframe was used to account for the impacts of that installation and the effective life of the controller. After that controller's effective life is over, then any future installations would be compelled according to EPA's regulations, and so the impacts would no longer be ascribed to the BLM's 2016 final rule. When comparing the 2017 final delay rule impacts to the 2016 rule, it is necessary to look at the equivalent 10 year estimated lifespan of the equipment in addition to the year delay. If instead the impacts of the delay rule were constrained to the 10 year span used in the 2016 rule, the rule would be undervalued. If companies are still incurring costs for the delay rule in year 2027, then it is appropriate to be counting the social benefits that result from those costs. The omission of baseline impacts in the final year of the delay rule analysis is due to the EPA rule taking effect. Ascribing emission reduction benefits from the EPA rule to BLM's 2016 final rule would be inappropriate. The BLM received some comments from the academic community supporting the BLM's presentation of impacts from 2017 to 2027 (i.e., the calculation of costs and benefits during the 10-year period of implementation following the 1-year delay period) as opposed to using the analysis period from the 2016

final rule (i.e., impacts from 2017 to 2026). The commenter also suggests that the BLM measure the forgone climate benefits over 300 years, not 1 year. As stated previously, the requirements of the 2016 final rule would have an impact that is limited in time due to the limited effective life of the equipment being required. Any subsequent equipment required would fall under the EPA's regulations. Lastly, for reasons provided in the RIA (at section 3.2 and appendix) for this proposed rule, the BLM has chosen to use the interim domestic values of methane emissions.

Comment 66: Multiple commenters state that the 2016 RIA analyzed the effects of the Waste Prevention Rule over a 10-year period and the 2017 RIA analyzes effects over an 11-year period. The 2017 RIA thus arbitrarily assumes that the Waste Prevention Rule would have no effects in 2027 when the analysis done in the 2016 RIA did not determine the rule would have no effects in 2027, but merely ended its evaluation period in 2026. The effect of BLM's mischaracterization of 2027 impacts is to understate the effects of the Suspension Rule.

Response: As stated previously, the 10-year timeframe is based on the effective life of equipment. For the requirements in the 2016 final rule that would necessitate new installations and result in methane reductions, there is an expected and limited effective life of the equipment before replacement. The future replacements would fall under the EPA's regulations. As such, the BLM limited the costs and benefits associated with these installations to a 10-year period. While it is possible that the equipment life might in practicality be less than or greater than 10 years, the BLM believes that the basis for this period of analysis is sound. Please refer to the response to Comment 65.

Comment 67: One organization states that the BLM supported the 2017 proposed delay rule with a new calculation of the costs and benefits of the provisions of the 2016 final rule. The new calculation dramatically altered the BLM's previous benefits calculation, which was completed less than a year ago, artificially reducing the 2016 final rule's projected benefits by as much as 87%. The commenter states that the 2017 proposed delay rule so fundamentally changed BLM's previous estimates as to convert an estimated roughly \$750 million or \$1.1 billion in benefits from the 2016 final rule to roughly negative \$420 million or \$750 million—in other words, where BLM previously found the 2016 final rule would overall benefit the American people, BLM now claims the 2016 final rule would actually make us worse off.

Response: The analysis, which is detailed in the 2017 final delay rule RIA, is based on many of the same methods and assumptions BLM used for the 2016 final rule analysis, and concludes that the benefits of the 2017 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). Apart from the concern over costs, the 2016 RIA also may have overestimated benefits by the use of a social cost of methane that attempts to account for global rather than domestic climate

change impacts. A main departure from the 2016 final rule analysis is the use of a social cost of methane that accounts for domestic rather than global climate change impacts. For a detailed explanation on the assumptions and methodologies used in the domestic social cost of methane analysis, see the RIA and response to Comment 5.

Comment 68: One commenter states that the BLM drastically revised the Interagency Working Group’s (“IWG”) standardized estimates of the costs of climate change, expressed as dollars per ton of carbon dioxide or methane emitted to the atmosphere in a given year. BLM’s estimate has not been presented for public comment in any other Federal rulemaking to date. Further, BLM’s estimate is based on highly controversial and complex methodological choices—including the exclusion of all harms from climate change that occur outside of the United States, and steep discounting of the future costs of climate change. Another commenter describes that other methods for computing the social cost of carbon yield values comparable to, or larger than, the values used in the RIA for the 2016 final rule .

Response: For this action, BLM has analyzed the costs and benefits of delaying implementing the compliance requirements for certain provisions of the 2016 final rule by one year. The analysis, which is detailed in the 2017 final delay rule RIA, is based on many of the same methods and assumptions BLM used for the 2016 final rule analysis, and concludes that the benefits of the 2016 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). Apart from the concern over costs, the 2016 RIA also may have overestimated benefits by the use of a social cost of methane that attempts to account for global rather than domestic climate change impacts. A main departure from the 2016 final rule analysis is the use of a social cost of methane that accounts for domestic rather than global climate change impacts. For a detailed explanation on the assumptions and methodologies used in the analysis for the 2017 final delay rule RIA, as well as the explanation of the discounts rates applied, see the RIA and response to Comment 5. In addition, today’s final rule uses the domestic social cost of methane methodologies also employed by the EPA in the RIA for the proposed rule for Approval and Promulgation of Air Quality Implementation Plans; Virginia; Amendment to Ambient Air Quality Standard for Ozone published on October 16, 2017 (82 FR 48035).

Comment 69: One commenter states that due to the court’s October 4, 2017 decision, holding that the BLM violated 705 of the Administrative Procedure Act in postponing the January 2018 compliance dates of the 2016 final rule, the “no compliance” baseline against which the BLM compares the costs is incorrect. Some operators have begun compliance before the 2017 proposed delay rule will be finalized, and therefore the net cost savings of deferral will be lower than those outlined in the 2017 proposed delay rule RIA. The commenter therefore suggests that

in the estimation of compliance costs in the 2017 final delay rule RIA, the BLM should adjust the baseline using an estimate for the share of entities already in compliance, or emphasize that the deferred costs would be lower than those estimated in the 2017 proposed delay rule RIA. Another comment similarly describes that the 2016 is already being implemented, describing that the California v. BLM court wrote, “Regulated entities with large operations had already needed to make concrete preparations after the Rule had not only become final but had actually gone into effect.” Another commenter states that the proposed delay rule frames the savings from negating 2017-2018 compliance costs as permanent but simultaneously frames the lost benefits caused by the delay (royalties, health, environmental, and other benefits) as merely postponed by a year. In addition, the commenter states that proposed delay rule treats costs of 2017-2018 compliance as wasted if BLM rescinds or revises the 2016 final rule but does not indicate which specific requirements may be proposed for rescission or amendment. As such, BLM does not provide support for its assumption that costs of compliance will have been wasted.

Response: BLM notes in the 2017 final delay rule RIA that the estimation of the impacts attributed to a suspension or delay may be imprecise for several reasons. First, operators are likely to have suspended certain compliance activities in light of the BLM’s recent postponement of the future compliance dates in the 2016 final rule. See 82 FR 27430 (June 15, 2017). Also, while compliance with the requirements suspended or delayed by this rulemaking would not be required until January 17, 2019, operators would still be expected to start undertaking compliance activities in advance of the compliance date. Although the BLM is currently considering revisions to the 2016 final rule, it cannot definitively determine what form those revisions will take until it completes the notice-and-comment rulemaking process. Therefore, for the purposes of this analysis, the BLM assumes that the 2016 final rule will be fully implemented starting in January 2019 after the suspension period ends. The 2017 final delay rule does not suspend or delay the requirements in Subpart 3178 related to the royalty-free use of natural gas, but the only estimated compliance costs associated with those requirements are for minor and rarely-occurring administrative burdens. Also, for the most part, this 2017 final delay rule suspends or delays the administrative burdens associated with Subpart 3179. Only four of the 24 information collection activities remain, and the burdens associated with these remaining items are not substantial.

Comment 70: Multiple commenters state in a joint comment letter that BLM did not consider information indicating that the costs of the 2016 final rule are actually lower than estimated in the 2016 RIA or that the benefits are actually higher than estimated in the 2016 RIA. For example, evidence from producer Jonah Energy in Wyoming shows declining inspection costs as LDAR methods are improved, indicating the costs of the 2016 final rule will likely decline

over time, as well as cumulative gas savings that more than offset LDAR program costs. In addition, major operators are now in compliance with the 2016 final rule and are even taking additional steps to reduce natural gas leakage, further indicating that the standards are cost-effective.

Response: The BLM recognizes that, despite the status of the 2016 final rule, operators are taking and will continue to take voluntary action to reduce the waste of natural gas, especially when taking action is in their best financial interest. The commenter cites an example of a successful LDAR program in a primarily gas-producing area. The same approach may not achieve the same results in a primarily oil-producing area, for oil wells, for marginal oil wells, or for marginal gas wells. The 2016 final rule would place the same LDAR requirements on all of these various well types. The BLM also recognizes that the experiences of “major” operators may not be the same as small operators. The BLM is currently reviewing the LDAR requirements of the 2016 final rule to see if they should be rescinded or revised.

Comment 71: One commenter states that, by BLM's own reckoning, delay of the 2016 final rule would end an expected \$23 million in annual royalty payments that oil and gas companies owe to Federal and state taxpayers. BLM should explain, in detail, what has changed in its thinking and any new analysis since the 2016 final rule was released and its associated fact sheet. Specific sections are quoted from BLM's fact sheet on the methane rule.

Response: Today's 2017 final delay rulemaking action is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. It does not revoke the 2016 rule, and thus does not “end” the expected royalty payments. In the RIA for the 2017 final delay rule, BLM estimates there will be an initial reduction in royalty payments due to the rule as compliance activities that would have resulted in additional gas capture are shifted to the future. However, over the next 11-year period (2017-2027), BLM estimates that the 2017 final delay rule will increase total royalties from the baseline, albeit by a relatively small amount. For a detailed explanation on the assumptions and methodologies used in the analysis for the 2017 final delay rule RIA, see the RIA and response to Comment 5.

Comment 72: One organization states that according to its analysis, the 2016 final rule demonstrated costs of \$1.26 billion annually to the economy, while the benefits as estimated by the BLM are between \$115 - \$384 million (assuming either a 3 percent or 7 percent discount rate, EPA finalizing or not finalizing of Subpart OOOOa, and various methane reduction assumptions). A more reasonable estimate of the benefits calculates that they are at best \$90 million, hence the cost-benefit ratio of the proposed rules is nearly 14:1 cost to benefit. The \$1.26 billion cost of the proposed rule to the industry is best examined in three primary

components. First, based on the costs of implementation outlined in the RIA prepared by the BLM, JDA estimates an economic impact on jobs, wages, and lost output of \$997,199,000. Additionally, those economic losses create an additional loss of \$114,112,000 in Federal and state taxes. Finally, a conservative estimate suggests a total of \$174 million in costs associated with implementing the rule. This can be viewed as an annual incremental cost to the industry. The commenter also updated its economic analysis of the compliance burden due to the postponement of the 2016 final rule requirements until January 2018. The commenter extrapolated member-company estimates to project the cost of compliance for the industry with sections 3179.201 (pneumatic controllers), 3179.202 (pneumatic pumps), 3179.203 (storage tanks), and 3179.301 (leak detection and repair) of the 2016 final rule, and found that the cost of compliance exceeds the original estimate by \$115 million.

Response: As stated in the preamble to today's action, pursuant to E.O.s 13771 and 13783 and S.O. 3349, the BLM conducted an initial review of the 2016 final rule and found that it appears to be inconsistent with the policy in section 1 of E.O. 13783. The BLM found that some provisions of the rule appear to add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Following up on its initial review, the BLM is currently reviewing the 2016 final rule to develop an appropriate proposed revision—to be promulgated through notice-and-comment rulemaking—that would propose to align the 2016 final rule with the policies set forth in section 1 of E.O. 13783. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analysis the rule's costs and benefits and keep in mind the commenter's cost-benefit analysis.

Comment 73: One commenter states that the 2016 final rule will reduce harm to local communities and surrounding areas by reducing visual and noise impacts from flaring.

Response: The BLM agrees in part with this comment. In the EA for the 2016 final rule, the BLM described the expected impacts that the 2016 final rule would have on local communities and surrounding areas. These expected impacts varied. On one hand, the EA explained that the 2016 final rule would decrease flaring and, therefore, decrease adverse noise and light impacts to communities and dwellings (2016 EA at 55). On the other hand, the EA explained that in some narrow circumstances, the 2016 final rule would have prescribed that the operator flare gas which could have some adverse impact on nearby dwellings and residences (2016 EA at 56). Furthermore, the EA explained that when gathering lines or compressors would be added, the noise eliminated from flaring operations would be replaced with noise generated from compressor stations (2016 EA at 56). The EA for the 2017 final delay rule incorporates by reference the impacts as described in the 2016 EA and discloses the impacts expected by this regulatory action (See Section 4.2.3 of the 2017 EA).

Comment 74: Multiple commenters take issue with BLM's alternative approach to analyze the 2017 delay rule by omitting forgone climate benefits due to uncertain estimates of the social cost of methane, noting that rather than assuming \$0, uncertainty on the whole points to even higher values of climate damages. The commenters offer examples from the jurisprudence regarding the treatment of uncertainty in cost-benefit analyses, particularly as related to climate benefits, as well as studies supporting higher social cost of methane. The commenters also provide several recommendations of approaches to address uncertain damage estimates.

Response: In response to this and other related comments, the BLM removed the referenced \$0 assumption and calculations that were included in the Appendix to the RIA for the proposed rule. The BLM believes that it has sufficiently explained the uncertainty surrounding the interim domestic social cost of methane estimates that it used to calculate the foregone benefits associated with this regulatory action.

National Impacts including Energy Security

Comment 75: One commenter cites to E.O.s 13771 and 13783, and S.O. 3349 to support the assertion that some provisions of the 2016 final rule appear to add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.

Response: Thank you for your submission and support.

Comment 76: One commenter states that Federal oil and gas resources provide an important source of energy for the United States, create jobs in the oil and gas industry, and generate billions of dollars annually in revenues that are shared between Federal, state, and tribal governments. Another commenter states that America is already energy independent, and the 2016 rule does not serve the American people.

Response: BLM appreciates the commenter's perspective on the importance of revenues from oil and gas resources and energy independence. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule's costs and benefits and keep in mind the commenters' view on energy independence.

Comment 77: Commenters state that efforts to cut methane waste help create American jobs. Commenters state that the 2016 final rule allows for the creation of cutting-edge technologies and field jobs that would reduce waste and increase income. A commenter states that a number of oil and gas companies have already implemented such practices because it is economically prudent and a measure of ethical business practice and good stewardship. One commenter cites a recent report which found that the leak detection and repair (LDAR) industry offers well-

paying employment opportunities across the country that cannot be offshored, with at least 60 companies providing services to oil and gas companies in 45 states. These companies have already experienced up to 30% business growth in jurisdictions with methane regulations. A commenter is concerned that these companies could be impacted by the suspension or repeal of the 2016 final rule. Along with the uncertain future of EPA's NSPS, it may be difficult for these companies to make strategic investment decisions, which could result in lost jobs. The commenter believes these issues should have been considered in the 2017 RIA but were not.

Response: As detailed in the 2017 final delay rule RIA, the BLM does not believe that the 2017 final delay rule substantially alters the investment or employment decisions of firms for two reasons. First, the RIA for the 2016 final rule determined that the rule would not substantially alter the investment or employment decisions of firms, and therefore delaying implementation of certain requirements of the 2016 final rule for one year would likewise not be expected to impact those decisions. BLM also recognizes that there may be a small positive impact on investment and employment due to the reduction in compliance burdens (see section 4.1 of the RIA). However, since the magnitude of the reductions would be relatively small, these impacts are not expected to be substantial. Second, as explained in the 2017 final delay rule preamble, this rulemaking is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule and it does not preclude oil and gas companies from continuing to take cost-effective steps to enhance production and revenue from leases on Federal and Indian lands. As BLM develops a proposed revision of the 2016 final rule in accordance with E.O. 13783, the BLM will continue to evaluate impacts on the jobs and income.

Comment 78: Commenters state that while BLM acknowledges that the delay rule is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners, it fails to address the impacts of reduced royalty revenues to state, local and tribal governments. Another commenter notes that suspension of the 2016 final rule could indirectly impact other industries like those in the outdoor recreation and tourism sectors. Suspending or repealing the 2016 final rule could have fiscal impacts on local communities and the larger recreation and tourism industries that were not accounted for in the RIA for the proposed rule. One commenter specifically highlights that, in several areas in New Mexico, oil and gas development overlaps with important habitat for big game species. While BLM's EA suggests that wildlife populations would benefit from postponing additional surface disturbance and truck traffic that would be required for compliance with the 2016 final rule, the commenter states that the proposed delay will generate additional disturbance in the form of increased venting and flaring. The New Mexico Department of Game and Fish has identified this as a substantial threat to big game species in the state.

Response: Pursuant to E.O. 12866 and NEPA, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has presented all of the foreseeable impacts that this 2017 final delay rule would have, based on the final analysis of the 2016 rule and to the extent that data and available methodologies permit and consistent with the best science currently available. The BLM's 2017 EA (at section 4.2.3) discusses the impacts that the 2017 final delay rule would have on recreation. The BLM appreciates the perspective of the commenter.

Comment 79: The 2017 RIA forecasts a reduction in royalties of \$2.61 million in Year 1, stating that this is neither a cost nor benefit because royalty payments are recurring income to Federal or tribal governments and costs to the operator or lessee (i.e., transfer payments). However, OMB's Circular A-4 instructs agencies to address transfer payments in a separate discussion of the regulation's distributional effects. No such description is forthcoming from BLM. This omission is glaring because BLM is obligated to consider this under OMB guidance but also as one of its fundamental statutory obligations to manage oil and gas development on public lands for the benefit of the public. The commenters state that natural gas royalties are an important source of revenue for state governments with significant natural gas production on Federal lands and that BLM must consider and discuss the effect of lost royalty revenues to state, tribal, and local governments from the suspension proposal.

Response: Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available. The discussion that commenter refers to is already in the 2017 final delay rule RIA. See section 4.4.2 to see the discussion of royalty impacts as a subsection of distributional impacts.

Comment 80: One commenter states that the 2016 final rule promotes domestic natural gas production, which in turn supports energy security, national security, and economic productivity. Excerpts from the preamble to the 2016 final rule are cited.

Response: The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. This comment is therefore outside the scope of the current 2017 final delay rulemaking action.

Comment 81: One commenter states that the 2016 final rule will force many North Dakota oil and gas operators to refocus their planned drilling activities to spacing units that do not contain Federal lands rather than confront the possibility that BLM will restrict production on new wells

under section 3179. The shifting of capital investment to state and privately owned lands, and the delay or loss of full development on Federal and Indian lands will result in significant loss of oil and gas resources and associated revenues estimated at more than \$1 billion over the next two to five years. The commenter also states that North Dakota would have lost more than 1,000 jobs from the relocation of oil and gas operations due to the implementation of the 2016 final rule, based on a study done by the North Dakota Department of Mineral Resources in conjunction with North Dakota State University Department of Agribusiness and Applied Economics, and the Vision West Project. The commenter suggests revision to the 2016 final rule.

Response: The 2017 final delay rule postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year, while BLM reconsiders the requirements in accordance with E.O. 13783. This delay may alleviate the concerns raised by the commenter regarding economic impacts in the short term. As it has done previously, BLM will analyze the costs, economic impacts, and benefits of revisions to the 2016 final rule as part of the rulemaking process.

Climate Change

Comment 82: Several commenters state that methane is a potent greenhouse gas that contributes to climate change, noting that methane has higher global warming potential than carbon dioxide. Some commenters state that over a 20-year period, methane is 84 to 86 times more potent as a greenhouse gas than carbon dioxide (or over 36 times the global warming potential of carbon dioxide on a mass basis over 100 years), and therefore oil and gas companies should not allow methane to escape into the atmosphere. One commenter notes that people in the Western U.S. are increasingly impacted by climate change, which has been linked to more severe droughts, disturbance of natural runoff cycles, and heightened threat of wildfires.

BLM Response: Section 4.2.1. of the 2017 final delay rule EA quantifies the estimated additional methane emissions and discusses the reduction in GHG emissions relative to the baseline that are estimated from the action. The 2017 final delay rule RIA estimates and analyzes the social cost of methane as a cost for this action. For a detailed explanation on the calculations for the social cost of methane for this action, see the RIA and response to Comment 5. As BLM develops a proposed revision of the 2016 final rule in accordance with E.O. 13783, the BLM will continue to evaluate and address potential environmental impacts.

Comment 83: One commenter states that 25% of the man-made global warming and climate disruption is caused by methane emissions, and that implementing the 2016 rule will reduce methane emissions by 35%. Another commenter highlights a recent study that finds that

methane pollution from venting and flaring from onshore Federal leases rose more than 51% between 2009 and 2013, according to government data.

Response: BLM notes that the one-year 2017 final delay rule implementation of the compliance requirements for certain provisions of the 2016 final rule is not expected to materially affect methane emissions as compared to the baseline data analyzed in the 2017 final delay rule RIA. The 35% reduction in methane emissions cited by the commenter appear to be from the RIA for the 2016 final rule, which is an estimated reduction of methane emissions from Federal and Indian oil and gas leases. Emissions from these sources represent a small fraction of total domestic methane emissions. As discussed in the 2017 final delay rule RIA, in accordance with E.O. 13783 and OMB Circular A-4, BLM analyzed the environmental effects of delaying the 2016 final rule implementation and determined that the benefits of the 2017 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). As part of the cost analysis, the 2017 final delay rule RIA estimates and analyzes the social cost of methane. For a detailed explanation on the calculations for the social cost of methane for this action, see the RIA and response to Comment 5. As BLM develops a proposed revision of the 2016 final rule in accordance with E.O. 13783, the BLM will continue to evaluate and address potential environmental impacts.

Comment 84: One commenter cites a peer-reviewed study from Alberta (Canada) published in the *Environmental Science and Technology* journal, which found that heavy oil recovery emits 3.6 times more methane than previously thought and total methane emissions were 25 to 50% higher than previous government estimates. The commenter further states that the amount of methane escaping into the atmosphere from oil and gas operations in Ohio, West Virginia, and Pennsylvania has not yet been correctly estimated.

Response: BLM acknowledges that there is uncertainty on the quantity of gas vented and flared. The BLM reviewed data from the ONRR and 2016 GHG Inventory to develop estimates of the average volume of gas vented and flared. See the 2016 RIA for a complete discussion of the methodology and data used to estimate lost gas volumes (2016 RIA at 15). In the supporting analysis for the 2016 final rule and in the 2017 final delay rule RIA, BLM provides estimates of the average volume of gas vented and flared based on 2014 data (110 Bcf), which are the best estimates available at this time for leases on Federal and Indian lands. BLM will continue to update the data as it reconsiders the 2016 final rule in accordance with E.O. 13783. In the 2017 final delay rule RIA, BLM analyzed the foregone benefits of the 2016 final rule due to the delay, and found that the foregone benefits are about half of the compliance cost savings, on an annualized basis. Even if BLM were to use methane emissions factors that are 50% greater, the compliance cost savings for this action would still outweigh the foregone

benefits, on an annualized basis. Further, BLM notes that whereas the benefits of the 2016 final rule accrue over time, a significant share of the costs are incurred upfront as lease operators replace or install equipment to comply with new requirements or make changes in their operating procedures (these costs are annualized over the 10-year life of the equipment for the purpose of comparing benefits to the costs). These costs, once incurred, would be stranded if the requirements were to change such that the equipment and procedures are no longer warranted. For this reason, it is appropriate for BLM to seek to avoid imposing costs that may ultimately be unnecessary.

Comment 85: One commenter states that a complaint in the constitutional climate lawsuit, *Juliana v. U.S.*, against the U.S. government in the U.S. District Court for the District of Oregon asserts that, through the government's affirmative actions that cause climate change, it has violated the youngest generation's constitutional rights to life, liberty, and property, as well as failed to protect essential public trust resources. The case is scheduled to go to trial on February 5, 2018. When arguments are being made about "the government's affirmative actions that cause climate change," an action by the Interior Department to delay an existing rule that is designed to reduce known climate impacts from methane emissions would be a compelling example of those affirmative actions .

Response: BLM is aware of the ongoing *Juliana v. U.S.* case. BLM is taking affirmative actions with today's action to ensure, in accordance with E.O. 13783, the "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." Thus, the policy set forth in E.O. 13783 is aimed at ensuring the "clean" and "prudent" (i.e., not wasteful) development of energy resources. The 2017 final delay rule RIA estimates and analyzes the costs as well as the benefits to society, and concludes that the benefits of the 2017 final delay rule (avoided compliance costs) exceed the costs (forgone savings and environmental improvements). The analysis of impacts intends to account for future intergenerational impacts by including a discount rate that reflects the rate at which society discounts future consumption (within the confines of Circular A-4).

Comment 86: Multiple comments oppose delaying the 2016 final rule asserting the responsibility of the Federal government to address the methane emissions as sources of climate change and note that these emissions are increasing and placing the planet at risk. Multiple comments state that all actions that reduce methane emissions are urgent and that delaying the 2016 final rule is taking a step backwards in the efforts to reduce greenhouse gas emissions. One commenter notes that the methane emissions associated with the rule is the climate equivalent of adding 850,000 passenger vehicles at the 100-year global warming potential. One comment asserts that fixing the detrimental effects of climate change is especially the

responsibility of the industrialized world who have used the majority of the world's resources and have forced the most vulnerable to suffer the devastating consequences of climate change the most.

Response: BLM appreciates commenters' concerns regarding methane emissions and its potential impact on climate change. In accordance with E.O. 13783, BLM is committed to furthering the national interest by promoting "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." Thus, the policy set forth in E.O. 13783 is aimed at ensuring the "clean" and "prudent" (i.e., not wasteful) development of energy resources. BLM acknowledges that there will be a short-term increase in the amount of methane and VOCs emitted during the one-year delay, relative to the baseline, there will be essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and RIA Section 4.2). While BLM did not monetize the forgone benefits from VOCs emissions, it notes that the impact is transitory and BLM will analyze the costs and benefit.

Air Quality and Public Health

Comment 87: Many commenters state that the 2016 final rule will reduce air pollution from oil and gas production, and that subsequently delaying the implementation of the 2016 final rule poses a public health challenge, particularly to the most vulnerable populations and communities, and impacts the environment. Commenters state that leaking, venting, and flaring from natural gas facilities and operations puts our families at considerable health risk. Several commenters state that 74,000 people live within a mile of an oil and gas facility on public or tribal lands, and the suspension of this rule subjects them to immense health risks. One comment expresses that public health organizations claim the 2016 final rule will reduce risk of asthma, cancers, heart and lung problems, neurological disorders, and birth defects related to emissions from oil and gas operations.

Response: BLM acknowledges that there will be a short-term increase in the amount of methane and VOCs emitted during the one-year delay, relative to the baseline, there will be essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and RIA Section 4.2). While BLM did not monetize the forgone benefits from VOCs emissions, it notes that the impact is transitory and BLM will analyze the costs and benefits, keeping in mind the commenter's concerns about stated public health risks, that may result from any changes it proposes to the 2016 final rule in accordance with E.O. 13783.

Comment 88: Multiple comments assert that, by failing to quantify some forgone benefits, such as the public health consequences of the additional tons of VOCs that will be emitted, the impacts on communities and wildlife of unchecked flaring, and unquantified climate effects, BLM fails to explain why the cost savings of the 2017 delay rule justify the forgone benefits.

Response: Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available.

Comment 89: Many commenters describe that the implementation of the 2016 final rule not only results in the capture of methane, but also the capture of VOCs, such as benzene, a known carcinogen. The commenters state that VOC releases degrade our ambient air quality, with long-term health impacts related to the exposure of low levels of VOCs. Several commenters refer to a fact sheet released by the Department of Interior stating that the 2016 final rule could prevent the release of 250,000-267,000 pounds of VOCs into the air annually, also highlighting that DOI has suggested that the 2016 final rule could result in net economic benefits. Similarly, another comment suggests that delaying the rule would result in the emission of an additional 175,000 tons of methane and 250,000 tons of harmful volatile organic compounds into the atmosphere in the first year alone.

Response: Regarding the net economic benefits of the 2017 final delay rule, BLM's analysis of the costs and benefits of today's action shows that the forgone benefits from delaying the implementation by one year are less than the avoided compliance costs, resulting in net benefits of \$19 to 29 million over the 11-year evaluation period using a 3% discount rate (see RIA section 4.3). BLM acknowledges that there will be a short-term increase in the amount of methane and VOCs emitted during the one-year delay, relative to the baseline, there will be essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and RIA Section 4.2). While BLM did not monetize the forgone benefits from VOC emissions, it notes that the impact is transitory and BLM will analyze the costs and benefits that may result from any changes it proposes to the 2016 final rule in accordance with E.O. 13783.

Comment 90: Many commenters state that methane is a dangerous air pollutant and also contributes to smog, in addition to being a potent greenhouse gas, and state that implementing the 2016 final rule will reduce local air pollution. One comment asserts that the forests outside of Farmington, New Mexico are noxious due to a methane cloud from mismanaged pipeline and gas wells. The commenter suggests the 2016 final rule could cure that methane cloud. Similarly, another comment states that a methane cloud over Bayfield, Colorado affects local students. Multiple comments highlight the methane clouds in Four Corners, CO and San Juan County,

New Mexico as being public health concerns. One comment states that family members in Four Corners suffer from headaches and breathing difficulties. Another comment describes the Four Corners, CO methane cloud as being the largest in the country and resulting in significant health effects on the Native American population.

Response: In the 2017 final delay rule EA and RIA, BLM analyzed the forgone air quality benefits of delaying implementation of the 2016 final rule and found short-term impacts during the interim period and essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and RIA Section 4.2). In reconsidering the 2016 final rule in accordance with E.O. 13783, BLM keep in mind the various “methane clouds” raised by the commenters and will evaluate requirements that promote clean and safe development of energy resources while avoiding unnecessary regulatory burden.

Comment 91: Many comments state that it is our responsibility to care for our land, water and air and to protect the health of our communities, and especially the children and the future. One commenter states that energy saved from being wasted on Federal and tribal lands by these rules could save more than \$300 million worth of natural gas annually, and that this saved resource could supply energy to 760,000 homes annually. The commenter states that the 2016 final rule helps clean our air by preventing leaks from pollutants and volatile organic compounds like benzene, toluene, ethylbenzene and xylene and prevents health problems like asthma that affect our children and elderly. Another commenter notes that methane is a contributor to background ozone levels, which cause asthma and early birth in people and reduce agricultural productivity. One commenter noted that the benefit of avoided morbidity (i.e., avoided sick days) were not included in the analysis.

Response: This one-year 2017 final delay rule does not substantively change the 2016 final rule, it simply postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. BLM provides estimates of the benefits forgone by the one-year delay in the 2017 final delay rule RIA. Based on revised assumptions regarding the impacts of methane emissions (see response to Comment 5), BLM estimates that the 2017 final delay rule reduces the cost savings over the one-year period of analysis by \$21 million and reduces the environmental benefits over that same period by \$0.3 million (using 3% discount rates). As shown in detail in section 3 the 2017 final delay RIA, these benefits are outweighed by estimated reductions in compliance costs of \$40 to \$49 million. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule’s costs and benefits and keep in mind the commenters’ statements.

Comment 92: Commenters state that existing State rules have resulted in reduced waste in Colorado of a valuable natural resource and reductions in air pollution that harms human health

and reduces agricultural productivity. However, the commenters state that the air quality is affected not only by leaks in Colorado but by oil and gas leaks from neighboring states. The high ozone levels in NorthWest Colorado are caused primarily by oil and gas leaks in neighboring Utah. The comment asserts that rules that reduce oil and gas leaks are needed in all states, not just a few and that oil and gas producers need a common set of rules to follow, rather than a patchwork of rules that differ by state.

Response: BLM appreciates the commenter's perspective on the need for a rule that addresses the potential oil and gas leaks in various states. Today's action is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Comment 93: One commenter states that methane release can trigger life-threatening asthma attacks, worsen respiratory conditions, and cause cancer, which disproportionately affects Hispanic communities. The comment cites the U.S. Environmental Protection Agency as reporting that Hispanics are among those facing the greatest risk of exposure to air pollutants and are three times more likely to die from asthma than any other racial or ethnic group.

Response: The BLM notes that the 2017 final delay rule delays or suspends implementation of the compliance requirements for certain provisions of the 2016 final rule by one year and is not expected to materially affect methane emissions as compared to the baseline data analyzed in the 2017 final delay rule RIA. The BLM concluded that the 2016 final rule did not lead to any significant or adverse differential environmental justice impacts (See 2016 final EA section 4.2.7). Any impacts from gathering lines, including impacts to minority and low-income populations, would be evaluated on a project-specific basis by the local BLM Field Office, which is better positioned to understand local communities, including minority and low-income populations. Adverse impacts from the implementation of the 2016 rule provisions could be caused by an increased number of pickup truck trips to replace pneumatic controllers and pumps, perform leak detection inspections, install artificial lift systems, and install combustors or VRUs on oil and condensate storage tanks. These impacts are expected to be short-term and minor in nature. As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule's costs and benefits, including any potential environmental justice impacts.

Rule Process

Comment 94: Several organizations request that BLM extend the public comment period on the 2017 proposed delay rule to at least 60 days and hold one or more public hearings for the 2017

proposed delay rule. Commenters stated that the public hearings would enable individuals from Western communities affected by flaring, venting and leaks to share their perspectives on the importance of the 2016 final rule. They state that the 2017 final delay rulemaking should comply with Federal agencies' standard procedures to ensure adequate public notice of and opportunity to comment on important regulatory actions with significant impacts on the public. This should include a reasonable period to provide meaningful public comment and a chance to provide input at public hearings on the proposal. Allowing the public only 30 days to prepare and submit comments on the 2017 proposed delay rule is clearly inadequate, particularly given the fundamental, highly technical, and extremely controversial changes to the benefits estimates included in the 2017 proposed delay rule, and the public comment opportunities that were provided for the 2016 final rule and its cost estimate methodologies. Sixty days is the minimum comment period recommended under E.O. 12866, in order for the public to provide meaningful comment, and much longer comment periods are common for significant rulemakings such as this one. Several commenters state that when developing the 2016 final rule, the BLM proactively reached out to stakeholders and held multiple rounds of hearings and tribal outreach sessions before and after issuing the 2016 final rule.

Response: E.O. 12,866, as amended, states that agencies “[t]o the extent feasible and permitted by law,” shall provide the public with a 60 day comment period. Given the scope of the proposal, short delay, and recent comments on the 2016 final rule, BLM determined a 30-day comment period to be appropriate. The 2017 final delay rulemaking is narrow in scope and merely suspends and delays regulatory provisions that were very recently the object of public comment procedures. The BLM is not required to hold public meetings. For today’s action, as the commenter mentions was done for the 2016 final rule, BLM proactively engaged in the appropriate amount of stakeholder outreach. As the BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will provide the public with appropriate notice and comment on the rule.

Comment 95: Commenters state that BLM has not provided for sufficient public engagement or stakeholder outreach. The BLM has attempted to limit public engagement and stakeholder input throughout this process. The agency never announced its intention to move forward with a notice and comment rulemaking to suspend the 2016 rule. An advanced notice of proposed rulemaking (ANPR) was never published in the Federal register, instead the proposed rule was first identified in the President’s Unified Agenda as a deregulatory action in late July. Little additional information was provided.

Response: The BLM has not attempted to limit public engagement and stakeholder input throughout the process. The proposed delay rule provided for a 30 day comment period, and BLM received over 150,000 comments. BLM carefully reviewed and

considered all substantive comments, and has made the necessary corrections to the rule and supporting documents in response to the comments and has appropriately summarized the comments and provided responses, as required by NEPA and its implementing regulations. BLM will provide appropriate notice and opportunities to the public, including individuals from Western communities, to comment on any future rule that would reconsider provisions of the final 2016 rule.

Comment 96: Commenters stated that, given the lengthy 2016 final rule rulemaking process, which lasted over two years, more than a year will be needed to revise the new final rule. Thus, BLM should stay compliance dates for two years, as suggested as an alternative in the discussion of the 2017 proposed delay rule. As to ensure a smooth transition to the revised rule and avoid creating further regulatory uncertainty for industry. Limiting the suspension to one year preserves the threat that the 2016 final rule could go back into effect before the administrative rule-making process for the revised rule is complete. Such an outcome will detract from BLM's mission by creating confusion, unnecessarily burdening the regulated community and divert scarce agency resources and time. The longer delay was also supported by another commenter who added that a longer period would provide more time for operators to evaluate whether to continue producing oil from wells that may not be commercially viable given compliance costs and thereby avoid these unnecessary costs. This commenter requests a delay of the portions of the rule pertaining to site inspections (the commenter does not identify specific requirements) by at least 2 years to provide operators the opportunity to evaluate the compliance costs for each well relative to the benefits of continuing oil production, and direct avoided inspection costs to shut-in those wells that are not commercially viable.

Response: The BLM decided to promulgate a suspension or delay for one year, which it believes to be the minimum length of time practicable within which to review the 2016 final rule and undertake a notice-and-comment rulemaking to revise that regulation. In addition, to reduce uncertainty while ensuring environmental protection, BLM limited the 2017 final delay rule to the minimum necessary to achieve revision to the regulations, which it determined to be one year. BLM has already made significant progress in developing a proposed revision of the 2016 rule and the BLM therefore fully expects that the revision will be completed before January 17, 2019. Operators may continue to evaluate their wells in the interim period to determine their commercial viability.

Comment 97: Commenters state that the fact that the Secretary has already determined the outcome of the rulemaking defeats the principle that meaningful comment requires agencies to keep an open mind.

Response: The Commenters are incorrect in stating that the Secretary has already determined the outcome of the rulemaking. Public statements about BLM's plan to reconsider the 2016 rule and its intentions behind the proposed delay rule do not amount to final decisions made prior to conducting NEPA.

Comment 98: Commenters state that BLM's rationales for suspending or delaying specific provisions are arbitrary and capricious. One commenter notes that an "agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 42 (1983). Commenters further suggest that BLM failed to articulate a valid basis for suspending the requirements of a rule that it recently found was necessary to fulfill its statutory mandates. BLM attempts to justify its suspension and delay of most substantive provisions of the Waste Prevention Rule by stating that BLM "wants to avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future." As one commenter notes, BLM's stated justification of avoiding "substantial" compliance costs for operators to meet the requirements of the 2016 final rule is contradicted by its own findings that such costs are minor and represent a tiny fraction of the profit margin for even the smallest companies. They further note that this rationale is not a legitimate basis for suspending the requirements of a validly promulgated rule. This commenter also states that BLM's alleged compliance with E.O. 13783 or S.O. 3349 cannot provide the reasoned basis for the Proposed Suspension required by the APA. BLM also "wishes to avoid expending scarce agency resources on implementation activities for such potentially transitory requirements." Commenters note that these general assertions do not provide a rational basis for the suspension or delay of the Waste Prevention Rule provisions. BLM also has provided no substantive rationale or explanation for why each specific provision should be suspended or delayed. Nor has BLM endeavored to explain the basis or factual support for the issues it now vaguely raises, given that the agency already extensively considered and made contradictory. Another commenter notes that BLM does possess the legal authority to suspend or postpone provisions of the 2016 final rule through the APA.

Responses: The BLM does not believe it has acted arbitrarily and capriciously in promulgating today's final rule; the preamble, RIA, responses to comments, and other associated documents collectively and adequately explain the rationales and factual bases for each provision in the rule, the relevant factors that the BLM considered, and the reasons why the BLM did not consider certain other factors.

Comment 99: One commenter states that the 2016 final rule was rushed to finalization before a new administration took office, which is evidenced by its final publication being after the general election on November 8, 2016. The commenter therefore thinks that unintentional

consequences will result since the time to correctly create the 2016 final rule was not taken, and supports the delay and suspension of certain requirements of the 2016 final rule.

Response: BLM disagrees with this commenter that the 2017 delay rule is necessary because of faults in the rulemaking process BLM followed. The 2016 final rule was the culmination of a process that started at least 2 years prior and included stakeholder consultations, outreach, proposed rule publication, review of comments, and analyses. See 81 FR 83008 for details on the rulemaking timeline. For the reasons that necessitated review of the 2016 final rule and promulgation of the 2017 final delay rule, please see the response to Comment 1.

Comment 100: One commenter requested that the BLM expedite this rulemaking to ensure completion before the 1/17/18 existing source sections become effective as they will be very costly and likely result in the shut in of thousands of marginal wells.

Response: In publishing the proposed delay rule and the final delay rule, BLM has been mindful of the 2016 final rule's January 17, 2018 compliance date. As stated in the preamble to the 2017 proposed delay rule, the BLM is currently reviewing the 2016 final rule and intends to avoid imposing likely considerable and immediate compliance costs on operators for requirements that may be rescinded or significantly revised in the near future.

Comment 101: Commenters state that given the significance of the proposed action, an environmental impact statement (EIS) is the appropriate level of analysis needed. Commenters note that BLM has not yet conducted the analysis necessary to determine whether an EIS is required, as evidenced by its failure to provide a draft finding of no significant impact (FONSI). The commenters note that while the FR notice stated that a draft FONSI was posted in the docket, there was no draft FONSI available in the e-docket. Commenters also indicated that BLM fails to take into account considerations of both context and intensity when determining significance of the effects of the proposed rule. In failing to account for context, the commenter indicates BLM fails to take a hard look at localized impacts. Commenters state that at least three of significance factors relating to intensity, as defined by CEQ, would require BLM to prepare an EIS. These include public health and safety, controversy, and cumulative significance.

Response: Based upon a review of the EA and the associated documents referenced in the EA, and considering the criteria for significance provided by the CEQ regulations implementing the NEPA and the comments submitted on the EA, the BLM determined and detailed in the FONSI that the Proposed action (Alternative B in the EA) will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the potentially affected areas. Therefore, an EIS was

not required in order to implement the Proposed -Action Alternative (Alternative B) described in the EA. For the detailed analysis of the criteria for significance, see the FONSI accompanying today's action. NEPA and its implementing regulations do not require a public review period for the FONSI.

Comment 102: Commenters state that in its EA, the BLM failed to take a “hard look” at the impacts of the proposed action. In describing the direct and indirect effects of Alternative A, BLM simply states there would be no incremental impacts since “that option does not alter the baseline.” This is misleading and erroneous because the 2016 Rule has not yet been implemented, and therefore the baseline is still what it was prior to finalization of the 2016 rule. The effects of fully implementing the 2016 Rule were described in the EA and RIA. Alternative A would have positive impacts on climate change, air quality, noise and light pollution and wildlife resources. BLM failed to analyze these impacts in any meaningful way in the EA. BLM also fails to meaningfully analyze the potential negative impacts of suspending the rule – which as we discuss, could include decreased royalties, increased GHG emissions, and harm to public health – as well as provide a careful accounting of the claimed positive impacts associated with the suspension. Based solely on the analysis conducted in the EA, there appears to be little if any benefit associated with the proposed action.

Response: Commenters are incorrect in their assertion that BLM failed to take the requisite “hard look” at the environmental impact of the proposed action in the draft EA. The fact that BLM chose to include the expected effects of the 2016 final rule in the “baseline” environment does not mean that the BLM’s analysis of the environmental impacts of the proposed action was inadequate. In fact, the incorporation of the 2016 final rule into the baseline environment has exactly the opposite effect. Were BLM not to include the not-yet effective requirements of the 2016 final rule in the baseline, then the BLM’s analysis of the proposed suspension action relative to the baseline would necessarily find fewer (and possibly no) impacts, as the suspension action would essentially maintain the environmental status quo. In any event, commenters are incorrect because the expected environmental impacts of the 2016 final rule were described on pages 9 through 11 and throughout section 4.1 of the draft EA.

Comment 103: Commenters note that BLM has predetermined the outcome of its proposed suspension rule, thus precluding any meaningful public participation in the rule making and violating the APA and NEPA requirements. Commenter notes that BLM has already publicly stated its intention to suspend and delay the 2016 final rule requirements in two documents filed in Federal district court on October 20, 2017, before the close of the comment period.

Response: Commenters are incorrect in stating that BLM has predetermined the outcome of this rulemaking. Public statements about BLM's plan to reconsider the 2016 rule and its intentions behind the proposed delay rule do not amount to final decisions made prior to conducting NEPA.

Comment 104: Commenter states BLM failed to analyze a full range of reasonable alternatives. The commenter highlights several ways which they believe illustrate that the range of alternatives considered by BLM does not meet NEPA requirements. First, by defining a purpose and need focused on ensuring that operators do not incur substantial and unnecessary compliance costs, BLM has violated NEPA by unreasonably narrowing its analysis such that it considers only alternatives that benefit private interests instead of the public as a whole. Second, the commenter states that BLM should have considered alternatives that satisfy its MLA and FLPMA duties. Third, the commenter provides several alternatives it believes BLM should have considered, including an alternative that would suspend leasing and permitting while the 2016 rule is delayed, and delaying only portions of the rule with future compliance dates. Finally, the commenter states that BLM should have analyzed the impacts of a six-month delay.

Response: The Commenter incorrectly states that BLM failed to analyze a sufficient range of reasonable alternatives. The EA for today's action analyzed Alternative A (No Action) and Alternative B (BLM Proposed Action), which are the reasonable alternatives that would meet the purpose and need of today's action. See Section 2 of the EA for a description of each alternative. Section 2.4 of the EA describes the alternatives considered but eliminated from further analysis. The RIA analyzed the impacts for a 6 month and 2 year delay, but they were both found to be not technically or financially feasible, therefore they were not carried forward for analysis.

Comment 105: One commenter stated that BLM's EA provides a misleading context for the incremental methane emissions by: (1) not translating the forgone methane forgone reductions into carbon dioxide-equivalent, the unit BLM uses for other emissions sources, and (2) not monetizing the incremental emissions.

Response: The EA as well as the other document accompanying today's action are not misleading. Section 3.2 of the RIA for the final delay rule estimates the forgone domestic climate benefits. Pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available.

Comment 106: In support for delaying and suspending the implementation of the 2016 final rule requirements, one commenter expressed their opinion that, in promulgating the 2016 final

rule, BLM failed to address the concerns the commenter and others raised about the rule provisions during the earlier comment period.

Response: The commenter did not provide details on the specific concerns that BLM allegedly failed to address.

Comment 107: One commenter noted their disagreement with BLM’s determination during the 2016 final rule development that the “proposed rule does not have sufficient Federalism implications to warrant preparation of a Federalism Assessment” and requested that BLM undertake a comprehensive review of the State’s [North Dakota’s] laws and regulations.

Response: 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 will 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. In the 2016 final rule, the BLM determined that that rule did not have Federalism implications and therefore, this rule, since it is merely a delay or postponement of that rule, would by extension, not have Federalism implications either.

Comment 108: Several commenters cite the extensive process used to develop the 2016 final rule, including years of research, analysis, and public engagement, including approximately 330,000 public comments. One commenter requests the current rulemaking follow the exact same procedures and requirements applied to the 2016 final rule.

Response: The BLM finds no reason to mimic the years-long process of developing the 2016 final rule for the current rulemaking, which involves a straightforward, one-year delay of a specific set of regulatory requirements which were themselves the object of public notice-and-comment in 2016. The BLM believes that the 30-day comment period provided an adequate opportunity for the public to provide input on a very narrow rulemaking.

Comment 109: One commenter disagrees with BLM’s characterization of the rule as “straightforward” and “narrow.” The commenter states that the rule substantively amends the 2016 final rule by rescinding regulations that are already in place and delaying significant, future compliance deadlines for one year. The commenter states that the rule would allow for waste of public natural gas, decrease royalty payments to states, tribes, and local communities, and pollute the air. The commenter notes that the rule represents a dramatic change in position from BLM’s prior conclusion that the suspended requirements represent “reasonable precautions to prevent waste of oil or gas,” 30 U.S.C. § 225, as required by the MLA. The

commenter also states that the BLM did not follow proper procedure to make a substantive revision to an already-effective rule prescribed in *FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 514-16 (2009). As the basis for reversing course, an agency may not offer a justification “that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *State Farm*, 463 U.S. at 43. When an agency does make new factual findings to support a new policy, if those findings contradict the prior record, the agency faces a higher burden in demonstrating that the change is reasoned. *Fox Television*, 556 U.S. at 515. An agency may not “disregard contrary or inconvenient factual determinations that it made in the past, any more than it can ignore inconvenient facts when it writes on a blank slate.”

Response: BLM disagrees with the commenters’ characterization of the legal standard for amending regulations. BLM believes it has a reasoned explanation for reconsidering the 2016 final rule and delaying implementation of the provisions of the 2016 rule with a vast majority of the compliance costs while doing so. For the reasons as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule and reconsidering the 2016 final rule, see the preamble to today’s 2017 final delay rulemaking and response to Comment 1. BLM believes the delay rule is straightforward because it does not make numerous changes to the 2016 final rule or “reverse course,” it merely delays or suspends (not rescinds) implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. BLM acknowledges that there will be a short-term increase in the amount of methane and VOCs emitted during the one-year delay, relative to the baseline; however, there will be essentially no increase over the 11-year evaluation period (See EA Section 4.2.1 and 4.2.2 and RIA Section 4.2). While BLM did not monetize the forgone benefits from VOC emissions, it notes that the impact is transitory and BLM will analyze the costs and benefits that may result from any changes it proposes to the 2016 final rule in accordance with E.O. 13783.

Comment 110: One commenter states BLM fails to meet its statutory requirements for review and/or consultation under NEPA. Specifically, the commenter states that BLM’s attempt to treat the rule as maintaining status quo is inaccurate, rather the rule is a deregulatory action with new and significant environmental impacts, constituting a major Federal action that requires a full Environmental Impact Statement. The commenter further asserts that BLM violates NEPA requirements and associated regulations in its EA because it assumes that that 2016 final rule will be fully implemented at the end of the delay period, rather than BLM’s intention to rescind or significantly amend major rule provisions.

Response: The commenter is incorrect in its assertion that the BLM’s NEPA analysis treated the proposed action as maintaining the status quo. To the contrary, the baseline

environment analyzed by the BLM in the EA incorporated the expected effects of the 2016 final rule. The EA appropriately analyzes the environmental impacts of the proposed action, which is a one-year suspension of certain requirements in the 2016 final rule. The BLM will analyze the environmental impacts of any proposed revision of the 2016 final rule as required by NEPA. The commenter is also incorrect in its assertion that the proposed action constitutes a major federal action that requires a full EIS. Based upon a review of the EA, and the associated documents referenced in the EA, and considering the criteria for significance provided by the CEQ regulations implementing the NEPA, the BLM determined that the Proposed action (Alternative B in the EA) will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the potentially affected areas. Therefore, an EIS was not required in order to implement the Proposed -Action Alternative (Alternative B) described in the EA. For the detailed analysis of the criteria for significance, see the FONSI accompanying today's action.

Comment 111: Several commenters state that the rule disparately impacts vulnerable communities and violates environmental justice requirements under E.O. 12898. As example, the 2016 final rule identified environmental health benefits to tribal members living in proximity to Indian oil and gas operations but did not evaluate the negative impacts on these communities of the rule. Commenters state that disparate impacts across local and tribal communities may create inequities to certain particularly vulnerable communities and warrant thoughtful consideration through an EIS.

Response: The BLM did not ignore the potential environmental impacts of the proposed action on communities in close proximity to Federal and Indian oil and gas development. For example, Section 4.2.5 of the EA discusses expected impacts on communities living near oil and gas operations. The BLM also concluded that the 2016 final rule did not lead to any significant or adverse differential environmental justice impacts (See 2016 final EA section 4.2.7). As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to analyze the rule's costs and benefits, including any potential environmental justice impacts. The FONSI accompanying today's action details the BLM's conclusion that an EIS was not warranted.

Comment 112: One commenter states that BLM failed to meets its review/consultation requirements under the Endangered Species Act, which requires BLM to consider the potential impacts of postponing compliance deadlines and resulting pollution from venting and flaring on threatened and endangered species and critical habitats, including climate change risks.

Response: The commenter is incorrect in asserting that BLM failed to meet its review/consultations requirements under the ESA. For the 2017 delay rule, as stated in

section 4.1 of the EA, the BLM informally consulted with FWS and FWS concurred with BLM's determination that the 2017 delay rule may affect, but it not likely to adversely affect, listed species or their associated designated critical habitat.

Comment 113: One commenter states that BLM failed to meets its review/consultation requirements under the National Historic Preservation Act, which requires BLM to consider the potential impacts of their actions on archaeological sites and other historical resources, including how exacerbating climate change may affect these resources.

Response: The commenter is incorrect in its assertion that the BLM has failed to meet any requirements of the National Historic Preservation Act (NHPA). This rulemaking action is not a "Federal undertaking" for which the NHPA requires an analysis of effects on historic property. See 54 U.S.C. §§ 306108, 300320.

Comment 114: One commenter states that BLM's assertion that operators should not be required to made to comply with 43 CFR 3179.201, 43 CFR 3179.202, 43 CFR 3179.203, 43 CFR 3179.204 and 43 CFR 3179.301 until the BLM has had an opportunity to review its requirements and revise them through notice-and-comment rulemaking is disingenuous as BLM took full advantage of its opportunity to review relevant requirements and revise them through the notice-and-comment rulemaking for the 2016 final rule.

Response: The BLM is in the process of developing a revision of the 2016 final rule. This revision will be developed through notice-and-comment rulemaking, and the effort is likely to affect the mentioned sections. For the reasons explained in the preamble to today's final rule and in response to Comment 1, the BLM does not believe that operators should be required to expend substantial resources to comply with regulatory requirements that are likely to be revised or rescinded in the near future.

Comment 115: A comment provided by a group of organizations states that BLM's assumption in the 2017 RIA that benefits and costs of the 2016 final rule will merely be shifted one year into the future is clearly invalid in light of BLM's ongoing reconsideration and announced plan to "rescind or revise the entire Waste Prevention Rule." The commenters state that BLM is effectively beginning rescission of the Rule in this rulemaking procedure but is attempting to mask the harmful effects of that rescission on the public by claiming in the 2017 RIA that all of the benefits of the 2016 rule will still accrue, just one year later.

Response: The BLM disagrees with the commenter. The purpose of the final 2017 delay rule is not to begin rescission of the rule (see response to Comment 1).

Comment 116: Commenters state that the 2017 RIA lacks transparency, resulting in unexplained and unsupportable changes from the 2016 RIA. Although BLM claims the 2017 RIA “generally uses the underlying assumptions used by BLM for the RIA prepared for the 2016 final rule,” BLM acknowledges that it made “some notable changes” in the 2017 RIA. BLM notes that it made changes to the estimation of the social cost of methane discussed above, as well as crude oil and natural gas price assumptions. BLM does not detail any other changes, “notable” or otherwise, that it has made from the 2016 RIA. For the changes that it does note, BLM does not disclose key assumptions or methodologies. This lack of transparency renders BLM’s analysis arbitrary, and forecloses opportunities for meaningful public comment. For example, the BLM does not list the oil and gas price assumptions used in the 2017 RIA, nor has it described the “downward” adjustment methodology used or the impact on price. BLM instead cites generally to an Energy Information Administration forecast, which shows similar price projections to those used in the 2016 RIA. In contrast, in the 2016 RIA, BLM describes specific price projections and the downward-adjustment methodology and acknowledged that the methodology is very conservative. It appears that the change in price assumptions in the 2017 RIA has led to decreases in the estimates of cost savings and royalties attributable to the rule in the 2017 RIA relative to the 2016 RIA. In particular, the commenters do not understand why the baseline incremental royalty as a result of the 2016 final rule is not similar between the 2016 RIA and 2017 RIA. Because BLM did not disclose its price assumptions, it is not possible to evaluate the 2017 RIA analysis or understand why it differs from the 2016 RIA.

Response: The BLM disagrees with the commenter that the BLM was not transparent in the methodological changes in the 2017 final delay rule RIA (See response to Comment 5). Apart from the concern over costs, the 2016 RIA also may have overestimated benefits by the use of a social cost of methane that attempts to account for global rather than domestic climate change impacts. A main departure from the 2016 final rule analysis is the use of a social cost of methane that accounts for domestic rather than global climate change impacts. The BLM offers a detailed explanation on the assumptions and methodologies used in the analysis for the 2017 final delay rule RIA, as well as the explanation of the discount rates applied, in the 2017 final delay rule RIA section 7.

Comment 117: One commenter representing a group of organizations notes that BLM has already fully considered and responded to all of the issues raised in the suspension proposal. The commenter provides a summary of BLM existing record findings and analysis supporting the various technical standards in the 2016 final rule to support their view that reconsideration is not warranted.

Response: BLM disagrees with the commenter that it has already analyzed and responded to all issues that were raised in today’s action prior to the close of the

comment period and analysing and responding to all of the comments submitted during the comment period. For the reasons as to why BLM is delaying or suspending the implementation of certain requirements of the 2016 rule, see the preamble to today's 2017 final delay rulemaking and response to Comment 1.

Royalty Provisions and Related Regional Impacts

Comment 118: Several commenters state that the 2016 final rule's provision to capture methane would be commercially valuable and economically benefit government through additional royalties instead of lost production. The wasted gas that would occur in delaying the 2016 final rule means a reduction in the royalties flowing to the states, tribes, and Federal government. Multiple commenters refer to the Government Accountability Office estimate that the Federal government and states lose up to \$23 million in royalty revenues annually from the waste of natural gas. Other commenters refer to a Western Values Report which suggested taxpayers could lose \$800 million in unpaid royalties over the next decade. Various commenters are concerned that unpaid royalties resulting from wasted gas should be available for schools and infrastructure in their communities. For these reasons and more, commenters state there is a need for a BLM standard to be implemented without delay to reduce wasteful venting, flaring, and leaking of natural gas from oil and gas operations on Federal and tribal lands.

Response: In Section 4.4 of the 2017 final delay rule RIA, BLM's analysis of the costs and benefits of the one-year delay accounts for the loss in royalty payments for gas flared or vented during the interim period. BLM determined that the forgone revenue and other benefits are reasonable in relation to the greater avoided compliance costs. In the short-term, the one-year 2017 delay is expected to decrease natural gas production from Federal and Indian leases due to the continued venting or flaring of the gas, and consequently to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners. However, over 11 years of implementation (2017-2027), the BLM expects a small increase in total royalties due to production slightly shifting into the future when commodity prices are projected to be higher. As BLM reconsiders the final 2016 rule in accordance with E.O. 13783, it will continue to assess impacts on royalty revenues.

Comment 119: One commenter cites disbursements from the Minerals Management Service, highlighting that royalties, rents, and bonuses disbursed in 2008 were a record \$23.4 billion to state and tribal governments. The commenter further states that the disbursements in 2016 and 2017 are lower than past years, and suggests that rescinding the 2016 final rule is preferred.

Response: BLM appreciates the commenter’s input on trends and royalty payments. The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Comment 120: One commenter is concerned that the 2016 rule would impact oil and gas development on tribal reservations, which are located in known shale play areas, and contain large amounts of undeveloped or underdeveloped areas. The commenter suggests that the 2016 final rule could delay drilling on these tribal lands, which would affect income flowing to Indian mineral owners, and tribal economies. Another commenter states that costs of the 2016 rule would drive industry away from Federal and Indian lands thereby reducing royalties.

Response: The BLM agrees that this is an important issue and is assessing it in developing a proposal to revise or rescind the 2016 final rule.

Comment 121: One commenter states that in 2012, energy and mineral resources generated over \$701 million in royalty revenue for Indian mineral owners – the largest revenue source from trust lands. The commenter is concerned that the 2016 final delay rule could impact historically significant royalty income received by tribes and individual tribal members.

Response: In Section 4.4. of the 2017 final delay rule RIA, BLM evaluated the impacts of the delay rule on Indian lands and determined that these impacts were minimal. As it reconsiders the 2016 final rule in accordance with E.O. 13783, BLM will evaluate the impacts on Indian leases and royalty revenue, as it had done in developing the 2016 final rule (e.g., see 81 FR 83070 Section VIII.B.4.e).

Comment 122: One commenter states that BLM’s 2016 final rule updates earlier BLM requirements to more clearly and specifically define when loss of gas is subject to royalties, which isn’t addressed by EPA’s rule.

Response: The 2017 final delay rule does not suspend or delay 43 CFR § 3179.4, which defines “avoidably lost” (subject to royalties) and “unavoidably lost” (not subject to royalties) oil and gas. “Avoidably lost” oil and gas continues to be subject to royalties, though some of the limitations cross-referenced in 3179.4(a)(2) are affected by today’s action. BLM is aware that EPA’s regulations do not dictate when losses of gas are royalty-bearing. BLM addressed the relationship between its 2016 final rule and other Federal regulations, including EPA’s regulations and potential overlap and duplication, when it developed the 2016 final rule (see Sections III.B.3 and Section IV.A of the preamble to the 2016 final rule [81 FR 83008]). As BLM reconsiders the 2016 final rule in accordance with E.O. 13783, it will continue to assess the relationship between the

2016 final rule and other Federal regulations, including defining when loss of gas is subject to royalties, as appropriate.

Comment 123: Commenters state that royalty losses are an appropriate cost of doing business in a responsible manner.

Response: In Section 4.4 of the 2017 final delay RIA, BLM's analysis of the costs and benefits of the one-year delay accounts for the loss in royalty payments for gas flared or vented during the interim period. BLM determined that the forgone revenue and other benefits are reasonable in relation to the greater avoided compliance costs.

Comment 124: One commenter states that reducing uncertainty in the process of collecting royalties, and thereby reducing burden on industry is desirable. The commenter suggests studying the feasibility of collecting royalties in kind in more situations.

Response: The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Comment 125: One commenter states that BLM incorrectly asserts that royalties are transfer payments. The commenter believes royalties should not be treated as transfer payments in the 2017 RIA because royalties do not meet the definition of a transfer payment under Circular A-4. Increased royalty collections are used to improve roads and support schools, and should be included as a benefit in any cost benefit analysis.

Response: The BLM disagrees with the commenter. Based on widely accepted economic principles, royalties are by definition, transfer payments.

Comment 126: One commenter states that the North Dakota's unique history of land ownership has resulted in a significant portion of the state consisting of split estate lands, with more than 30% of the potential development on private surface involving Federal minerals, and therefore subject to the 2016 final rule that could adversely impact the region's economy. Federally owned mineral tracts impact more than 30% of the oil and gas spacing units which are typically recognized as a communitized area (CA) by the BLM. The commenter adds that the 2016 final rule displaces North Dakota's sovereign authority and improperly asserts BLM regulatory authority over vast stretches of state and privately owned minerals because they are interspersed with a small number of Federal tracts.

Response: The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Technical Issues

Comment 127: One commenter states that BLM should focus the revised 2016 rule on an update to NTL-4A, which has been in place since 1974. The simple concepts of “avoidable” and “unavoidable” losses in this guidance are still valid today based on an operator taking “reasonable precautions” to prevent “waste” of product. Operators should not be penalized with uneconomic air emissions requirements disguised as “waste” prevention.

Response: The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action. As stated in the preamble to today’s action, the BLM is currently considering concerns raised by operators that the capture-percentage requirement of § 3179.7 is unnecessarily complex and infeasible in some regions because it may cause wells to be shut-in repeatedly (or otherwise cease production if the lease(s) does not allow for a shut in) until sufficient gas infrastructure is in place. The BLM is considering whether the NTL-4A framework can be applied in a manner that addresses any inappropriate levels of flaring, and whether market-based incentives (*i.e.*, royalty obligations) could improve capture in a more straightforward and efficient manner.

Comment 128: Commenters state that BLM’s current guidance (NTL-4A) is not sufficient to meet the agency’s statutory requirements, as acknowledged by the BLM in its rulemaking process.

Response: NTL-4A does not represent the current regulatory requirements with respect to the venting and flaring of Federal and Indian gas. The 2016 final rule replaced NTL-4A. In developing a proposed revision of the 2016 final rule, the BLM is considering whether the NTL-4A framework can be applied in a manner that addresses any inappropriate levels of flaring, and whether market-based incentives (*i.e.*, royalty obligations) could improve capture in a more straightforward and efficient manner.

Comment 129: One comment provided by a group of organizations describes a number of incorrect assumptions in BLM’s 2017 RIA. First, the commenters state that the 2017 RIA assumes that suspension of the 2016 final rule will result in a return to NTL-4A. This assumption is, however, not valid because NTL-4A was withdrawn and superseded in its entirety by the 2016 final rule. The gap in regulation, with neither NTL-4A nor the 2016 final rule in place during the suspension results in fewer protections against waste than assumed in the baseline scenario for the RIA. The commenters assert that BLM’s failure to account for the changed regulatory landscape is arbitrary and capricious and results in an underestimate of the additional waste of natural gas, associated lost royalties, and social harms that will occur under the suspension proposal.

Response: The BLM disagrees with the commenter. The 2017 final rule RIA does not state nor implies an assumption that the suspension of the 2016 final rule will result in a return to NTL-4A. Regulations from BLM, the EPA, and the states will operate to address venting and flaring during the period of the suspension. The BLM's venting and flaring regulations that will remain in effect during the one-year suspension period include: definitions clarifying when lost gas is "avoidably lost," and therefore subject to royalties (§ 3179.4); restrictions on the practice of venting (§ 3179.6); limitations on royalty-free venting and flaring during initial production testing (§ 3179.103); limitations on royalty-free flaring during subsequent well tests (§ 3179.104); and, restrictions on royalty-free venting and flaring during "emergencies" (§ 3179.105). The BLM also notes that states with significant Federal oil and gas production have regulations that restrict flaring and these regulations apply to Federal oil and gas operations in those states. See, e.g., 20 Alaska Admin. Code § 25.235; Mont. Admin. R. 36.22.1220 - .1221; New Mexico Administrative Code section 19.15.18.12; North Dakota Century Code section 38-08-06.4; North Dakota Industrial Commission Order 24665; 055-3 Wyo. Code R. § 39; Utah Administrative Code R649-3-20. See the 2017 final delay rule RIA section 2.8 for a summary of these State regulations. Finally, as discussed elsewhere in this document, EPA regulations in 40 C.F.R. 60 subparts OOOO and OOOOa address natural gas emissions (venting) from new, modified, and reconstructed equipment on oil and gas leases.

Comment 130: The commenter states that the proposed action cannot be evaluated in a vacuum. The commenter believes the proposed rule "is a prerequisite to repealing and replacing the 2016 rule with either the antiquated system it superseded or a slightly modified version thereof." As such, the commenter argues that BLM should consider its comments related to these actions as they are likely the strategies BLM would pursue if the 2016 final rule is revised or rescinded following this proposed delay. The commenter states that BLM has in effect issued an advance notice of proposed rulemaking related to these issues, so these comments are timely even if the current proposal is directed at suspension and delay of the effective date of provisions in the 2016 final rule.¹

Response: The commenter incorrectly states the the 2016 final delay rule is a "prerequisite" to repealing and replacing the 2016 final rule. The revisions of the 2016 final rule is not contingent upon today's action. Both rules are and will be treated as separate rulemakings.

Comment 131: One commenter states that BLM has done an excellent job of evaluating the impactful and questionable sections of the rule and fully supports the recommended suspensions.

Response: BLM appreciates the commenter's feedback.

Comment 132: One commenter generally believes that the 2016 final rule has too many requirements, and cites various requirements under 43 CFR Part 3179 as evidence.

Response: The 2017 final delay rule is limited to providing a one-year delay in implementing compliance requirements for certain provisions of the 2016 final rule. This comment is therefore outside the scope of the current action.

Comment 133: Multiple commenters state that the proposed delay rule misleadingly depicts certain factors as mitigating environmental harm caused by the compliance delay and likely rescission or revision of the waste prevention rule. The commenters specifically highlight that the proposed delay rule cites U.S. EPA's New Source Performance Standards (NSPS) for methane emissions from oil and gas operations as an existing regulation that would prevent oil and gas operations on Federal and Indian leases from being unregulated. However, the administration has proposed postponing implementation of the NSPS while the U.S. EPA reconsiders the rule and determines whether and how to rescind or amend it. Other commenters similarly note that the BLM states in the RIA that suspending the 2016 final rule "would not necessarily leave these operations unregulated, as operators will still need to comply with other Federal regulations and requirements, State regulations, and tribal regulations, where applicable." The RIA highlights in particular EPA's regulation as new and modified oil and gas sources, which are proposed to be suspended (82 FR 27645), as well as varying state requirements in six states. The commenters state that BLM does not address the lack of uniform Federal standards controlling waste of publicly owned resources on federally managed lands.

Response: Today's action temporarily suspending certain requirements of the 2016 final rule does not leave unregulated the venting and flaring of gas from Federal and Indian oil and gas leases. Indeed, regulations from BLM, the EPA, and the states will operate in tandem to address venting and flaring during the period of the suspension. The BLM's venting and flaring regulations that will remain in effect during the one-year suspension period include: definitions clarifying when lost gas is "avoidably lost," and therefore subject to royalties (§ 3179.4); restrictions on the practice of venting (§ 3179.6); limitations on royalty-free venting and flaring during initial production testing (§ 3179.103); limitations on royalty-free flaring during subsequent well tests (§ 3179.104); and, restrictions on royalty-free venting and flaring during "emergencies" (§ 3179.105). The BLM also notes that states with significant Federal oil and gas production have regulations that restrict flaring and these regulations apply to Federal oil and gas operations in those states. *See, e.g.,* 20 Alaska Admin. Code § 25.235; Mont. Admin. R. 36.22.1220 - .1221; New Mexico Administrative Code section 19.15.18.12; North Dakota Century Code section 38-08-06.4; North Dakota Industrial Commission

Order 24665; 055-3 Wyo. Code R. § 39; Utah Administrative Code R649-3-20. Finally, as discussed elsewhere in this document, EPA regulations in 40 C.F.R. 60 subparts OOOO and OOOOa address natural gas emissions (venting) from new, modified, and reconstructed equipment on Federal oil and gas leases.

Comment 134: In response to 43 CFR 3162.3-1(j), one commenter states that BLM’s reason for postponing the implementation of the waste-minimization plan provision are spurious and/or addressed in the 2016 rulemaking record. The commenter states that the plans’ utility lies in their development and existence; the requirement to develop a plan requires operators to consider waste and offer a strategy for its management without making operators liable for precise implementation of every provision. The commenter further notes that BLM rejected prior commenters’ request to make plans enforceable to ‘avoid [] creating an incentive for operators to develop very general plans with few specific details[,]’ and to avoid penalizing operators whose circumstances change such that strict adherence. The commenter also cites to BLM’s prior conclusion as part of the 2016 final rule that “requiring operators to prepare a waste minimization plan for all wells is a reasonable, low cost, and effective way to encourage operators to consider and plan for capturing gas before the development of every new well.” (81 FR 83042). Finally, the commenter cites several measures included in the 2016 final rule designed to minimize the burden of this requirement. For example, the plans need only be submitted along with an Application for a Permit to Drill, and BLM will only review them when reviewing such an application, streamlining some of the required plan elements from the proposed rule, incorporating a plan to review the effectiveness and costs of the plan requirement within three years and allowing operators to submit supplemented versions of state-mandated plans.

Response: The BLM appreciates the commenter’s arguments in support of the efficacy of the waste minimization plan requirement. However, as the BLM explained in the preamble to today’s final rule, the BLM is reconsidering whether the potential benefits of the waste minimization plan requirement outweigh its administrative burdens, and whether this burden can be reduced by narrowing the required information or by relying on State waste minimization plan requirements. The BLM is also evaluating concerns raised by the operators that § 3162.3-1(j) is infeasible because some of the required information is in the possession of a midstream company that is not in a position to share it with the operator prior to the operator’s submission of an APD. While the BLM considers revising or rescinding the waste minimization plan requirement, the BLM does not believe that operators should be required to generate, and the BLM required to review, these lengthy plans.

Comment 135: One commenter states that BLM already considered and addressed in the 2016 rulemaking record the reasons it cites for postponing implementation of the gas capture requirements at 43 CFR 3179.7. For example, BLM states that capture-percentage requirement is unnecessarily complex, however, BLM established the details of this requirement, along with alternative capture target provisions in §3179.8, in response to operators' comments requesting additional flexibility and reduced cost. With respect to NTL-4A, as part of the 2016 final rule, BLM indicated that NTL-4A "neither reflects today's best practices and advanced technologies, nor is particularly effective in minimizing waste of public minerals." Finally, the commenter states that BLM expressly considered "whether market-based incentives (i.e., royalty obligations) could improve capture in a more straightforward and efficient manner" and determined "that imposing royalties alone was unlikely to significantly curb waste and gas loss and, thus, would not adequately meet the purpose and need. Likewise, the BLM determined that an approach focused on royalty collection would not be as effective in reducing the harmful environmental impacts of vented and flared gas. The BLM also identified legal concerns with this approach."

Response: The reason the BLM is suspending the gas capture requirements of 43 CFR 3179.7 is because the BLM is considering revising or rescinding those requirements in the near future and the BLM does not wish to require operators to institute new processes and adjust their plans for development in order to meet potentially transitory capture requirements. The BLM believes that a reconsideration of the gas capture requirement is warranted due to its complexity and infeasibility. This reconsideration is further supported by the fact that the gas capture percentage scheme of the 2016 final rule was developed after the close of the comment period and not made available for a subsequent round of public comment that would have addressed the concerns the BLM now has with respect to 43 CFR 3179.7.

Comment 136: One commenter states that BLM already considered and resolved potential overlap between 43 CFR 3479.301 and comparable EPA and State leak detection and repair regulations. The commenter states that BLM worked closely with BLM EPA and consulted with States to align the regulations as much as possible, consistent with the agencies' separate statutory authorities. Further, the 2016 "final rule already contains provisions to address overlapping EPA or State requirements ... By contrast, exempting any site with existing enforceable [leak detection and repair] requirements provides no assurance that those requirements will produce results equivalent to the BLM requirement." Finally, the commenter also notes that EPA's proposed stay of its methane NSPS for the oil and gas sector for two years renders BLM's consideration of "whether these requirements are necessary in light of comparable EPA" regulations gratuitous.

Response: Although the LDAR requirements of the 2016 final rule were designed to avoid imposing requirements that conflict with EPA's requirements, this does not mean that overlap with EPA regulations cannot provide a basis on which the BLM can reconsider the regulatory necessity of those requirements. Because EPA's LDAR requirements apply to new, modified, and reconstructed sources, it is possible that EPA's regulations will adequately address the losses of gas from these sources over time. As EPA's regulations continue to displace the requirements of the 2016 final rule, and existing wells become marginal and therefore likely to qualify for an exemption from the requirements of the 2016 final rule, it is possible that the 2016 final rule's requirements will become ineffective and unnecessary. In addition, the BLM is reconsidering whether the volumes of gas that would be captured for sale under the 2016 final rule's LDAR requirements actually justify the compliance costs associated with those provisions.

Comment 137: One commenter states that the rule's delay of the monitoring and reporting requirements is arbitrary and capricious, and unjustified on the record. The commenter specifically cites several excerpts from prior GAO findings, including findings from a 2016 report that the Department of Interior expressed broad concurrence. The commenter also notes that GAO stated that the 2016 final rule was a good start, however, that more remained to be done. Delay of the monitoring and reporting requirements are directly contrary to GAO's recommendations and to BLM's FLPMA obligations. The commenter states that BLM should be requiring more rigorous reporting, as the GAO has repeatedly recommended. The commenter states that the reporting requirements themselves are minimally costly (especially when viewed as a percentage of industry revenues or profits) and, consistent with BLM's RIA, appear to produce no meaningful changes in sector employment or negative effects on industry behavior. Additionally, the commenter notes that the requirements are ready at hand, straightforward to collection, consistent with basic standards of industry practice, consistent with measurements that good industry operators should already be doing, and include metrics regularly requested, in various forms, in U.S. EPA's Greenhouse Gas Reporting Program, the state of California's program, and in the many state programs that BLM notes in the RIA and Proposed Suspension.

Response: The Commenter is incorrect in the assertion that the monitoring and reporting requirements are arbitrary and capricious, and unjustified on the record. In the section-by-section discussion of 43 CFR 3179.301 in the preamble to today's final delay rule, the BLM has explained the reasons why the leak detection and repair (LDAR) requirements imposed by 43 CFR 3179.301 should be reconsidered and suspended during the brief period of that reconsideration.

Drilling Applications and Plans (3162.3-1(j))

Comment 138: Several commenters request that BLM suspend the 2016 final rule Waste Minimization Plan (WMP) requirements at 3162.3. Commenters state that the requirement is duplicative, conflicting, and/or unnecessary given existing state requirements. One commenter states that items required for a WMP may not be available at the time an Application for Permit to Drill (APD) is submitted, as operators must apply for APDs many months in advance of drilling plans because APDs are not currently processed in a timely manner. Because the operator typically does not control midstream operations or pipeline operations, the information required in a WMP may or may not be available to the operator. One commenter requests a suspension for “as long as needed” for BLM to review the adequacy of the requirement. Another commenter adds that BLM should consider whether state waste minimization plan would serve the purpose of this section.

Response: In the 2016 RIA, the BLM estimated that the administrative burden of the waste-minimization plan requirements would be roughly \$1 million per year for the industry and \$180,000 per year for the BLM (2016 RIA at 96 and 100). The BLM is currently reviewing concerns raised by operators that the requirements of § 3162.3-1(j) may impose an unnecessary burden and can be reduced. The BLM is also evaluating concerns raised by operators that § 3162.3-1(j) is infeasible because some of the required information is in the possession of a midstream company that is not in a position to share it with the operator prior to the operator’s submissions of an APD. The BLM is considering narrowing the required information and is considering whether submission of a State waste-minimization plan, such as those required by New Mexico and North Dakota, would serve the purpose of § 3162.3-1(j).

Comment 139: Commenters state that, with regard to waste minimization plans, BLM arbitrarily fails to evaluate the quantified or unquantified benefits of keeping the requirement in place for the duration of the reconsideration rulemaking and whether those benefits would justify the very minimal expenditures required. In addition, BLM makes no attempt to quantify, and does not even mention, the reduction in wasted gas and accompanying cost savings to operators associated with the requirement for waste-minimization plans. This is despite evidence in the rulemaking record that these plans are highly effective in reducing flaring and decreasing waste. Additionally, BLM has now had over eight months of experience implementing this provision, yet the proposal provides no information on how the requirement has worked to date.

Response: The BLM chose to suspend the waste minimization plan requirement after identifying waste minimization plans as being potentially duplicative of what some states require. In addition, the BLM is looking into the pre-drilling administrative burden that would be incurred by reviewing waste minimization plans to ensure that they are

necessary and not unduly burdensome. Table 4.1a in the 2017 final delay rule displays the estimated reduction in administrative compliance costs during the delay period

Flaring and Venting Prohibitions (3179.6)

Comment 140: Several commenters recommend that section 3179.6 of the 2016 final rule be suspended or delayed. One commenter states that BLM should not adopt a rule that conflicts with North Dakota Industrial Commission's regulations to prevent venting. Another commenter states that the BLM 2016 rule provisions are duplicative of Wyoming Oil and Gas Conservation Commission requirements and should be suspended. This commenter further states that activities exist which require small volume venting, rather than flaring such as low or intermittent gas volumes, inert gasses from the well bore requiring additional fuel gas onsite, adding to surface disturbance and unnecessary costs to the well. If meter plates are installed in the flare line, and the meter plate is too small for the largest potential throughput to the flare, site safety is compromised. One commenter states that section 3179.6, which requires all flares or combustion devices to be equipped with an automatic ignition system, incorrectly assumes that such systems may be installed and will operate effectively on every flare or combustion device, which operating experience shows is not the case. The commenter also points to situations where flaring simply is not feasible due to technical or operational safety reasons in addition to those identified in this section. Instead of trying to identify each particular case, the commenter recommends delaying or suspending this section to allow venting until it the rule can be informed by technical feasibility, operational safety considerations at the drilling or production site, and the agency's authority to reduce waste and incentivize recovery of produced gas.

Response: This final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that the BLM estimated would pose a compliance burden to operators and are being reconsidered due to the cost, complexity, and other implications. The BLM has tailored the final delay rule to target the requirements of the 2016 rule for which immediate regulatory relief is particularly justified.

Gas Capture Requirement (3179.7)

Comment 141: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to well drilling (3179.7). One commenter supports suspending the requirement since it is unnecessarily complex and since the gas capture percentage requirements could be obviated through other BLM efforts to facilitate pipeline development. To support this

BLM effort, the commenter notes that in the third quarter of 2015, two Federal decisions resulting in delay or denial of the requested right-of-way accounted for 6% of the flaring in the state of North Dakota. The commenter states that BLM has not adequately evaluated the consequences of imposing arbitrary flaring limits. The commenter also states that in an area constrained to make 100% gas sales, wells would be required to shut-in repeatedly (or otherwise cease production if the lease does not allow for shutting in an oil well) until sufficient gas infrastructure is in place or where there are capacity constraints, rights-of-way issues, emergencies or during third party maintenance to avoid flaring. The commenter further states that shut-in events have the potential to impact the productivity of low permeability hydraulically fractured reservoirs due to various reservoir and mechanical causes. The commenter adds that these effects, either individually or combined, have often resulted in a negative effect on productivity of the well and/or an increase in operating costs. The commenter states that this could ultimately lead to suspended production and the royalties on that production, and wells being shut in (or otherwise cease producing) beyond the term of the lease or leases in question. The commenter requests that this provision of the 2016 final rule be suspended until these issues can be resolved through development of a revised rule. One commenter states that the capture-percentage requirement of this section of the 2016 final rule is unnecessarily complex and may not be a significant improvement on the requirement of NTL-4A. The commenter encourages BLM to work with the North Dakota Industrial Commission (NDIC) to ratify state rules or allow state BLM offices to manage flaring through agreements with the state. The commenter asks BLM to focus its efforts to facilitate pipeline development through more streamlined Federal processes which will considerably reduce flaring in North Dakota. One commenter states that the Wyoming Oil and Gas Conservation Commission (WOGCC) approved a rule on venting and flaring of wells in Wyoming in 2016, and that the 2016 final rule is requiring duplicative requirements to WOGCC's rule. The commenter therefore supports suspending this section of the rule. In supporting the suspension of the requirement, this commenter states concerns with the process for requesting exemptions (Sundry Notice) for limits on venting or flaring on existing leases, noting delays and missing information.

Response: In the 2016 RIA, the BLM estimated that this requirement would impose costs of up to \$162 million per year and generate cost savings from product recovery of up to \$124 million per year, with both costs and cost savings increasing as the requirements increased in stringency (2016 RIA at 49). The BLM is currently considering concerns raised by operators that the capture-percentage requirement of § 3179.7 is unnecessarily complex infeasible in some regions because it may cause wells to be shut-in repeatedly (or otherwise cease production if the lease(s) does not allow for a shut in) until sufficient gas infrastructure is in place. The BLM is considering whether the NTL-4A framework can be applied in a manner that addresses any inappropriate

levels of flaring, and whether market-based incentives (i.e., royalty obligations) could improve capture in a more straightforward and efficient manner. Finally, the BLM is considering whether the need for a complex capture-percentage requirement could be obviated through other BLM efforts to facilitate pipeline development. Rather than require operators to institute new processes and adjust their plans for development to meet a capture-percentage requirement that may be rescinded or revised as a result of the BLM's review, the BLM is delaying for one year the compliance dates for § 3179.7's capture requirements. This final delay rule will allow the BLM sufficient time to more thoroughly explore through notice-and-comment rulemaking whether the capture percentage requirements should be rescinded or revised and would prevent operators from being unnecessarily burdened by regulatory requirements that are subject to change.

Comment 142: Commenters state that, with regard to gas capture requirements, BLM explains that it is considering whether the requirement is unnecessarily complex and whether it will be an improvement on the requirements of NTL-4A. BLM does not explain why it deems this suspension to be necessary, nor does it account for the contradictory findings in the final Waste Prevention Rule, in which BLM already addressed both of these issues when establishing the gas capture requirement. The 2016 RIA found that the direct quantified benefits to operators that would result from capturing gas that would otherwise have been wasted outweighed the costs of the capture targets in the first two years that those targets apply (2018 and 2019). There is no information in the 2017 RIA supporting BLM's Suspension Proposal that explains how or why this analysis might have changed. Additionally, BLM's own analysis finds that there is no compliance cost to operators from leaving this provision in place, making the proposal to delay the provision arbitrarily and utterly irrational.

Response: In the 2016 RIA, the BLM estimated that this requirement would impose costs of up to \$162 million per year and generate cost savings from product recovery of up to \$124 million per year, with both costs and cost savings increasing as the requirements increased in stringency (2016 RIA at 49). The BLM is currently considering concerns raised by operators that the capture-percentage requirement of § 3179.7 is unnecessarily complex and infeasible in some regions because it may cause wells to be shut-in repeatedly (or otherwise cease production if the lease(s) does not allow for a shut in) until sufficient gas infrastructure is in place. The BLM is considering whether the NTL-4A framework can be applied in a manner that addresses any inappropriate levels of flaring, and whether market-based incentives (i.e., royalty obligations) could improve capture in a more straightforward and efficient manner. Finally, the BLM is considering whether the need for a complex capture-percentage

requirement could be obviated through other BLM efforts to facilitate pipeline development.

Measuring and Reporting Volumes of Gas Vented and Flared from Wells (3179.9)

Comment 143: One commenter disagrees with BLM’s description of the requirements at 43 CFR 3179.9 as imposing a blanket requirement on all operators. The commenter notes that the 2016 final rule differentiates between flares of different volumes by establishing the threshold. In promulgating the 2016 final rule, BLM determined that, while a threshold for more stringent requirements is appropriate, it would be not be appropriate to exempt certain sources from estimation or measurement, as “it is important for both the operator and the BLM to have an accurate understanding of the total quantity of gas that is being flared” and as “BLM needs to fully understand the quantities of gas lost on public lands in order to ensure that reasonable precautions are taken to avoid such waste.” Under the 2016 final rule, BLM determined that meters would not be prohibitively expensive to install, but also provided operators with flexibility in meeting the requirements of this section, allowing industry to select estimation methods, allowing calculation instead of measurement, and allowing alternate methods to measure gas flow.

Response: The BLM disagrees with the commenter’s assertion that the measurement requirements of 43 CFR 3179.9 cannot be characterized as a “blanket” requirement. The BLM believes that a one-year suspension of 43 CFR 3179.9 is justified as the BLM is considering revising or rescinding the requirements of 43 CFR 3179.9. Also, the commenter refers to meters being inexpensive to install, but does not take into account all the other equipment that would be required under the 2016 final rule; the BLM will be considering the total costs when the BLM reconsiders whether the potential benefits of the waste minimization plan outweigh its administrative burden.

Comment 144: Commenters state that, with regard to measuring and reporting volumes of gas vented and flared from wells, it seems that accurate information on the quantities of gas lost through flaring would be particularly valuable to BLM at this time, since it is reconsidering the final rule’s provisions to limit such flaring. In addition, accurate measurement is critical for accurate assessment of royalties. Despite these significant benefits, BLM makes no attempt in the proposal to discuss or assess the adequacy of the data already available to it, or to weigh the value of better data to its ongoing rulemaking and other activities against the costs of measurement and reporting.

Response: The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year.

Comment 145: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to measuring and reporting volumes of gas vented and flared from wells (3179.9). One commenter states that this provision of the 2016 final rule creates a requirement operators cannot comply with because there is no current technology that can reliably measure low pressure, low volume, fluctuating gas flow. One commenter further states that there is no current technology that can reliably measure low pressure, low volume, fluctuating gas flow that is typical of activities as defined under the “unavoidably lost” definition within section §3179.4, and that the only way to safely design flare measurement is to size the orifice meter for the maximum possible flow under worst case abnormal operating conditions, which makes accurate measurement for low flow rates impossible. The commenter believes that operators will not be able to comply with the BLM requirements in this section of the 2016 final rule, and will either violate a wildlife stipulation or miss the inspection timeframe. The commenter therefore supports suspending this section of the rule. Commenters state that the requirement for operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas will impose significant costs, in part because the variability of flow rates to flare systems poses such a challenge to accurate measurement over the possible range of flow. The commenter states that the cost of metering systems potentially to be required by the provision, costs associated with engineering and installation of any such systems, plus costs associated with overhead for documentation, regulatory filings, and general maintenance of the meters mean that suspension of the requirements of this provision is appropriate until BLM has re-examined its requirements for measuring and reporting gas volumes in the context of a revision to the 2016 Rule, and additionally considered the production reporting requirements in the various states in which BLM lands are located. The commenter concludes that more discussion with industry must take place before requirements around measuring are proposed and/or adopted. The commenter states that the RIA for the 2016 final rule estimated that the requirements in this section would impose costs of approximately \$4 million to \$7 million annually. The commenter notes that BLM did not account for the costs of equipment necessary to estimate flared gas by conducting gas-to-oil ratio tests on a monthly basis, and recommends that the BLM should work with the North Dakota Industrial Commission to ratify state rules on measuring and reporting volumes of gas vented and flared from wells.

Response: In the 2016 RIA, the BLM estimated that this requirement would impose costs of about \$4 million to \$7 million per year (2016 RIA at 52). The BLM is presently reviewing concerns raised by operators that the additional accuracy associated with the

measurement and estimation required by § 3179.9(b) does not justify the burden it would place on operators and that the requirement is infeasible because current technology does not reliably measure low pressure, low volume, fluctuating gas flow. The BLM is also reviewing concerns raised during the comment period that there is no current technology to reliably measure low pressure, low volume, fluctuating gas flow. The BLM is considering whether it would make more sense to allow the BLM to require measurement or estimation on a case-by-case basis, rather than imposing a blanket requirement on all operators. In order to avoid immediate and potentially unnecessary compliance costs on the part of operators, this final delay rule delays the compliance date in § 3179.9 until January 17, 2019.

Determinations Regarding Royalty-Free Flaring (3179.10)

Comment 146: Commenters state that, with regard to determinations regarding royalty-free flaring, the Suspension Proposal provides no explanation, let alone evidence, of why BLM now believes that a year-long transition period is inadequate and should be extended for an additional year. The Suspension Proposal also provides no information on the effect of such an extension, and specifically, how much royalty revenue would be lost. Nor does the Proposal consider the equitable concerns about applying royalties or not applying royalties to similarly situated flared gas that is distinguishable only by the date on which the flaring began.

Response: Commenters incorrectly stated that BLM provided no explanation for suspending the compliance dates for section 3179.10. As stated in the preamble to today's action, the purpose of section 3179.10 was to provide a transition period for operators who were operating under existing approvals for royalty-free flaring. Because the BLM's review of the 2016 final rule could result in rescission or substantial revision of the rule, the BLM believes that terminating pre-existing flaring approvals in January 2018 would be premature and disruptive and would introduce needless regulatory uncertainty for operators with existing flaring approvals. The BLM provides estimates of royalty impacts from the final 2017 delay rule. See 2017 RIA section 4.4.2.

Comment 147: One commenter states that the 2016 final rule revised the regulations at § 3103.3-1, which govern royalty rates applicable to onshore oil and gas leases, and authorizes BLM to set the royalty rate on competitive leases issued after the effective date of the Rule at not less than 12.5%. Increased royalty rates will further disadvantage Federal leases when compared to State or private leases due to the additional cost of securing permits to carry out operations on Federal leases, coupled with costs for compliance with other Federal regulations that do not apply to operations on other leases. Commenters state that invoking variable lease

royalty rates would result in unintended consequences toward commingling allocations and approvals (CAAs). Under the 2016 final rule's Subpart 3173 rule replacing Onshore Oil and Gas Order Number 3, effective January 17, 2017, BLM proposes as a general rule to only authorize CAAs if properties proposed for commingling (single Federal leases, unit participating areas, or communitization agreements) "have the same royalty rates and royalty distributions." (§ 3173.14 Conditions for commingling and allocation approval (surface and downhole)). Under that circumstance, properties with variable royalty rates apparently would not be eligible for CAAs. This would result in significantly increased costs and environmental consequences in situations where royalties greater than 12.5% could be imposed, and would effectively eliminate many situations in which CAAs could be approved. One commenter requests delay or suspension of this section of the 2016 final rule until the BLM can re-examine the potential disincentives from this section on new leasing of Federal minerals and the impediments that it would present to approval of CAAs, and strongly encourages BLM to revoke this section in a revised rule.

Response: The 2017 final delay rule does not substantively change the 2016 final rule, it merely postpones implementation of the compliance requirements for certain provisions of the 2016 final rule for one year. This final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that the BLM estimated would pose a compliance burden to operators and are being reconsidered due to the cost, complexity, and other implications. The BLM has tailored the final delay rule to target the requirements of the 2016 rule for which immediate regulatory relief is particularly justified.

Comment 148: One commenter states that the BLM should extend the January 2018 expiration of pre-existing flaring approvals, as it would introduce regulatory uncertainty for operators with existing flaring approvals. The commenter states that this flaring is necessary because lessees are entitled to rely on the existing conditions of their leases and could constitute a breach of existing leases.

Response: The BLM has tailored the final delay rule to target the requirements of the 2016 Rule for which immediate regulatory relief appears to be particularly justified. Because the BLM's review of the 2016 final rule could result in rescission or substantial revision of the rule, the BLM believes that terminating pre-existing flaring approvals in January 2018 would be premature and disruptive and would introduce needless regulatory uncertainty for operators with existing flaring approvals. The BLM therefore extends the end of the transition period provided for in § 3179.10(a) to January 17, 2019.

Well Drilling (3179.101)

Comment 149: One commenter states the 2016 final rule already addresses “exceptional circumstances” under 43 CFR 3179.101 by excusing operators from using or disposing of gas in one of the specified ways if doing so would be technically infeasible. Further, BLM recognized that “most operators are already controlling gas from drilling operations for safety and other operating practices,” and noted that this minimizes any burden the provision places on most operators.

Response: As stated in the preamble to today’s action, pursuant to E.O.s 13771 and 13783 and S.O. 3349, the BLM conducted an initial review of the 2016 final rule and found that it appears to be inconsistent with the policy in section 1 of Executive Order 13783. The provision the commenter mentions was part of the review. The BLM is currently reviewing concerns raised by operators that § 3179.101 is unnecessary in light of existing BLM requirements, infeasible in the situations where flares may be used on drilling wells because of insufficient gas to burn, and creates a risk to safety.

Comment 150: Commenters state that, with regard to well-drilling, the 2017 RIA does not estimate any capital costs to operators associated with this provision, the 2016 RIA did not identify capital costs or administrative burden to operators from the provision, and the provision has been in effect since January 17, 2017. In the Suspension Proposal, BLM does not explain how the provision imposes any burden on operators, stating only that it “may” “impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas.” What such a regulatory constraint might be is not specified, nor its scope or effect.

Response: As stated in the preamble to today’s action, the BLM is currently reviewing concerns raised by operators that § 3179.101 is unnecessary in light of existing BLM requirements, infeasible in the situations where flares may be used on drilling wells because of insufficient gas to burn, and creates a risk to safety. Because § 3179.101 includes the primary method of gas disposition, which is also required by Onshore Oil and Gas Order No. 2 - Drilling Operations, Part III.C.7, the primary effect of § 3179.101, therefore, may be to impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas. The BLM is therefore suspending the effectiveness of § 3179.101 until January 17, 2019, while the BLM completes its review of § 3179.101 and decides whether to propose permanently revising or rescinding it through notice-and-comment rulemaking.

Comment 151: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to well drilling (3179.101). Several commenters support suspending or delaying the requirements because of their impracticality. The commenter states that the BLM has failed to consider the technical feasibility of the requirements, mentioning that flares may be used on drilling wells in three situations: (i) The first is during air or nitrogen drilling operations where no drilling fluid is used due to low formation pressure and the potential for lost circulation. (ii) The second is when drilling fluid is used, but the design weight of the drilling fluid is underbalanced with respect to formation pressure. (iii) The third situation is when dangerous concentrations of hydrogen sulfide (H₂S) are possible, and venting in any quantity cannot be tolerated due to safety concerns for work crews and any nearby public. In the first two situations, due to underbalanced drilling conditions some gas can be encountered, but these techniques are mainly used to prevent lost circulation in depleted under-pressured formations or in tight formations such as shale, with low natural permeability that inhibits formation flow into the wellbore. In all three situations, there is frequently insufficient gas to actually burn while drilling, in which case de minimis amounts of gas may still be vented. The commenters further state that flaring requirements in § 3179.101 fall outside BLM's regulatory authority because these requirements do not prevent waste or avoidable loss, and instead are intended only to protect air quality. The flaring of gas during drilling does not prevent waste or avoidable loss, and cannot be captured and sold. Commenters state that because of the impracticality of many options for gas capture in the context of drilling operations, the requirements of this provision present challenges to operators to engineer, procure, and install the flare systems to be required. One commenter views the requirements in regard to well drilling as an unnecessary imposition of a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgement about how to safely and effectively dispose of the gas, and therefore urges BLM to suspend the well drilling requirements of the 2016 final rule.

One commenter states that the BLM rule currently has a flaring requirement for wells without regard to the variable designs of drilling programs and that the required emission control options currently found in the rule to reduce emissions are not feasible or realistic. The commenter provides an example of unplanned gas kicks that could happen while drilling in a shallow gas pocket or in a deeper formation if the pressure is higher than anticipated. This gas cannot be captured to flare as both cases are potentially serious well control problems that have to be responded to immediately to mitigate a blow-out risk. The commenter supports suspending this section of the rule.

Response: As stated in the preamble to today's action, the BLM is currently reviewing concerns raised by operators that § 3179.101 is unnecessary in light of existing BLM requirements, infeasible in the situations where flares may be used on drilling wells

because of insufficient gas to burn, and creates a risk to safety. Because § 3179.101 includes the primary method of gas disposition, which is also required by Onshore Oil and Gas Order No. 2 - Drilling Operations, Part III.C.7, the primary effect of § 3179.101, therefore, may be to impose a regulatory constraint on operators in exceptional circumstances where the operator must make a case-specific judgment about how to safely and effectively dispose of the gas. The BLM is therefore suspending the effectiveness of § 3179.101 until January 17, 2019, while the BLM completes its review of § 3179.101 and decides whether to propose permanently revising or rescinding it through notice-and-comment rulemaking.

Well Completion and Related Operations (3179.102)

Comment 152: One commenter states that the 2016 rulemaking record undermines BLM's current justification for postponing the compliance deadline for requirements at 43 CFR 3179.102. Specifically, BLM determined that the provision is a "key part of a comprehensive regulatory regime reducing waste from development of the public's oil and gas resources[.]" and therefore necessary to "satisfy [BLM's] statutory obligations to prevent waste of oil and gas on Federal lands." BLM also acknowledged that the provision would not require any action from most operators and therefore impose no burden, but noted that, as EPA's related provisions were facing legal challenge, "the BLM requirements provide a backstop in the unlikely event that subparts OOOO or OOOOa are no longer in effect."

Response: BLM disagrees that the 2016 rulemaking record undermines BLM's justification for postponing the compliance date for § 3179.102. As stated in today's preamble, the BLM is currently reviewing § 3179.102 because it is concerned that it imposes an immediate cost on operators and is reviewing to determine whether it is necessary in light of current operator practices and the analogous EPA regulations. Operators dispose of gas during well completions and related operations consistent with § 3179.102(a) either to comply with EPA or state regulations. See the Section II of the preamble to today's action for the detailed justification.

Comment 153: Commenters state that, with regard to well completion and related operations, the 2017 RIA does not estimate any capital costs to operators associated with this provision, the 2016 RIA did not identify administrative burden to operators from the provision, and the provision has been in effect since January 17, 2017. BLM proposes suspending this provision and attempts to justify suspension on the basis that it "may . . . generate confusion about regulatory compliance during well-drilling and related operations." 82 Fed. Reg. at 46,462. But BLM provides no information suggesting this is actually the case.

Response: As stated in the preamble for today's action, the BLM is currently reviewing § 3179.102 to determine whether it is necessary in light of current operator practices and the analogous EPA regulations in 40 CFR part 60, subparts OOOO and OOOOa. Operators dispose of gas during well completions and related operations consistent with § 3179.102(a) either to comply with EPA or state regulations. See the Section II of the preamble to today's action for the detailed justification.

Comment 154: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to well completion and related operations (3179.102) since the requirement is technically infeasible. One commenter states that requiring that all gas reaching the surface during well completion and post completion, drilling fluid recovery, or fracturing or refracturing be captured and sold, flared, used onsite, or injected with no allowance for any venting is technically infeasible. The commenter add that until a two or three phase gas/liquid separator can be operated, the only option is venting. One commenter also notes that this section of the 2016 final rule inappropriately limits the combined flared volumes regulated under this section with the flared volumes in § 3179.103 to 20 MMcf, which the commenter thinks is arbitrary and too low for modern day unconventional production testing. The commenter also states that reducing the duration for determining the production of a well could result in inadequate design and sizing of the production equipment and insufficient pipeline capacity resulting in additional flaring and venting from the facility in the future. One commenter agrees that this provision may be found duplicative and unnecessary in light of current operating practices and analogous EPA regulations in 40 CFR Part 60, subparts OOOO and OOOOa. One commenter urges BLM to delay the requirements of this section while it considers the necessity and appropriateness of current industry practices and the overlap with EPA regulations, as this section introduces unnecessary confusion about compliance during well-drilling and related operations. The commenter mentions that the EPA's NSPS OOOO and OOOOa allow venting from flowback following hydraulic fracturing until a gas/liquid separator can be operated so that sufficient gas can be captured and sent to a flare or recovered for some other beneficial use. The commenter suggests that complying with an applicable Federal regulation should not have to be verified through a sundry process, and therefore this requirement is inconsistent with the OOOOa exemption for pneumatic controllers and pumps. The commenter therefore supports suspending this section of the rule.

Response: The BLM has tailored the final delay rule to target the requirements of the 2016 Rule for which immediate regulatory relief appears to be particularly justified. The BLM is currently reviewing § 3179.102 to determine whether it is necessary in light of current operator practices and the analogous EPA regulations in 40 CFR part 60, subparts OOOO and OOOOa. Operators dispose of gas during well completions and related operations consistent with § 3179.102(a) either to comply with EPA or state

regulations. Considering the overlap with EPA regulations, the primary effect of § 3179.102 may be to generate confusion about regulatory compliance during well-drilling and related operations. See the Section II of the preamble to today's action for the detailed justification.

Equipment Requirements for Pneumatic Controllers (3179.201)

Comment 155: One commenter states that BLM's reference to analogous EPA regulations as the reason for reconsidering requirements at 43 CFR 3179.201 and 43 CFR 3179.203 is inaccurate. For each of these provisions, the commenter states that BLM overlooks the 2016 final rule's clarification that the requirements at each of these sections only apply only to a pneumatic controller or storage vessel, respectively, if it "[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source." Further, the commenter states that BLM already reviewed relevant requirements through the notice-and-comment rulemaking less than a year ago.

Response: Although 43 CFR 3179.201 and 3179.203 were designed to avoid imposing requirements that conflict with EPA's requirements, this does not mean that overlap with EPA regulations cannot provide a basis on which the BLM can reconsider the regulatory necessity of 3179.201 and 3179.203. Because EPA's regulations apply to new, modified, and reconstructed pneumatic controllers and storage vessels, it is possible that EPA's regulations will adequately address the losses of gas from these sources over time as pneumatic controllers and storage vessels are installed, modified, or replaced over time and become subject to EPA's regulations. As EPA's regulations continue to displace the requirements of the 2016 final rule, and existing wells become marginal and therefore likely to qualify for an exemption from the requirements of the 2016 final rule, it is possible that the 2016 final rule's requirements will become ineffective and unnecessary. In addition, the BLM is reconsidering whether the volumes of gas that would be captured for sale under 3179.201 and 3179.203 actually justify the compliance costs associated with those provisions.

Comment 156: Commenters state that, BLM states that it is reconsidering section 3179.201 in light of analogous EPA regulations and the fact that operators are likely to adopt more efficient equipment in cases where it makes economic sense for them to do so. Commenters request clarification from BLM on the reason BLM would consider a requirement that makes economic sense for operators to be unduly burdensome. BLM's proposal also repeats the 2016 RIA's finding that the cost savings to operators from compliance with the pneumatic controller requirements would substantially exceed the costs of compliance. One commenter further states

that while the commenter agrees that operators are likely to adopt more efficient equipment for pneumatic controllers in cases where it makes economic sense for them to do so, factors such as low gas prices, royalty payments below market value, and externalities can affect operator perceptions and behavior.

Response: In the 2016 RIA, the BLM estimated that this requirement would impose costs of about \$2 million per year and generate cost savings from product recovery of \$3 million to \$4 million per year (2016 RIA at 56). The BLM is concerned that § 3179.201 imposes an immediate cost on operators and is currently reviewing it to determine whether it should be revised or rescinded. The BLM is considering whether § 3179.201 is necessary in light of the analogous EPA regulations and the fact that operators are likely to adopt more efficient equipment in cases where it makes economic sense for them to do so. The BLM does not believe that operators should be required to make expensive equipment upgrades to comply with § 3179.201 until the BLM has had an opportunity to review its requirements and, if appropriate, revise them through notice-and-comment rulemaking.

Requirements for Pneumatic Chemical Injection Pumps or Pneumatic Diaphragm Pumps (3179.202)

Comment 157: One commenter states that BLM’s reason for reconsidering requirements for pneumatic diaphragm pumps at 43 CFR 3179.202 is inaccurate. The commenter indicates that BLM expresses concern that “[a]nalogous EPA regulations apply to new, modified, and reconstructed sources, therefore limiting the applicability of §3179.202 [and] that requiring zero-emissions pumps may not conserve gas in some cases.” The commenter states that BLM overlooks the 2016 final rule’s clarification that the requirements of this section apply only to a pneumatic diaphragm pump that “[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new or modified source.” The commenter also states that the 2016 final rule does not require zero-emissions pumps, but permits them as a compliance option, and incorporates several exceptions, including for pumps with low methane emissions relative to the cost of replacement.

Response: BLM disagrees with the commenter and, in reconsidering the 2016 final rule, the BLM is reviewing pneumatic diaphragm pumps at 43 CFR 3179.202. As stated in the preamble to today’s action, analogous EPA regulations apply to new, modified, and reconstructed sources, therefore limiting the applicability of § 3179.202. In addition, the BLM is concerned that requiring zero-emissions pumps may not conserve gas in some cases. The volume of royalty-free gas used to generate electricity to provide the power

necessary to operate a zero-emission pump could exceed the volume of gas necessary to operate the pneumatic pump that the zero-emission pump would replace.

Downhole Well Maintenance and Liquids Unloading (3179.204)

Comment 158: Commenters state that, with regard to downhole well maintenance and liquids unloading, BLM’s proposal repeats the 2016 RIA’s finding that the costs of compliance with this provision would be partially or more than fully offset by the cost savings from the captured gas, which suggests that the cost burden on operators would be small or nonexistent. BLM provides no rationale for suspension, other than BLM’s belief that operators “should” not be “burdened with the operational and reporting requirements” of this provision until BLM has had an opportunity to review and revise them. This is so vague as to be essentially no rationale at all, and it is wholly inadequate to justify suspending requirements that have already been in effect for nearly a year.

Response: In the 2016 RIA, the BLM estimated that these requirements would impose costs of about \$6 million per year and generate cost savings from product recovery of about \$5 million to \$9 million per year (2016 RIA at 66). In addition, there would be estimated administrative burdens associated with these requirements of \$323,000 per year for the industry and \$37,000 per year for the BLM (2016 RIA at 98 and 101). See Section II of the preamble.

Comment 159: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to downhole well maintenance and liquids unloading (3179.204). One commenter states that the Wyoming Department of Water Quality (WDEQ) worked with the industry to develop a cost-effective permitting program to lower emissions to equivalent standards desired by the EPA, and that the WDEQ’s guidance has already addressed the issue of liquids unloading. The commenter adds that the BLM’s 2016 final rule essentially eliminates the use of WDEQ guidance, and therefore the commenter supports suspending this section of the rule. Another commenter states that Section 3179.204 is outside of BLM’s authority, and recommends that BLM should withdraw its prescriptive requirements for liquids unloading, in particular the prohibition of purging for new wells and flaring for all wells. The commenter suggests that even EPA has acknowledged lack of sufficient technical information to regulate liquids unloading, which BLM recognizes in the preamble of the 2016 Rule and 2016 RIA. The commenter is not aware of any instance in which flares are used for liquids unloading for sweet gas wells as the use of a flare adds back pressure to the well, achieves little, if any, benefit, and is generally cost prohibitive. The commenter states that such flaring cannot be considered a standard industry practice. The commenter also states that the multiple Sundry Notices required

by this section add cost and burden to both industry and the BLM with no waste minimization benefit. The commenter further suggests that this section is duplicative of many state and local regulations around liquids unloading.

Response: As stated in the preamble for today's action, in the 2016 RIA the BLM estimated that these requirements would impose costs of about \$6 million per year and generate cost savings from product recovery of about \$5 million to \$9 million per year (2016 RIA at 66). In addition, there would be estimated administrative burdens associated with these requirements of \$323,000 per year for the industry and \$37,000 per year for the BLM (2016 RIA at 98 and 101). The BLM is concerned that § 3179.204 imposes immediate costs on operators and is currently reviewing it to determine whether it should be rescinded or revised. The BLM does not believe that operators should be burdened with the operational and reporting requirements imposed by § 3179.204 until the BLM has had an opportunity to review them and, if appropriate, revise them through notice-and-comment rulemaking. In addition, as part of this review, the BLM would want to review how these data could be reported in a consistent manner among operators.

Requirements for Pneumatic Controllers (3179.201), Pneumatic Diaphragm Pumps (3179.202), Storage Vessels (3179.203), and Leak Detection and Repair Requirements (3179.301-305)

Comment 160: Commenters state that, with regard to Requirements for Pneumatic Diaphragm Pumps, Storage Vessels, and Leak Detection and Repair Requirements, BLM's stated rationale for delaying these provisions is against its belief that operators should not be required to make upgrades to equipment, or incur operational costs for leak detection, until BLM has completed a rulemaking to reevaluate the requirements, but agencies are not allowed to suspend or delay regulatory requirements currently in effect simply on the basis that the agency thinks that it would like to change those requirements in the future and does not want the regulations to apply in the interim. But that is exactly what BLM is trying to do in the Suspension Proposal.

Response: The BLM has tailored the final delay rule to target the requirements of the 2016 Rule for which immediate regulatory relief appears to be particularly justified. See the preamble for today's action for the BLM's specific justification for delay with regard to Requirements for Pneumatic Diaphragm Pumps, Storage Vessels, and Leak Detection and Repair Requirements.

Comment 161: Multiple commenters support suspending or delaying the requirements of the 2016 final rule that establish equipment requirements for pneumatic controllers (3179.201),

pneumatic diaphragm pumps (3179.202), and storage vessels (3179.209). The commenters state that these sections are regulated by the EPA and the respective state authority, and therefore their requirements should be either suspended or delayed. One commenter states that the equipment requirement of pneumatic controllers and pneumatic pumps are in direct conflict with § 3178.3 and § 3178.4 that specifically state that royalty is not due for gas used to operate pneumatic controllers and pumps. The commenter states that this section of the 2016 final rule is unnecessary in light of EPA's NSPS OOOO and OOOOa requirement to not allow installation of high bleed pneumatic controllers or pumps which will ensure over time that as they go out of service all high bleeds will be replaced, and that the operators will replace equipment where it makes economic sense. The commenter adds that because the 2016 final rule would apply to pre-OOOO sites, operators of many low volume and marginal wells would likely choose to shut in these wells rather than to incur these expenditures, resulting in a loss of production for a negligible benefit. One commenter states that pneumatic controller gas usage is a beneficial use and does not generate waste. In Wyoming, pneumatic controllers are currently regulated by the WDEQ and the EPA, and therefore this section of the 2016 final rule should be rescinded as BLM is attempting to regulate air emissions, not waste. In regard to pneumatic pumps, the commenter does not understand the reason that BLM believes that it has the authority to require operators to change pneumatic pumps under the guise of royalty collection. Another commenter supports the delay or suspension of the broad set of requirements under 3179.201-204, and 3179.301-305 and notes that the regulation of natural gas pneumatic controllers, pneumatic diaphragm pumps, well maintenance and liquids unloading, storage vessels and leak detection all outside of BLM's authority, the associated venting and flaring is either beneficial or unavoidable, and their regulation does not increase royalties.

Response: BLM generally agrees with the comments and, in reconsidering the 2016 final rule, the BLM is reviewing its authority for regulating such issues. As stated in the preamble to today's action, these provisions may create unnecessary regulatory overlap in light of analogous EPA regulations that adequately address BLM's concern with the wasteful loss of gas. In general, the emissions-targeting provisions of the 2016 final rule were crafted so that compliance with analogous EPA regulations would constitute compliance with the BLM's regulations. Although EPA's regulations apply to new and modified sources while the 2016 final rule's requirements would also apply to existing sources, the BLM notes that many of the EPA's regulations have been in place since 2011 and that over time, as existing well sites are decommissioned and new well sites come online, the EPA's regulations will rapidly displace the BLM's regulations, eventually rendering the BLM regulations entirely duplicative.

Leak Detection and Repair Requirements (3179.301-305)

Comment 162: Multiple commenters support suspending or delaying the requirements of the 2016 final rule with regard to equipment leaks (3179.301 - 305). One commenter states that the leak detection and report (LDAR) requirements are outside BLM's authority under the MLA. The commenter refers to its detailed comments on the 2016 final rule RIA, and mentions the BLM overestimated the benefits from the proposed LDAR provisions. The commenter states that the benefits that BLM estimated include both the natural gas recovery benefits to operators and the social cost of methane to society, and that the BLM overstated the methane emission reductions associated with the provision in the 2016 Rule addressing equipment leaks and LDAR by over 30% by rounding up the estimates. The commenter states that a BLM review is necessary and delay and suspension are appropriate to ensure that operators and BLM are not required to implement requirements that may be repealed. One commenter states that it is unclear how operators are to prove to BLM via Sundry Notice that LDAR requirements are being met through EPA's OOOOa rule, when BLM's requirements are not consistent with EPA's requirements under OOOOa. The commenter believes that the Wyoming Department of Water Quality (WDEQ) is in the best position to regulate LDAR as they have the personnel, budget, and expertise necessary to efficiently and effectively implement and manage compliance with its program, and therefore supports suspending this section of the rule.

Response: BLM generally agrees with the comments and, in reconsidering the 2016 final rule, the BLM is reviewing its authority for regulating such issues. As stated in the preamble to today's action, these provisions may create unnecessary regulatory overlap in light of analogous EPA regulations that adequately address BLM's concern with the wasteful loss of gas. In general, the emissions-targeting provisions of the 2016 final rule were crafted so that compliance with analogous EPA regulations would constitute compliance with the BLM's regulations. Although EPA's regulations apply to new and modified sources while the 2016 final rule's requirements would also apply to existing sources, the BLM notes that many of the EPA's regulations have been in place since 2011 and that over time, as existing well sites are decommissioned and new well sites come online, the EPA's regulations will rapidly displace the BLM's regulations, eventually rendering the BLM regulations entirely duplicative.

Paperwork Reduction Act

Comment 163: One commenter states that this information collection (IC) activity is unnecessary because operators will be forced to plan for compliance, with or without a regulatory IC requirement. The commenter also questions the BLM's burden estimates for both operators and the government.

Response: The BLM believes that this IC activity is a reasonable, low-cost, and effective way to assist operators as they anticipate the need to capture gas. The BLM disagrees with the commenter with respect to the usefulness of this IC activity and will continue to include it in this information collection. The BLM will not increase the estimated annual number of responses to 100,000, as suggested by the commenter. Contrary to the comment, the estimated number of responses is not for the life of the rule. Instead, the estimates are annual. Moreover, APDs, along with waste minimization plans, are limited to wells at which operations have not yet commenced (see 43 CFR 3162.3-1(d)), and thus are not required for all oil and gas wells on public lands.

Comment 164: A commenter claimed that the BLM underestimated the number of responses for this IC activity for 43 CFR 3179.8 (Request for Approval of Alternative Capture Requirement), and stated that the BLM estimated 185 operators will submit information under this regulation.

Response: In fact, the BLM estimates that 50 operators will request approval of an alternative capture requirement. The BLM believes that even this lower estimate is reasonable. Section 3179.7 authorizes operators to choose to comply with the capture requirements on a county- or State-wide basis, provided the operator notifies the BLM of its choice by Sundry Notice (Form 3160-5) by January 1 of the relevant year. This option is likely to minimize the number of requests for an alternative capture requirement, since it provides opportunities for compliant wells to offset those that are non-compliant. As stated in the regulatory text, section 3179.8 applies only to leases issued before the effective date of the 2016 final rule and to operators choosing to comply with the capture requirement in section 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis. The BLM will not revise the burden estimates for section 3179.8.

Comment 165: A commenter stated that, while an operator may be able to obtain relief under section 3179.201(b)(4) (Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Controller)) for all of the wells on a lease, an operator faced with the prospect of having to replace a single pneumatic controller will never be able to meet the standard outlined in the regulation. For this reason, the commenter claimed that the regulation requires an operator to submit unnecessary and irrelevant information. The commenter calculates that the BLM's burden estimates mean that operators will invoke this IC activity for only 0.012 percent of existing high-bleed controllers. The commenter also compares the 4-hour-per-response estimated time burden for this IC activity to the 16-hour-per-response estimated time burden for a request for approval of an alternative capture requirement at 43 CFR 3179.8(b).

Response: The BLM disagrees. This IC activity is required in order to obtain or retain a benefit (i.e., authorization to continue using a high-bleed pneumatic controller). An operator may choose to forgo that benefit. However, the BLM believes this is a useful IC activity for operators who choose to seek that benefit. The BLM will not remove this IC activity from the final rule.

The commenter calculates that the BLM's burden estimates mean that operators will invoke this IC activity for only 0.012 percent of existing high-bleed controllers. The BLM does not necessarily accept the commenter's calculation. However, the more important point is that the BLM expects that a large number of operators will choose to comply with the requirement to replace high-bleed controllers rather than seek authorization to continue using them.

The commenter also compares the 4-hour-per-response estimated time burden for this IC activity to the 16-hour-per-response estimated time burden for a request for approval of an alternative capture requirement at 43 CFR 3179.8(b). The BLM does not agree with the validity of this comparison. The first 3 exceptions listed at section 3179.201, for which the estimated time burdens are 2 hours per response, are a more apt comparison, since the underlying requirements are the same.

The BLM continues to believe its burden estimates are reasonable: 50 responses, 4 hours per response, and 200 total burden hours annually.

Comment 166: A commenter stated that, while an operator may be able to obtain relief under section 3179.202(f) (Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pump)) for all of the wells on a lease, an operator faced with the prospect of having to replace a single pump will never be able to meet the standard outlined in the regulation. For this reason, the commenter claimed that the regulation requires an operator to submit unnecessary and irrelevant information. The commenter calculates that the BLM's burden estimates mean that operators will invoke this IC activity for a small percent of existing pumps. The commenter also compares the 4-hour-per-response estimated time burden for this IC activity to the 16-hour-per-response estimated time burden for a request for approval of an alternative capture requirement at 43 CFR 3179.8(b).

Response: The BLM disagrees. This IC activity is required in order to obtain or retain a benefit (i.e., authorization to continue using an existing pump). An operator may choose to forgo that benefit. However, the BLM believes this is a useful IC activity for operators who choose to seek that benefit. The BLM will not remove this IC activity from the final rule.

The commenter calculates that the BLM's burden estimates mean that operators will invoke this IC activity for a small percent of existing pumps. The BLM does not necessarily accept the commenter's calculation. However, the more important point is that the BLM expects that a large number of operators will choose to comply with the requirement to replace pumps rather than seek authorization to continue using them.

The commenter also compares the 4-hour-per-response estimated time burden for this IC activity to the 16-hour-per-response estimated time burden for a request for approval of an alternative capture requirement at 43 CFR 3179.8(b). The BLM does not agree with the validity of this comparison. The other exceptions listed at section 3179.202, for which the estimated time burdens are 1 hour per response, are a more apt comparison, since the underlying requirements are the same.

The BLM continues to believe its burden estimates are reasonable: 50 responses, 4 hours per response, and 200 total burden hours annually.

Comment 167: A commenter claimed that the BLM underestimates the burdens of this IC. The commenter stated that the BLM should have based the hourly cost for submitting information on U.S. Department of Labor data for Colorado: \$73.06 for a petroleum engineer and \$25.11 for a paralegal. The commenter also states that the dollar equivalent of the burden estimates should be about \$4.268 million.

Response: It is not clear how the commenter would obtain a weighted average hourly wage from those numbers. The BLM did provide a weighted average hourly wage estimate at Table 12-1 of the supporting statement for the IC request. (The BLM submitted the supporting statement to OMB in connection with the proposed rule that is publicly available at <https://reginfo.gov/public/do/PRAMain>.)

For purposes of responding to the comment, that table is shown below:

A. Position	B. Mean Hourly Pay Rate	C. Hourly Rate with Benefits (Column B x 1.4)	D. Percent of Collection Time	E. Weighted Average Hourly Cost (Column C x Column D)

General Office Clerk (43-9061)	\$15.33	\$21.46	10%	\$2.14
Engineer (17-2199)	\$47.19	\$66.07	80%	\$52.86
Engineering Manager (11-9041)	\$68.10	\$95.34	10%	\$9.53
Totals			100%	\$64.53

The BLM notes that in the table above, the hourly rate with benefits for an engineering manager is \$95.34. In the comment, the hourly rate with benefits for a petroleum engineer in Colorado is \$94.98. Moreover, the BLM's table shows that 80 percent of the work is done by an engineer, whose hourly rate with benefits is \$66.07. That is far higher than the commenter's recommended hourly rate of \$32.64 for a paralegal.

The commenter also states that the dollar equivalent of the burden estimates should be about \$4.268 million. The commenter's estimate is actually lower than the total of about \$5.3 million shown in the BLM's supporting statement.

The BLM will not revise its burden estimates in response to this comment.

Attachment 17

BLM, **Regulatory Impact Analysis** for the Final Rule to Suspend or Delay Certain Requirements of the 2016 Waste Prevention Rule (Dec. 2017)

Regulatory Impact Analysis for the Final Rule to Suspend or Delay Certain Requirements of the 2016 Waste Prevention Rule

U.S. Bureau of Land Management

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1. Introduction

On November 18, 2016, the Bureau of Land Management (BLM) published a final rule entitled, “Waste Prevention, Production Subject to Royalties, and Resource Conservation” (2016 final rule). The 2016 final rule became effective on January 17, 2017, with many of the provisions phased-in over time, beginning January 17, 2018.

Since the start of this year, the President has issued several Executive Orders (E.O.) that necessitate the review of the BLM’s 2016 final rule. On January 30, 2017, the President issued E.O. 13771, entitled, “Reducing Regulation and Controlling Regulatory Costs,” which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. In addition, on March 28, 2017, the President issued E.O. 13783, entitled, “Promoting Energy Independence and Economic Growth.” Section 7(b) of E.O. 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for “consistency with the policy set forth in section 1 of [the] order and, if appropriate...publish for notice and comment proposed rules suspending, revising, or rescinding those rules.”

As directed by these Executive Orders, and by Secretarial Order No. 3349, “American Energy Independence,” the BLM is currently reviewing the 2016 final rule and wants to avoid imposing temporary or permanent compliance costs for requirements that might be rescinded or significantly revised in the near future. This Regulatory Impact Analysis (RIA) analyzes the impacts of this 2017 final delay rule to temporarily suspend or delay the implementation of certain requirements of the 2016 final rule.

BLM’s Final Rule

The 2016 final rule replaced the BLM’s existing policy, Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A). The 2016 final 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 (other than Osage Tribe) 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 2017 final delay rule temporarily suspends or delays certain requirements contained in the 2016 final rule until January 17, 2019.

For the following requirements in the 2016 final rule with January 2018 compliance dates, this 2017 final delay rule will temporarily postpone the compliance dates until January 17, 2019:

- Gas capture requirement (§3179.7);
- Measuring and reporting volumes of gas vented and flared (§3179.9);
- Determinations regarding royalty-free flaring (§3179.10);
- Equipment requirements for pneumatic controllers (§3179.201);
- Requirements for pneumatic diaphragm pumps (§3179.202);

- Storage vessels (§3179.203); and
- Operator responsibility (Leak Detection and Repair (LDAR)) (§§3179.301 to 3179.305).

The following requirements in the 2016 final rule that are currently in effect are temporarily suspended until January 17, 2019:

- Waste Minimization Plans (§3162.3-1(j));
- Well drilling (§3179.101);
- Well completion and related operations (§3179.102); and
- Downhole well maintenance and liquids unloading (§3179.204).

The suspension or delay of these requirements do not necessarily leave these operations unregulated, as operators will still need to comply with other Federal regulations and requirements, State regulations, and tribal regulations, where applicable.

Summary of Impacts

The Office of Management and Budget's (OMB) Office of Information and Regulatory Affairs (OIRA) reviewed the BLM's proposal to suspend or delay certain requirements and determined that the 2017 final delay rule is not economically significant and does not require a Regulatory Flexibility Analysis. This RIA draws heavily upon the analysis conducted for the RIA for the 2016 final rule. This 2017 final delay rule will shift the impacts estimated for the 2016 final rule into the future.

We estimate that the 2017 final delay rule will result in a reduction in compliance costs, a reduction in cost savings, forgone emissions reductions, and positive net benefits. Compliance activities will be shifted to the future, due to the suspension and delay of the 2016 final rule's requirements, and start in mid to late 2018 as operators prepare for the proposed new compliance deadline of January 17, 2019. Over the 11-year evaluation period (2017-2027), the BLM estimates total net benefits ranging from \$35 – 52 million (NPV and interim domestic Social Cost of Methane (SC-CH₄) using a 7% discount rate) or \$19 – 29 million (NPV and interim domestic SC-CH₄ using a 3% discount rate).

The 2017 final delay rule 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. Additionally, the 2017 final delay rule will not have a significant economic impact on a substantial number of small entities.

We also estimate an initial reduction in royalty payments as compliance activities that would have resulted in additional gas capture are shifted to the future. However, over the next 11-year period (2017-2027), we estimate that the 2017 final delay rule will increase total royalties from the baseline, albeit by a relatively small amount.

Table 1 Summary of Estimated Impacts, 2017 (\$ in million, 2016)*

	Net Present Value (7%)	Net Present Value (3%)	Annualized (7%)	Annualized (3%)
Estimated Reductions in Compliance Costs (Excluding Cost Savings)	\$73 – 91	\$40 – 50	\$9.7 – 12.1	\$4.3 – 5.4
Estimated Reductions in Cost Savings	\$36	\$21	\$4.8	\$2.3
Estimated Value of Forgone Emissions	\$1.9	\$0.3	\$0.25	\$0.03
Estimated Net Benefits	\$35 – 52	\$19 - 29	\$4.7 – 7	\$2.1 – 3.1

*Although this rule puts into place a delay of one year, the length of analysis is from 2017 through 2027.

2. Background

2.1 Requirements for Economic Analysis

By statute and executive order, an agency passing a significant regulatory action is required to provide a qualitative and quantitative assessment of the anticipated costs and benefits of that action.

E.O. 12866 “Regulatory Planning and Review” requires agencies to assess the benefits and costs of regulatory actions, and for significant regulatory actions, submit a detailed report of their assessment to OMB for review. A rule may be significant under E.O. 12866 if it meets any of the four criteria. A significant regulatory action is any rule that may:

- Have an annual effect on the economy of \$100 million or more or 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;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

The purpose of this economic analysis is to provide information allowing decision makers to determine that:

- There is adequate information indicating the need for and the consequences of the proposed action;
- The benefits to society justify the potential costs, recognizing that not all benefits and costs can be described in monetary or even in quantitative terms, unless a statute requires another regulatory approach;
- The action will maximize net benefits to society (including economic, environmental, public health and safety, and other advantages; distributional impacts; and equity), unless a statute requires another regulatory approach;
- Where a statute requires a specific regulatory approach, the action will be the most cost-effective, including reliance on performance objectives to the extent feasible; and
- Agency decisions are based on the best reasonably obtainable scientific, technical, economic, and other information.

To provide this information, per OMB Circular A-4, the economic analyses of economically significant rules will contain three elements:

- A statement of the need for the proposed action;
- An examination of alternative approaches; and
- An analysis of benefits and costs.

E.O. 13771 “Reducing Regulation and Controlling Regulatory Costs” requires agencies to do the following:

- Unless prohibited by law, identify at least two existing regulations to be repealed when it proposes for notice and comment or otherwise promulgates a new regulation;
- Unless otherwise required by law or consistent with advice provided in writing by the Director of OMB, ensure that the cost of all new regulations, including repealed regulations, to be finalized in fiscal year 2017, be less than or equal to \$0; and
- To the extent permitted by law, ensure that any new incremental costs associated with new regulations be offset by the elimination of existing costs associated with at least two prior regulations.

The OMB issued guidance for implementing E.O. 13771 on April 5, 2017. It defines a deregulatory action as “an action that has been finalized and has total costs less than zero.” Further, deregulatory actions do not have to be defined as significant under E.O. 12866 or OMB guidance. With respect to estimating costs and cost savings, the guidance directs agencies to use the methods and concepts in OMB Circular A-4 and that “agencies should conform to the accounting conventions they have followed in past analyses.” Meaning, items historically considered costs in regulatory actions would be considered cost savings in deregulatory actions. However, items historically considered benefits in regulatory actions should not be considered negative cost savings when deregulating.

The guidance continues, “For EO 13771 deregulatory actions that revise or repeal recently issued rules, agencies generally should not estimate cost savings that exceed the costs previously projected for the relevant requirements, unless credible new evidence show that costs were previously underestimated...Where an agency believes it can significantly improve upon a prior cost estimate, especially a recent one, through methodological enhancements, the agency should first discuss those methodologies with OIRA.”

The Regulatory Flexibility Act (RFA) and the Small Business Regulatory Enforcement Fairness Act (SBREFA) require agencies to analyze the economic impact of regulations to determine whether there would be a significant economic impact on a substantial number of small entities.

If a rule will have a significant economic impact on a substantial number of small entities when it is promulgated, then agencies must conduct an initial regulatory flexibility analysis with the proposed rule and a final regulatory flexibility analysis with the final rule.¹ If the rule will not have a significant economic impact on a substantial number of small entities when it is promulgated, then agencies do not have to conduct the initial or final regulatory flexibility analyses.²

¹ Under 5 U.S.C. 603 and 5 U.S.C. 604, respectively.

² Under 5 U.S.C. 605.

Federal law also requires special considerations if OIRA determines that the rule is “major.”³ A rule is major if it has resulted in or is likely to result in:

- An annual effect on the economy of \$100 million or more;
- A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- Significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets.

If OIRA determines that a rule is major, then the rule may become effective 60 days after the agency promulgates it and submits it to Congress. A major rule is subject to congressional review during this time and other procedural requirements.⁴

E.O. 13272 reinforces executive intent that agencies give serious attention to impacts on small entities and develop regulatory alternatives to reduce the regulatory burden on small entities. When the proposed regulation will impose a significant economic impact on a substantial number of small entities, the agency must evaluate alternatives that would accomplish the objectives of the rule without unduly burdening small entities.

2.2 Need for Policy Action

Since the start of 2017, the President has issued several Executive Orders that necessitate the review of the BLM’s 2016 final rule. On January 30, 2017, the President issued E.O. 13771, entitled, “Reducing Regulation and Controlling Regulatory Costs,” which promotes the objective of reducing regulation and controlling regulatory costs. In addition, on March 28, 2017, the President issued E.O. 13783, entitled “Promoting Energy Independence and Economic Growth.” Section 7(b) of that order directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for “consistency with the policy set forth in section 1 of [the] order and, if appropriate...publish for notice and comment proposed 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, on March 29, 2017, Secretary Zinke issued Secretarial Order 3349, entitled “American Energy Independence,” 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 RIA for the 2016 final rule estimated initial compliance costs (excluding the sales from recovered gas) of \$114 million in Year 1 and \$118 – 134 million in Year 2, and estimated compliance costs of about \$55,200 per operator per year over a 10-year period. See Table 2.2 for

³ Under 5 U.S.C. 804.

⁴ Described in 5 U.S.C. 801.

the estimated total costs in more detail. As directed by Executive Orders 13771 and 13783 and by Secretarial Order 3349, the BLM is currently reviewing the 2016 final rule to determine whether it should be suspended, revised, or rescinded. In light of this, the BLM wants to avoid imposing temporary or permanent compliance costs on operators for requirements that might be rescinded or significantly revised in the near future. The BLM therefore suspends or delays certain requirements in the 2016 final rule until January 17, 2019.

Table 2.2: 2016 Final Rule Estimated Compliance Costs (\$ in millions)

Rate Used to Annualize Capital Costs	7%		3%	
Year:	Year 1	Year 2	Year 1	Year 2
Compliance costs	\$114	\$118 – 134	\$110	\$114 – 130
Compliance costs (less sales from the recovery of gas)	\$94	\$75 – 91	\$90	\$71 – 87

2.3 Final Delay Rule Requirements and Discussion

The following table describes the suspensions and delays and their significance.

Citation	Summary	2016 Final Rule Compliance Date	2107 Final Delay Rule Compliance Date	Significance of Change
§ 3103.3-1(a)	Royalty provisions that allows the BLM to increase royalty rates for new competitive leases.	January 17, 2017	No change	None – no change
§ 3162.3-1(j)	Operators must submit a waste minimization plan with an Application for Permit to Drill.	January 17, 2017	January 17, 2019	Operators are not required to submit waste minimization plans until January 17, 2019.
Subpart 3178	Royalty-free use requirements.	January 17, 2017	No change	None – no change
§§ 3179.4 and 3179.5	Determines when the loss of oil or gas is “avoidable” and therefore royalty bearing.	January 17, 2017	No change	None – no change
§ 3179.6	Requires operators to flare gas that is not captured rather than vent it, except in certain circumstances.	January 17, 2017	No change	None – no change
§ 3179.7	Requires operators to capture an increasing percentage of the gas they produce.	January 17, 2018	January 17, 2019 (All dates shift back one year)	The gas-capture requirements now start on January 17, 2019. The gas-capture-target deadlines shift back one year each. The

				time periods corresponding to the allowable flaring amounts shift back one year each.
§ 3179.8	Allows for alternative capture requirements.	With start of 3179.7	No change	None – no change
§ 3179.9	Measurement requirements for flared gas.	January 17, 2018	January 17, 2019	Operators are not required to measure flared gas until January 17, 2019.
§ 3179.10	Regarding existing approvals to flare royalty free.	January 17, 2018	January 17, 2019	Extends the date by which existing approvals to flare royalty free are voided.
§ 3179.101	Limits on, and requirements for disposal of, gas lost during well drilling.	January 17, 2017	January 17, 2019	Operators are not subject to requirements during well drilling. This change is likely to have little impact since operators are expected to control gas in a manner consistent with the 2016 final rule's requirements as a matter of practice.
§ 3179.102	Limits on, and requirements for disposal of, gas lost during well completion and related operations.	January 17, 2017	January 17, 2019	Operators are not subject to requirements during well completion and related operations. This is likely to have little impact since the provisions in the 2016 final delay rule are generally consistent with other

				Federal requirements and some State requirements.
§§ 3179.103 – 3179.105	Limits on, and requirements for disposal of, gas lost during initial production testing, subsequent well tests, and emergencies.	January 17, 2017	No change	None – no change
§§ 3179.201 and, 3179.202	Operators must upgrade to lower-emission pneumatic equipment.	January 17, 2018	January 17, 2019	Operators with high-bleed continuous pneumatic controllers are not required to replace the controllers with low-bleed devices until January 17, 2019. Operators with pneumatic diaphragm pumps are not required to replace with lower-emission equipment or control the emissions until January 17, 2019. This change only impacts existing and applicable controllers and pumps. New equipment is subject to other Federal requirements and some State requirements which meet the 2016 final rule's requirements.
§ 3179.203	Operators must route tank vapors from covered	January 17, 2018	January 17, 2019	Operators with existing storage vessels with

	storage vessels to sales line or to flare.			uncontrolled emissions greater than 6 tons per year are not required to capture or control those emissions until January 17, 2019. This change only impacts certain existing storage vessels. New equipment is subject to other Federal requirements and some State requirements which meet the 2016 final rule's requirements.
§ 3179.204	Requirements for minimizing gas losses from downhole well maintenance and liquids unloading.	January 17, 2017	January 17, 2019	Operators do not have to comply with the 2016 final rule's requirements, i.e., taking steps to minimize waste from liquids unloading activities, remaining on site during well purging, and reporting requirements, until January 17, 2019.
§ 3179.301	Leak detection and repair requirements.	January 17, 2018 for sites that have begun production prior to January 17, 2017; 60 days after beginning production for sites that	January 17, 2019	Operators do not have to comply with the 2016 final rule's LDAR requirements until January 17, 2019. This change only impacts existing well sites. New well sites are subject to other Federal requirements and some State

		begin production after January 17, 2017; 60 days after an out-of-service site is brought back into service and re-pressurized		requirements which meet the 2016 final rule's requirements.
§§ 3179.302 – 3179.305	Leak detection and repair requirements.	With start of 3179.301	No change	These requirements begin on January 17, 2019, the new compliance date for 3179.301.

2.4 Consideration of Alternative Approaches

In developing this 2017 final delay rule, the BLM considered alternative timeframes for which it could suspend or delay the requirements (e.g., six months and two years). Ultimately, the BLM decided to promulgate a suspension or delay for one year, which it believes to be the minimum length of time practicable within which to review the 2016 final rule and undertake a notice-and-comment rulemaking to revise that regulation.

2.5 Alternatives to Direct Regulation

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.”

By suspending and postponing the 2016 final rule, the BLM is suspending and postponing the direct regulation that it had finalized. During the review of the 2016 final rule, the BLM will, in a subsequent rulemaking, explore alternatives to direct regulation.

2.6 Background – Venting and Flaring from Oil and Gas Operations

The following section discusses some of the scenarios under which natural gas can physically be vented and flared from oil and gas operations. There are regulatory requirements and legal restrictions that may prevent the venting or flaring of gas from these sources, depending on the operation or its location. For example, the Environmental Protection Agency (EPA) regulates many of these sources on new or modified wellsites or facilities and States may have regulations that place restrictions on venting or flaring.

The BLM’s 2016 final rule has requirements designed to limit the loss of gas from these sources. This 2017 final delay rule will suspend or delay the implementation of those requirements until January 17, 2019. The sources described below are the primary sources of vented and flared gas from oil and gas production operations, as identified by the Government Accountability Office (GAO) and other studies.

A. Gas flaring from production operations, including associated gas

Associated gas (or casinghead gas) is the natural gas that is produced from an oil well during normal production operations and is either sold, re-injected, used for production purposes, vented (rarely), or flared, depending on whether the well is connected to a gathering line or other method of capture.

Production tests (or productivity tests) are “tests in an oil or gas well to determine its flow capacity at specific conditions of reservoir and flowing pressures. The absolute open flow potential (AOF) can be obtained from these tests, and then the inflow performance relationship (IPR) can be generated.”⁵ The AOF is “the calculated maximum flow rate that a system may provide in the absence of restrictions.”⁶ To determine an AOF, the operator may need to flare gas (and sometimes vent) for a period of time; however, it is also possible to calculate the AOF while capturing the gas in a sales line. For conventional oil and gas wells, well completions and production tests are separate processes temporally. For unconventional wells, however, operators may conduct production tests during flowback.

In addition, emergency flaring or venting may be necessary for safety reasons.

B. Well completions and workovers

Well completion is the process taken to transform a drilled well into a producing well. Hydraulic fracturing is a type of well completion. Refracturing is “an operation to re-stimulate a well after an initial period of production,”⁷ and is a hydraulic fracturing completion. A well workover is “cleaning” of the well or can refer to “the repair or stimulation of an existing production well for the purpose of restoring, prolonging or enhancing the production of hydrocarbons.”⁸

Releases may occur during any well completion and workover; however, greater releases are associated with “flowback” from a hydraulic fracturing completion. Flowback is “the process of allowing fluids to flow from the well following a treatment, either in preparation for a subsequent phase of treatment or in preparation for cleanup and returning the well to production.”⁹

During flowback, an operator will generally return recovered fluids to a temporary three-phase flowback separator. From the separator, the gas is diverted to a sales line or is either vented or flared, the flowback water is returned to a flowback tank (and then trucked or pumped out), and the hydrocarbon liquid is returned to a storage tank. If uncontrolled, natural gas releases may occur during any step of this process.

C. Pneumatic controllers

Pneumatic controllers are automated instruments used for maintaining a process condition, such as liquid level, pressure, pressure difference, and temperature. Depending on the design, controllers are most often powered by pressurized natural gas, but they may also be solar-powered, powered by electricity from the grid, or powered by instrument air.

⁵ “Productivity test” as defined by the Schlumberger Oilfield Glossary. <http://www.glossary.oilfield.slb.com/en/.aspx>.

⁶ “Open flow potential” as defined by the Schlumberger Oilfield Glossary.

⁷ “Refracturing” as defined by the Schlumberger Oilfield Glossary.

⁸ “Workover” as defined by the Schlumberger Oilfield Glossary.

⁹ “Flowback” as defined by the Schlumberger Oilfield Glossary.

Natural gas-driven controllers come in a variety of designs for a variety of uses. Continuous bleed pneumatic controllers are those with a continuous flow of pneumatic supply natural gas to the process control device (e.g., level control, temperature control, pressure control). Continuous controllers are generally classified by their bleed rate – the rate at which they continuously release gas. Low-bleed continuous controllers have a bleed rate of less than or equal to six standard cubic feet per hour (scfh), while high-bleed continuous controllers have a bleed rate exceeding six scfh.

Intermittent pneumatic controllers are actuated using pressurized gas, but do not bleed continuously and can serve functionally different purposes than continuous bleed controllers.

Other controllers are limited by their functionality and feasibility. Non-natural gas-driven pneumatic controllers, such as instrument air devices, can be used depending on the application, but they require electricity sufficient to power an air compressor. Mechanical controllers can replace continuous bleed controllers and intermittent controllers in many applications, but require electricity as their power source.

D. Pneumatic pumps

Pneumatic pumps are devices that use gas pressure to move or compress liquids or gases, and they are generally used at oil and natural gas production sites where electricity is not readily available. The supply gas for these pumps is most often natural gas from the production stream, though they may also use compressed air. The gas leaving the exhaust port of the pump is either directly discharged into the atmosphere or is recovered and used as a fuel gas or stripping gas.

The majority of pneumatic pumps used in oil and natural gas production are used for chemical injection or glycol circulation. During chemical injection, piston pumps or diaphragm pumps will inject small amounts of chemicals to limit processing problems and protect equipment. Pneumatic pumps are used for glycol circulation and recover energy from the high-pressure rich glycol/gas mixture leaving the absorber and use that energy to pump the low-pressure lean glycol back into the absorber.

E. Liquids unloading

In producing gas wells, fluids may accumulate in the wellbore and impede the flow of gas, sometimes halting production itself. Gas wells generally have sufficient pressure to produce both formation fluids and gas early on, but as production continues and reservoir pressure declines, the gas velocity in the production tubing may not be sufficient to lift the formation fluids. When this occurs, liquids (hydrocarbons and salinized water) may accumulate in the tubing, causing a further drop in pressure, slowed gas velocity, and raised pressure at the perforations. When the bottom-hole pressure becomes static, gas flow stops and all liquids accumulate at the bottom of the tubing.

When liquid accumulation occurs, there are a number of options available to operators to remove the liquids, including:¹⁰

- Installing an artificial lift system or other pumping unit;
- Installing smaller diameter tubing;
- Swabbing the well to remove the fluids;
- Using a surfactant to reduce the density of the fluid column; or
- Shutting-in the well to increase bottom-hole pressure and then venting the well to the atmosphere (well purging).

We note that venting may occur during all of these interventions. Generally, lift systems reduce the volume of venting and facilitate the capture and production of gas that would otherwise be vented during purging. However, certain plunger lifts may not be connected to a gas flow line and may vent some gas in the process of unloading.

Liquid accumulation may become a recurring problem, depending on the intervention that an operator uses. Lift systems, pumping units, or smaller diameter tubing, are longer-lasting solutions, while swabbing, surfactants, and well purging are only temporary solutions.

F. Oil and condensate storage tanks

Crude oil and condensate tanks or vessels are used on-site to store produced hydrocarbons and other fluids. In most cases, an operator will direct recovered fluids from the well to a separator, with the hydrocarbons then directed to the storage tanks.

During storage, light hydrocarbons dissolved in the crude oil or condensate vaporize and collect in the space between the tank liquids and the tank roof. These vapors are often vented to the atmosphere when the liquid level in the tank subsequently fluctuates. Losses of gas vapors generally occur when oil is dumped into the tank, the fluids within the tank are circulated or agitated, or when the temperature changes. Lighter crude oil, with API gravity greater than 36°, typically vaporizes more easily.

Rather than release these vapors to the atmosphere, an operator may install a combustion device to combust the vapors or it may install a vapor recovery unit (VRU) to capture gas vapors for sale. Capturing the gas with a VRU requires that a well be connected to a gas-gathering line. VRUs have been shown to reduce volatile organic compound (VOC) emissions from storage vessels by approximately 95%. Recovered vapors have a British Thermal Unit (Btu) content that is higher than pipeline quality natural gas. The vapors may range between 950 to 1,100 Btu per standard cubic foot, and can reach as high as 2,000 Btu/scf.

G. Leaks

¹⁰ An EPA document, *Lessons learned from natural gas STAR partners: Options for removing accumulated fluid and improving flow in gas wells*, describes the problem of liquid accumulation and options for removing the fluids.

Production sites with the potential for natural gas leaks include natural gas well pads, oil wells that co-produce natural gas, gathering and boosting stations, gas processing plants, and transmission and storage infrastructure. Potential sources of leaks include seals, connectors, flanges, hatches, and valves, among others. Leaked gases, or evaporated liquids, are lost to the atmosphere. The leaked natural gas is lost production, and results in the release of methane, VOCs, and other air pollutants into the air.

2.7 Estimated Venting and Flaring from Federal and Indian Leases

GAO Investigations – Initial Estimated Losses for 2008

In 2010, the GAO released a report entitled *Federal oil and gas leases: Opportunities exist to capture vented and flared natural gas, which would increase royalty payments and reduce greenhouse gases*.¹¹ In this report, the GAO estimated that 126 billion cubic feet (Bcf) of natural gas was vented and flared from onshore Federal leases in 2008. The sources of the lost gas accounting for that volume included: flaring from a variety of sources (28 Bcf); pneumatic devices (16 Bcf); gas well liquids unloading (17 Bcf); well completions (30 Bcf); oil and condensate storage tanks (18 Bcf); glycol dehydrators (7 Bcf); and other (10 Bcf).¹²

The GAO further concluded that about 50 Bcf of that gas could be economically captured using currently available technology, including low-bleed pneumatic devices, smart automated plunger lifts, reduced emissions completions, and vapor recovery devices.¹³ It estimated that 40% of the gas was economically recoverable, representing \$23 million in annual Federal royalties, and 16.5 million metric tons of CO₂ equivalent emissions.¹⁴

Table 2.7a: GAO Estimated Venting and Flaring from Federal Leases in 2008, Reduction Technologies, and Potential Reductions

Sources	Vented/ Flared Volume (Bcf)	Reduction Technology	Potential Reduction (Bcf)	Percent of Total Volume Vented/ Flared
Flared (variety of sources)	28			
Pneumatic devices	16	Use low bleed devices	9.7	7.7%

¹¹ GAO (2010). Federal oil and gas leases: Opportunities exist to capture vented and flared natural gas, which would increase royalty payments and reduce greenhouse gases (GAO-11-34). October 2010. Available on the web at <http://www.gao.gov/new.items/d1134.pdf>.

¹² Ibid., p. 12.

¹³ Ibid., p. 20.

¹⁴ Ibid., highlights.

Gas well liquids unloading	17	Expanded use of smart automated plungers	7.2	5.7%
Well completions	30	Expanded use of reduced emissions completions	14.7	11.7%
Oil and condensate tanks	18	Install vapor recovery units	12.9	10.2%
Glycol dehydrators	7	Install vapor recovery devices	5.7	4.5%
Other	10			
Total	126		50.2	39.8%

Source: GAO 2010, pp. 12 and 20.

BLM Estimates for 2014

The BLM reviewed data from the Office of Natural Resources Revenue (ONRR) and 2016 greenhouse gas (GHG) Inventory. Based on this review, we conclude that about 111 Bcf of natural gas was vented and flared from producing operations on Federal and Indian leases in 2014. Of that total, we estimate that 81 Bcf was flared and 30 Bcf was vented.

The ONRR flaring data further indicate that the gas flared from operations producing from Federal and Indian leases contains a mix of gas produced from various mineral estates, including Federal and Indian mineral estates and non-Federal and non-Indian mineral estates (i.e., State-owned and privately-owned minerals). Using data provided by ONRR, we estimate that, of the 81 Bcf of gas flared in 2014, about 77 Bcf of gas was flared from oil wells and 4 Bcf of gas was flared from gas wells. Further, about 44 Bcf of that total (or 55%) came from either Federal or Indian mineral estates. The remaining 37 Bcf came from non-Federal and non-Indian mineral estates. We note that the GAO identified consistency issues with the data reported to ONRR, so the reported volume of flared gas is likely to under-represent the actual volume flared.

Of the estimated 30 Bcf of venting, pneumatic controllers represent the bulk of the natural gas losses with fugitive emissions (including leaks), liquids unloading, and storage tanks being the sources of next highest losses. Table 2.7b shows the estimated volumes of gas loss for each source and the relative share in the context of total venting/flaring and venting alone. The sources of natural gas venting (and leaks) ranked by the percent of total vented volumes are: pneumatic controllers (49.5%), fugitives (13.3%), liquids unloading (10.8%), storage tanks (9.8%), pneumatic pumps (7.7%), well completions and workovers (3.7%), gas engines (3.5%), and compressors (1.7%). See section 4 of the RIA prepared for the 2016 final rule for more detail.

Table 2.7b: Estimated Venting and Flaring from Federal and Indian Leases in 2014

Source	Natural Gas Releases from Natural Gas Production Segment (Bcf)	Natural Gas Releases from Petroleum Production Segment (Bcf)	Vented/ Flared Total (Bcf)	Percent of Total Vented/ Flared	Percent of Total Vented
Flared Gas ¹	3.98	76.94	80.91	72.9%	NA
Well Completions and Workovers ²	0.57	0.55	1.12	1.0%	3.7%
Pneumatic Controllers ²	7.64	7.29	14.93	13.4%	49.5%
Pneumatic Pumps ²	1.42	0.90	2.32	2.1%	7.7%
Gas Engines ²	0.75	0.31	1.06	1.0%	3.5%
Compressors ²	0.51	0.01	0.52	0.5%	1.7%
Liquids Unloading ³	3.26	0.00	3.26	2.9%	10.8%
Storage Tanks ²	1.54	1.40	2.94	2.6%	9.8%
Fugitives ²	3.39	0.62	4.01	3.6%	13.3%
Total	23.06	88.02	111.07	100.0%	

¹ Data from ONRR.

² The EPA's national emissions estimates in the 2016 GHG Inventory were adjusted downward based on the share of U.S. natural gas production in 2014 that came from Federal and Indian lands (about 10.49%) and the share of U.S. crude production in 2014 that came from Federal and Indian lands (about 7.06%).

³ The GHG Inventory suggests a high degree of variability across regions, and also within regions relevant to natural gas production on Federal and Indian lands. Therefore, we used a bottom-up approach to estimate emissions from this source, estimating the number of wells and using per-well emissions data from the Inventory.

The BLM's estimates differ markedly from the GAO's estimates for 2008. There are several possible explanations for these discrepancies.

First, since 2010, the regulatory landscape has changed, with action on the Federal and State levels. In 2012, the EPA finalized Oil and Natural Gas Sector: New Source Performance Standards (NSPS), which established standards for EPA's regulation of VOC emissions from

“new,” “reconstructed,” or “modified” sources in the oil and natural gas sectors.¹⁵ The NSPS regulations apply to operations nationwide, including those on Federal and Indian lands.

Further, several States have published regulations and policies that have impacted Federal leases in those jurisdictions. In 2014, the Colorado Department of Public Health and the Environment, Air Quality Control Division (AQCC) finalized a rule addressing venting and leaks from new and existing sources. Also in 2014, the North Dakota Industrial Commission (NDIC) approved policies aimed at reducing the flaring of natural gas from oil wells.

Second, the amount of flared oil-well gas has increased dramatically since 2008. Increased oil production from tight oil and other unconventional formations without commensurate increases to the gas transportation and processing infrastructure has led to the flaring of large volumes of associated gas.

Third, the GAO based most of its estimates for vented gas on emission factors from the EPA. However, we note that since 2010, the EPA revised its emission factors for gas well liquids unloading and well completions. In addition to the EPA’s work, additional research has focused on the loss of gas from oil and gas wells and production sites.

Lastly, regarding volumes of flared gas reported to ONRR, the GAO report identified that not all flared volumes were reported by operators. The data show that since 2008, the reported volumes of flared gas have increased quite dramatically. While these increases likely reflect the increased oil production over that period, they may also reflect the increased reporting of flared volumes. Interviews with BLM field personnel indicate that some field offices began to require, as a condition of approval to flare, that the operator report the flared volumes to ONRR.

2.8 Existing Federal and State Regulations

The temporary suspension or delay of certain requirements in the 2016 final rule will not leave the oil and gas operations on Federal and Indian leases unregulated with respect to the activities governed by the provisions being suspended or delayed.

The development and production of oil and gas are regulated under a framework of Federal and State laws and regulations. Several Federal agencies implement Federal laws and requirements, while each State in which oil and gas is produced has one or more regulatory agencies that administer State laws and regulations.

State laws apply on Federal lands except when they are preempted by Federal law. Accordingly, the drilling, completion, and production operations of oil and gas wells on Federal lands are subject both to Federal and to State regulation. If the requirements of a State regulation are more

¹⁵ The EPA also finalized National Emission Standards for Hazardous Air Pollutants (NESHAP) Rule, which places certain control requirements on pneumatic pumps.

stringent than those of a Federal regulation, for example, the operator will comply with both the State and the Federal regulation by meeting the more stringent State requirement.

Tribal and Federal laws apply to oil and gas drilling, completion, and production operations on tribal lands. Operators on tribal lands will comply with both tribal and Federal regulations by assuring that they are in compliance with the stricter of those rules.

Regardless of any difference in operational regulations, operators on Federal lands must comply with all Federal, State, and local permitting and reporting requirements. On Indian lands, they must comply with all Federal and tribal permitting and reporting requirements.

Since 2010, the regulatory landscape has changed, with action on the Federal and State levels. In 2012, the EPA finalized Oil and Natural Gas Sector: NSPS subpart OOOO, which established standards for EPA's regulation of VOC emissions from new, modified, and reconstructed sources in the oil and natural gas sectors. It does not address sources in existence prior to the date the NSPS was proposed, unless those sources are modified or replaced at some future time. NSPS 40 CFR part 60, subpart OOOO addresses emissions from hydraulically fractured gas well completion operations, storage vessels emitting more than six tons per year of uncontrolled VOC, continuous bleed pneumatic controllers, and other sources. It applies to operations nationwide, including those on Federal and Indian lands, and it has a co-benefit of reducing the loss of natural gas from certain sources.

In addition, in 2016, the EPA finalized NSPS 40 CFR part 60, subpart OOOOa, which addresses emissions from hydraulically fractured oil and natural gas well completions, pneumatic pumps, fugitive emissions, and other sources. The EPA has recently proposed to delay the fugitive emissions, pneumatic pumps at well sites, and professional engineer certification for close vent system requirements for two years.¹⁶ The EPA has not finalized this proposal. The EPA had already convened a proceeding for reconsidering the final OOOOa rule.¹⁷ Like the NSPS 40 CFR part 60, subpart OOOO, this regulation addresses new, modified, and reconstructed sources in the oil and natural gas sectors, but not existing sources. It also applies to operations nationwide, including those on Federal and Indian lands, and would have a co-benefit of reducing the loss of gas from certain sources.

Several States have published regulations and policies that have impacted Federal leases in those jurisdictions. Below is a summary of selected State regulations and policies that have the effect of limiting the waste of gas from production operations in the States where the production of oil and gas from Federal and Indian leases is most prevalent.

Alaska: Historically, the State of Alaska had high rates of flaring, but the State adopted regulations in the 1970s to address the problem.¹⁸ Since then, the State of Alaska has prohibited

¹⁶ 82 FR 27645 and 82 FR 27641

¹⁷ 82 FR 25730 (June 5, 2017).

¹⁸ Alaska Administrative Code Title 20 - Chapter 25 235. Gas Disposition.

venting or flaring of gas except in narrowly defined circumstances: Testing a well before regular production; fuel that maintains a continuous flare; *de minimis* venting of gas incidental to normal oil field operations; and flaring or venting gas for no more than one hour during an emergency or operational upset. The practical effect is to drive widespread reinjection of associated gas into the field for conservation and oil recovery purposes. Alaska estimates that roughly 0.4% of gas production is flared, which is far lower than in most other States.

Colorado: The State has reduced venting through air quality regulations of emissions of hydrocarbons and other VOCs from the oil and natural gas industry.¹⁹ The Colorado Department of Public Health and Environment, Air Quality Control Commission has instituted regulations similar in many ways to the EPA's existing NSPS for new, reconstructed, and modified hydraulically fractured gas wells and gas processing facilities. The Colorado regulation incorporates some aspects of EPA's NSPS 40 CFR part 60, subpart OOOO by reference, and expands upon the EPA standards in other areas. For example, the Colorado rule requires operators to control emissions from well operations (completions and recompletions) for all hydraulically fractured oil and gas wells. It extends the requirements for pneumatic controllers and storage tanks to cover existing, rather than just new, devices and facilities. It also requires operators to implement a comprehensive instrument-based LDAR program, sets standards for liquids unloading similar to those in the BLM's 2016 final rule, and includes other measures.

Montana: The State has had some limits on venting and flaring in place for some years.²⁰ Produced gas vented to the atmosphere at a rate exceeding 20 thousand cubic feet (Mcf) per day that continues for more than 72 hours must be burned. After completion of a gas well, no gas may be permitted to escape, except gas required for periodic testing or cleaning of the well bore. If, after well completion, the operator intends to flare gas production in excess of 100 Mcf per day, the operator must obtain a variance from the State oil and gas board. The operator must submit a production test and a statement justifying the need for a variance, including information such as potential human exposure; relative isolation of location; measures to restrict public access to location; low gas volume; and low Btu content. The board may elect to restrict production until the gas is marketed or otherwise beneficially used.

North Dakota: In March 2013, the Industrial Commission of North Dakota adopted a policy to reduce flaring, and it followed this with an enforceable order adopted in July 2014.²¹ The policy and order require well operators to meet flaring reduction targets according to a prescribed timeline. The gas-capture targets for each operator start with a target of capturing at least 74% of production by October 2014 and then rise over time, culminating with a target of capturing at least 91% of production by October 2020.²² The operator may show compliance with the target

¹⁹ Colorado Air Quality Control Commission Regulations, Regulation 7, Control of Ozone via Ozone Precursors and Control of Hydrocarbons via Oil and Gas Emissions (Emissions of Volatile Organic Compounds and Nitrogen Oxides).

²⁰ Administrative Rules of Montana, Title 17-Chapter 8-Subchapter 16 Emission Control Requirements for Oil and Gas Well Facilities Operating Prior to Issuance of a Montana Air Quality Permit.

²¹ <https://www.dmr.nd.gov/oilgas/or24665.pdf>.

²² Specifically, the targets for gas capture are: 74% of the gas by October 1, 2014; 77% by January 1, 2015; 85% by January 1, 2016; and 90% by October 1, 2020, with potential for 95% capture.

by well, field, county, or statewide. The policy provides for oil production to be restricted from wells where the operator does not meet the flaring reduction targets. Production is restricted to no more than 200 barrels of oil per day for those wells capturing more than 60% of the gas production, but less than the applicable target percentage. Production is restricted to no more than 100 barrels of oil per day from those wells capturing less than 60% of produced gas.

Utah: Utah approved a “General Approval Order for a Crude Oil and Natural Gas Well Site and/or Tank Battery” on June 5, 2014.²³ This Order requires LDAR for equipment (e.g., – valves, pumps, etc.) at varying frequencies. The monitoring can be performed using Method 21 (leak definition of 500 ppm), a tunable diode laser absorption spectroscopy (leak definition of 500 ppm) or an infrared camera (optical gas imaging – visible emissions indicate leak). Utah requires annual monitoring for the initial year. After the initial monitoring year, the frequencies begin to vary based on performance and vary from quarterly inspections to annual inspections. It also requires the use of low-bleed pneumatic controllers and the control or combustion of emissions from pneumatic pumps and storage tanks.

Wyoming: The Wyoming Department of Environmental Quality adopted regulations on May 19, 2015, to reduce emissions of VOCs in the Upper Green River Basin nonattainment area.²⁴ The regulations require operators to control emissions from new and existing storage tanks with uncontrolled emissions of four or more tons per year, by 2017, and to control emissions from existing pneumatic pumps (as of January 1, 2014) by 2017. The regulations also require existing pneumatic controllers (as of January 1, 2014) to be low-bleed or zero-bleed by 2017, and they require operators to implement an instrument-based LDAR program with quarterly inspections, by 2017. Further, the regulations establish requirements on additional emissions sources.

2.9 Industry Classifications

Most crude oil and natural gas entities are classified under the North American Industry Classification System (NAICS) 211. This 2017 final delay rule would directly affect entities classified within the Crude Petroleum and Natural Gas Extraction (211111), Natural Gas Liquid Extraction (211112), Drilling of Oil and Natural Gas Wells (213111), and Support Activities for Oil and Gas Operations (213112) industries. Other industries include various distribution or transportation, storage industries.

The small entities affected by the regulatory action include small businesses in Oil and Gas Extraction, Drilling, and Support. We identify the population of affected entities in accordance with the Small Business Administration (SBA) size standards developed to carry out the purposes of the Small Business Act.²⁵ Based on these standards (also described below) the vast majority of businesses in the affected industries are considered small entities.

²³ <http://www.deq.utah.gov/Permits/GAOs/docs/2014/6June/DAQE-AN149250001-14.pdf>

²⁴ The BLM received an advanced copy of the final rule, but does not have a citation with which the public can access the regulation.

²⁵ Code of Federal Regulations, Title 13, Chapter I, part 121, subpart A, section 121.201.

Small entities for mining, including the extraction of crude oil and natural gas, are defined by the SBA as an individual, limited partnership, or small company considered being at “arm’s length” from the control of any parent companies, with fewer than 1,250 employees. For firms drilling oil and gas wells, the threshold is 1,000 employees. For firms involved in support activities, the standard is annual receipts of less than \$38.5 million.

To estimate the percentage of small entities involved in the affected industries, we reference Tables 2.9a and 2.9b. Table 2.9a illustrates that, in 2012, the vast majority of establishments in the affected oil and gas sectors were classified as small as defined by the SBA. Of the establishments involved in crude petroleum and natural gas extraction, 99% had fewer than 1,000 employees. Of the establishments involved in natural gas liquids extraction, 79% had fewer than 1,000 employees. Of the establishments involved in the drilling of oil and gas wells, over 98% had fewer than 1,000 employees. We note that the SBA size standards for crude petroleum and natural gas extraction and the natural gas liquids industries are higher than 1,000 employees; therefore, the percent of small businesses in these industries will likely be slightly higher than 99% and 79%, respectively. Table 2.9b illustrates that in 2012, of the establishments involved in oil and gas support, 96% had annual receipts of less than \$35 million.

Based on these national data, the preponderance of entities involved in developing oil and gas resources are small entities as defined by the SBA. As such, it appears that a substantial number of small entities will be potentially affected by the 2017 final delay rule.

Table 2.9a Oil and Gas Establishments by Employment, Receipts, and Average Receipt per Firm – (2012)

Naics Code	Naics Name	Employee Size	Number Of Firms	Percent of All Firms	Receipts (\$1,000)	Average Receipt per Firm (\$1,000)
211111	Crude Petroleum and Natural Gas Extraction	0-4 employees	4,520	69.2%	\$ 5,679,769	\$ 1,257
		5-9 employees	933	14.3%	\$ 4,245,124	\$ 4,550
		10-19 employees	495	7.6%	\$ 6,449,805	\$ 13,030
		20-99 employees	399	6.1%	\$ 18,612,686	\$ 46,648
		100-499 employees	97	1.5%	\$ 20,060,434	\$ 206,809
		500-999 employees	26	0.4%	\$ 32,115,176	\$ 1,235,199
		<20 employees	5,948	91.0%	\$ 16,374,698	\$ 2,753
		<500 employees	6,444	98.6%	\$ 55,047,818	\$ 8,542
		<1,000 employees	6,470	99.0%	\$ 87,162,994	\$ 13,472
		>1,000 employees	66	1.0%	\$ 185,096,970	\$ 2,804,500
		any size	6,536	100.0%	\$ 276,076,578	\$ 42,239
211112	Natural Gas Liquid Extraction	0-4 employees	60	42.0%	\$ 203,474	\$ 3,391
		5-9 employees	17	11.9%	\$ 148,498	\$ 8,735
		10-499 employees	30	21.0%	\$ 100,772	\$ 3,359
		500-999 employees	6	4.2%	\$ 1,366,827	\$ 227,805

	<10 employees	77	53.8%	\$ 351,972	\$ 4,571
	<500 employees	107	74.8%	\$ 452,744	\$ 4,231
	<1,000 employees	113	79.0%	\$ 1,819,571	\$ 16,102
	>1,000 employees	30	21.0%	\$ 24,443,361	\$ 814,779
	any size	143	100%	\$ 49,236,136	\$ 344,309
213111	Drilling Oil and Gas Wells				
	0-4 employees	1,191	55.6%	\$ 657,906	\$ 552
	5-9 employees	258	12.0%	\$ 378,134	\$ 1,466
	10-19 employees	225	10.5%	\$ 633,316	\$ 2,815
	20-99 employees	303	14.1%	\$ 2,686,952	\$ 8,868
	100-499 employees	108	5.0%	\$ 4,592,918	\$ 42,527
	500-999 employees	15	0.7%	\$ 1,684,645	\$ 112,310
	<20 employees	1,674	78.1%	\$ 1,669,356	\$ 997
	<500 employees	2,085	97.2%	\$ 8,949,226	\$ 4,292
	<1,000 employees	2,100	97.9%	\$ 10,633,871	\$ 5,064
	>1,000 employees	44	2.1%	\$ 21,281,060	\$ 483,660
	any size	2,144	100%	\$ 33,262,941	\$ 15,514

Source: U.S. Census Bureau, Statistics of U.S. Businesses. Data available at <https://www.census.gov/data/datasets/2012/econ/susb/2012-susb.html>.

Table 2.9b: Oil and Gas Support Activities by Receipt Size, Receipts, and Average Receipt per Firm – 2012

NAICS Code	NAICS Name	Receipt Size (\$)	Number of Firms	Percent of All Firms	Receipts (\$1,000)	Average Receipt per Firm (\$1000)
213112	Support Activities for Oil and Gas Operations	<100,000	1,194	13%	\$ 72,652	\$ 61
		\$100,000-499,999	3,277	37%	\$ 821,035	\$ 251
		\$500,000-999,999	1,086	12%	\$ 789,848	\$ 727
		\$1,000,000-2,499,999	1,215	14%	\$ 1,964,944	\$ 1,617
		\$2,500,000-4,999,999	788	9%	\$ 2,750,642	\$ 3,491
		\$5,000,000-7,499,999	331	4%	\$ 1,966,673	\$ 5,942
		\$7,500,000-9,999,999	205	2%	\$ 1,720,148	\$ 8,391
		\$10,000,000-14,999,999	189	2%	\$ 2,234,200	\$ 11,821
		\$15,000,000-19,999,999	131	1%	\$ 2,059,589	\$ 15,722
		\$20,000,000-24,999,999	72	1%	\$ 1,489,268	\$ 20,684
		\$25,000,000-29,999,999	43	0%	\$ 967,448	\$ 22,499
		\$30,000,000-34,999,999	30	0%	\$ 941,771	\$ 31,392
		\$35,000,000-39,999,999	34	0%	\$ 1,068,553	\$ 31,428
		\$40,000,000-49,999,999	32	0%	\$ 1,091,868	\$ 34,121

\$50,000,000-74,999,999	61	1%	\$ 3,229,182	\$ 52,937
\$75,000,000-99,999,999	23	0%	\$ 1,455,563	\$ 63,285
\$100,000,000+	166	2%	\$ 66,022,182	\$ 397,724
<\$35,000,000	8,561	96%	\$ 17,778,218	\$ 2,077
>\$35,000,000	316	4%	\$ 72,867,348	\$ 230,593
Any Size	8,877	100%	\$ 90,645,566	\$ 10,211

Source: U.S. Census Bureau, Statistics of U.S. Businesses. Data available at
<https://www.census.gov/data/tables/2012/econ/susb/2012-susb-annual.html>.

3. Estimating Benefits and Costs

3.1 Analytical Framework

The BLM's 2017 final delay rule temporarily suspends or delays almost all of the requirements in the 2016 final rule that we estimated would pose a compliance burden to operators and generate benefits of gas savings or reductions in methane emissions. The 2017 final delay rule does not suspend or delay the requirements in subpart 3178 related to the royalty-free use of natural gas, but the only estimated compliance costs associated with those requirements are for minor and rarely occurring administrative burdens. In addition, for the most part, the 2017 final delay rule suspends or delays the administrative burdens associated with subpart 3179. Only four of the 24 information collection activities remain, and the burdens associated with these remaining items are not substantial.

The suspension or delay in the implementation of certain requirements in the 2016 final rule will postpone the impacts estimated previously to the near-term future. For example, for a delay of one year, then the impacts that we previously estimated would occur in Year 1 are now estimated to occur in Year 2, impacts that we previously estimated would occur in Year 2 are now estimated to occur in Year 3, and so on.

For this 2017 final delay rule, we track this shift in impacts over the eleven years of implementation (one year delay plus 10 years of implementation) and compare against the baseline. The original period of analysis in the RIA prepared for the 2016 final rule was 10 years. We note that certain impacts, such as cost savings and royalty, are different when shifted to the future.

We also note that the estimation the impacts attributed to a suspension or delay may be imprecise for several reasons. First, operators are likely to have suspended certain compliance activities in light of the BLM's recent postponement of the future compliance dates in the 2016 final rule. See 82 FR 27430 (June 15, 2017).²⁶ Also, while compliance with the requirements suspended or delayed by this 2017 final delay rulemaking will not be required until January 17, 2019, operators are still expected to start undertaking compliance activities in advance of the compliance date including investing in capital equipment. The exact time period for which to measure the impacts of this 2017 final delay rule is imprecise.

Except for some notable changes, this RIA generally uses the underlying assumptions used by the BLM for the RIA prepared for the 2016 final rule, published in November 2016. More

²⁶ BLM's postponement was challenged in the U.S. District Court for the Northern District of California by the states of California and New Mexico as well as a coalition of environmental and tribal groups. See *California v. BLM*, No. 3:17-cv-03804 (N.D. Cal.) (consolidated with *Sierra Club v. Zinke* No. 3:17-03885 (N.D. Cal.)). On October 4, 2017, the court issued an order granting plaintiffs' motions for summary judgment and vacating the BLM's postponement of the January 2018 compliance dates. However, operators are likely to have suspended certain compliance activities in response to the BLM's June 2017 postponement, and may have only resumed, if at all, those activities after the October 4 court decision.

specifically, the BLM used the same per-unit cost assumptions and the same per-unit benefits (gas volumes recovered and emissions reductions) for the equipment requirements.

The BLM recognizes that, to the extent that operators have already undertaken compliance activities, either for requirements already being implemented or in anticipation of the requirements with implementation dates of January 17, 2018, the reduction in compliance costs estimated for this 2017 final delay rule could be overstated.

On the other hand, we also note that during the rulemaking process for the 2016 final rule, the BLM received a substantial number of comments suggesting that the BLM's estimated compliance costs were inadequate and that the actual costs of the rule would be much higher. The petitioners in the subsequent litigation raised the same concerns. While the BLM recognizes these arguments, we have not revisited the estimated compliance costs of the 2016 final rule at this time, which for this 2017 final delay rule would be a reduction in compliance costs. Likewise, we have not revisited the estimated cost savings of the 2016 final rule (aside from the updating the price assumptions, described in the following paragraph), which for this 2017 final delay rule would be a reduction in cost savings.

The BLM updated the crude oil and natural gas price assumptions based on current Energy Information Administration (EIA) forecasts.²⁷ We then adjusted those prices downward, using the same methodology as in the RIA for the 2016 final rule, to reflect a more accurate price that operators would receive at the first point of sale.

3.2 Estimating Forgone Domestic Climate Benefits

We estimate the forgone climate benefits from the proposal using a measure of the domestic social cost of methane (SC-CH₄). The SC-CH₄ is an estimate of the monetary value of impacts associated with marginal changes in CH₄ emissions in a given year.

Since publication of RIA for the 2016 final rule, several documents upon which the 2016 final rule RIA relied upon have been rescinded. In particular, Section 5 of E.O. 13783, issued by the President on March 28, 2017, disbanded the earlier Interagency Working Group on Social Cost of Greenhouse Gases (IWG) and withdrew the Technical Support Documents²⁸ upon which the RIA for the 2016 final rule relied for the valuation of changes in methane emissions. It further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in OMB Circular A-4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)).

²⁷ EIA, Annual Energy Outlook 2017, released January 5, 2017. See Tables 12 and 13. Available on the web at https://www.eia.gov/outlooks/aeo/tables_ref.php.

²⁸ Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under E.O. 12866 (published August 26, 2016) and its Addendum.

The SC-CH₄ estimates presented here 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 and 7%, and to present domestic rather than global impacts of climate change, consistent with OMB Circular A-4. The 7% rate is intended to represent the average before-tax rate of return to private capital in the U.S. economy. The 3% 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.

The Mineral Leasing Act (MLA) provides the BLM with authority “...to prevent waste of oil or gas developed in the land” (30 U.S.C. 225). The statute does not include climate-related benefits from changes in GHG emissions as factors that the BLM should consider in exercising this authority. Thus, the BLM does not consider the monetized benefits of avoiding GHG emissions as a statutory basis under the MLA for rulemaking in this area. However, pursuant to E.O. 12866, and in an effort to provide full transparency to the public regarding the impacts of its actions, the BLM has estimated all of the significant costs and benefits of this 2017 final delay rule to the extent that data and available methodologies permit, consistent with the best science currently available. The 2016 final rule stated that it was expected to result in climate-related benefits by reducing methane emissions. The 2017 final delay rule postpones the previously-claimed climate-related and health benefits associated with any emissions reductions for a period of one year.

Table 3.2 shows the domestic SC-CH₄ estimates used in this RIA. In the Appendix, we provide additional detail about the development of the estimates and uncertainties.

Table 3.2: Interim Domestic SC-CH₄, Using 7% and 3% Discount Rates*

Year	Interim Domestic SC-CH ₄ (2016\$/metric ton)	
	7%	3%
2017	50	162
2018	52	167
2019	53	171
2020	55	176
2021	58	181
2022	60	187
2023	63	193
2024	65	198
2025	68	204

2026	70	209
2027	73	215
2028	75	221
2029	78	226
2030	81	232

* The estimates are emission year specific and are defined in real terms, i.e., adjusted for inflation using the GDP implicit price deflator.

3.3 Discounted Present Value

There is a time dimension to estimates of potential costs and benefits. The 2017 final rule results in compliance costs being assumed by operators at a later point in time. We expect that the majority of the impacts will be short-term in nature and present the results in nominal terms. We also show the 2017 final rule's impacts over 10 years of implementation following the delay (from 2017-2027), using both 7% and 3% discount rates to show the NPV of cumulative impacts.

3.4 Uncertainty

The impacts estimated in this analysis are indeed estimates and come with uncertainty. Generally, the primary sources of uncertainty are:

- While the suspension or delay of requirements is for a specified period of time, until January 17, 2019, there is some uncertainty in the estimated impacts due to uncertainty about the duration of the impact on operator behavior. We are fairly certain that operators are likely to have ceased some compliance activities prior to this final delay rule being implemented, considering the BLM's recent postponement of future compliance dates,²⁹ but there will likely be continued uncertainty until this 2017 final delay rule is made final. In addition, although the 2017 final delay rule shifts compliance to January 17, 2019, operators likely started undertaking compliance activities in advance of that date;
- There is uncertainty associated with the use of the impacts estimated in the RIA for the 2016 final rule, particularly for the gas capture provisions. For that analysis, the BLM based its analysis on the EIA's crude oil and natural gas price forecasts, but reduced those prices to account for the prices that operators might actually receive. Still, the BLM's assumed prices do not account for field-level differentials. We believe that if the field-level natural gas prices are lower than the assumed prices, then the gas savings estimated in the RIA for the 2016 final rule would be overstated;
- As noted in the RIA for the 2016 final rule, there is continued uncertainty over the amount of voluntary compliance currently occurring. If that level of voluntary compliance is higher than that assumed, then the estimated impacts of the delay of the requirements would be higher than reality;
- Please refer to the uncertainties associated with SC-CH₄, as described in the Appendix to this RIA; and
- Please refer to the uncertainties associated with the estimation methodology, as listed in the RIA for the 2016 final rule.

²⁹ For the status of the BLM's 705 postponement, see *supra* note 26.

4. Results

4.1 Estimated Reductions in Compliance Costs (Excluding Cost Savings)

First, we examine the reductions in compliance costs, excluding the savings that would have been realized from product recovery (considered in sections 4.2 and 4.3). Suspending or delaying the targeted requirements of the 2016 final rule for one year (until January 17, 2019) is estimated to substantially reduce compliance costs during the period of the suspension or delay.

Impact in Year 1:

- Regulated entities delay incurring compliance costs of \$114 million (using a 7% discount rate to annualize capital costs) or \$110 million (using a 3% discount rate to annualize capital costs). A reduction in cost savings of \$19 million (NPV using a 7% discount rate) or \$23 million (NPV using a 3% discount rate).

Impacts over an 11-year evaluation period (2017-2027):

- Total reduction in compliance costs ranging from \$73 – 91 million (NPV using a 7% discount rate) or \$40 – 50 million (NPV using a 3% discount rate).

Table 4.1a shows the Year 1 delay in compliance costs (excluding cost savings) by requirement. Tables 4.1b and 4.1c show the compliance costs of the 2016 final rule, compliance costs of the final rule with the proposed delay and alternative delay periods, and the delay in compliance costs estimated to result from the 2017 final delay rule.

Table 4.1a: Compliance Costs That Are Being Delayed by Requirement, Year 1 (\$ in millions)

Requirement	Capital Costs Annualized Using a 7% Discount Rate	Capital Costs Annualized Using a 3% Discount Rate
	Year 1	
Capture Target Req.	\$0	\$0
Flare Measurement	\$4	\$3
Pneumatic Controllers	\$2	\$2
Pneumatic Pumps	\$4	\$4
Liquids Unloading	\$6	\$5
Storage Tanks	\$8	\$7
LDAR	\$84	\$83
Administrative Burden	\$7	\$7

Total	\$114	\$110
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Table 4.1b: Timing and Estimated Compliance Costs (Using a 7% Discount Rate to Annualize Capital Costs) of the 2016 Final Rule, 2017 Final Delay Rule and Proposed Alternative Delays (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Cost for 2016 Final Rule (lower estimate)	Cost for 2016 Final Rule (higher estimate)	Cost for 6-month delay using 11-year analysis (lower estimate)	Cost for 6-month delay using 11-year analysis (higher estimate)	Cost for 1-year delay using 11-year analysis (lower estimate)	Cost for 1-year delay using 11-year analysis (higher estimate)	Cost for 2-year delay using 12-year analysis (lower estimate)	Cost for 2-year delay using 12-year analysis (higher estimate)
2017	\$114	\$114	\$57	\$57	\$0	\$0	\$0	\$0
2018	\$119	\$135	\$117	\$125	\$114	\$114	\$0	\$0
2019	\$125	\$145	\$122	\$140	\$119	\$135	\$114	\$114
2020	\$162	\$192	\$143	\$169	\$125	\$145	\$119	\$135
2021	\$197	\$231	\$179	\$211	\$162	\$192	\$125	\$145
2022	\$212	\$254	\$205	\$242	\$197	\$231	\$162	\$192
2023	\$188	\$236	\$200	\$245	\$212	\$254	\$197	\$231
2024	\$176	\$238	\$182	\$237	\$188	\$236	\$212	\$254
2025	\$194	\$263	\$185	\$250	\$176	\$238	\$188	\$236
2026	\$197	\$265	\$196	\$264	\$194	\$263	\$176	\$238
2027			\$98	\$133	\$197	\$265	\$194	\$263
2028							\$197	\$265
NPV (7%)	<u>\$1,143</u>	<u>\$1,387</u>	<u>\$1,106</u>	<u>\$1,341</u>	<u>\$1,069</u>	<u>\$1,296</u>	<u>\$999</u>	<u>\$1,211</u>
NPV (3%)	<u>\$1,416</u>	<u>\$1,732</u>	<u>\$1,396</u>	<u>\$1,707</u>	<u>\$1,375</u>	<u>\$1,682</u>	<u>\$1,335</u>	<u>\$1,633</u>
Difference from baseline (NPV, 7%)			(\$37)	(\$45)	(\$75)	(\$91)	(\$145)	(\$176)

Difference from baseline (NPV, 3%)			(\$21)	(\$25)	(\$41)	(\$50)	(\$81)	(\$99)
Annualized difference (7%)			(\$4.99)	(\$6.05)	(\$9.98)	(\$12.10)	(\$18.22)	(\$22.10)
Annualized difference (3%)			(\$2.23)	(\$2.73)	(\$4.46)	(\$5.45)	(\$8.17)	(\$9.99)

*Totals may not sum due to rounding. Discounting done relative to 2017.

Table 4.1c: Timing and Estimated Compliance Costs (Using a 3% Discount Rate to Annualize Capital Costs) of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Cost for 2016 Final Rule (lower estimate)	Cost for 2016 Final Rule (higher estimate)	Cost for 6-month delay using 11-year analysis (lower estimate)	Cost for 6-month delay using 11-year analysis (higher estimate)	Cost for 1-year delay using 11-year analysis (lower estimate)	Cost for 1-year delay using 11-year analysis (higher estimate)	Cost for 2-year delay using 12-year analysis (lower estimate)	Cost for 2-year delay using 12-year analysis (higher estimate)
2017	\$110	\$110	\$55	\$55	\$0	\$0	\$0	\$0
2018	\$115	\$131	\$113	\$121	\$110	\$110	\$0	\$0
2019	\$121	\$141	\$118	\$136	\$115	\$131	\$110	\$110
2020	\$158	\$188	\$139	\$165	\$121	\$141	\$115	\$131
2021	\$193	\$226	\$175	\$207	\$158	\$188	\$121	\$141
2022	\$208	\$250	\$200	\$238	\$193	\$226	\$158	\$188
2023	\$184	\$232	\$196	\$241	\$208	\$250	\$193	\$226
2024	\$172	\$233	\$178	\$233	\$184	\$232	\$208	\$250
2025	\$190	\$259	\$181	\$246	\$172	\$233	\$184	\$232
2026	\$192	\$261	\$191	\$260	\$190	\$259	\$172	\$233
2027			\$96	\$130	\$192	\$261	\$190	\$259
2028							\$192	\$261
NPV (7%)	<u>\$1,115</u>	<u>\$1,358</u>	<u>\$1,078</u>	<u>\$1,313</u>	<u>\$1,042</u>	<u>\$1,269</u>	<u>\$974</u>	<u>\$1,186</u>
NPV (3%)	<u>\$1,381</u>	<u>\$1,697</u>	<u>\$1,361</u>	<u>\$1,672</u>	<u>\$1,341</u>	<u>\$1,647</u>	<u>\$1,302</u>	<u>\$1,599</u>
Difference from baseline (NPV, 7%)			(\$36)	(\$44)	(\$73)	(\$89)	(\$141)	(\$172)
Difference from baseline (NPV, 3%)			(\$20)	(\$25)	(\$40)	(\$49)	(\$79)	(\$97)

Annualized difference (7%)			(\$4.86)	(\$5.92)	(\$9.72)	(\$11.85)	(\$17.76)	(\$21.64)
Annualized difference (3%)			(\$2.17)	(\$2.67)	(\$4.35)	(\$5.34)	(\$7.96)	(\$9.79)

*Totals may not sum due to rounding. Discounting done relative to 2017.

4.2 Estimated Reduction in Benefits

The 2017 final delay rule will reduce benefits, since estimated cost savings that would have come from product recovery will be deferred and the emissions reductions will also be deferred.

Reductions in Cost Savings

Impact in Year 1:

- A reduction in cost savings of \$19 million (NPV using a 7% discount rate) or \$23 million (NPV using a 3% discount rate).

Impacts over the 11-year evaluation period (2017-2027):

- Total reduction in cost savings of \$36 million (NPV using a 7% discount rate) or \$21 million (NPV using a 3% discount rate).

Reductions in Environmental Benefits

We estimate that the 2017 final rule will also result in additional methane emissions of 175,000 tons in Year 1, but no change from the baseline for the 11-year period following the delay. We also estimate additional VOC emissions of 250,000 tons in Year 1, but no change from the baseline for the 11-year period following the delay. See Table 4.2b.

Value of the Forgone Methane Reductions

Impact in Year 1:

- Forgone methane emissions reductions valued at \$8 million (using interim domestic SC-CH₄ based on a 7% discount rate) or \$26 million (using interim domestic SC-CH₄ based on a 3% discount rate).

Impacts over the 11-year evaluation period (2017-2027):

- Forgone methane emissions reductions valued at \$1.9 million (NPV and interim domestic SC-CH₄ using a 7% discount rate); or
- Forgone methane emissions reductions valued at \$300,000 (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Table 4.2a shows the reduction in cost savings by requirement in the short-term. Table 4.2b shows the additional emissions in the short-term. Table 4.2c shows the estimated cost savings of the 2016 final rule, and the 2017 final rule after the 2017 final delay and alternative delays. Table 4.2d shows the estimated social benefits of the 2016 final rule, and the 2017 final delay rule after the 2017 final delay and alternative delays.

Table 4.2a: Estimated Reduction in Cost Savings by Requirement, Year 1 (\$ in millions)

Requirement	Year 1
Capture Target Req.	\$0.00
Pneumatic Controllers	\$0.86
Pneumatic Pumps	\$1.82
Liquids Unloading	\$4.47
Storage Tanks	\$0.10
LDAR	\$12.0
Total	\$19.3

*Totals may not sum due to rounding.

Table 4.2b: Estimated Additional Methane Emissions and VOC Emissions, Year 1 (in tons)

Requirement	Methane Emissions	VOC Emissions
	Year 1	
Capture Target Req.	NE	NE
Pneumatic Controllers	18,000	64,900
Pneumatic Pumps	26,800	7,000
Liquids Unloading	33,700	121,000
Storage Tanks	7,100	32,500
LDAR	89,500	24,800
Total	175,000	250,000

*Totals may not sum due to rounding.

Table 4.2c: Timing and Estimated Cost Savings Associated with Natural Gas Recovery for the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays (\$ in millions)

Year	Baseline	6-Month Delay	1-Year Delay	2-Year Delay
	Cost savings for 2016 Final Rule	Cost savings for 6-month delay using 11-year analysis	Cost savings for 1-year delay using 11-year analysis	Cost savings for 2-year delay using 12-year analysis
2017	\$19	\$10	\$0	\$0
2018	\$41	\$30	\$19	\$0
2019	\$54	\$47	\$41	\$19
2020	\$77	\$66	\$54	\$41
2021	\$80	\$79	\$77	\$54
2022	\$90	\$85	\$80	\$77
2023	\$99	\$95	\$90	\$80
2024	\$124	\$111	\$99	\$90
2025	\$138	\$131	\$124	\$99
2026	\$142	\$140	\$138	\$124
2027		\$71	\$142	\$138
2028				\$142
NPV (7%)	<u>\$555</u>	<u>\$537</u>	<u>\$519</u>	<u>\$485</u>
NPV (3%)	<u>\$710</u>	<u>\$699</u>	<u>\$689</u>	<u>\$669</u>
Difference from baseline (NPV7)		(\$18)	(\$36)	(\$70)
Difference from baseline (NPV3)		(\$10)	(\$21)	(\$41)
Annualized difference (7%)		(\$2.42)	(\$4.84)	(\$8.85)
Annualized difference (3%)		(\$1.12)	(\$2.23)	(\$4.09)

*Totals may not sum due to rounding.

Table 4.2d: Timing and Estimated Social Benefits of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays Using the Interim Domestic SC-CH₄ (\$ in millions)

Year	Baseline**		6-Month Delay		1-Year Delay		2-Year Delay	
	Interim Domestic SC-CH ₄ (2016\$)		Interim Domestic SC-CH ₄ (2016\$)		Interim Domestic SC-CH ₄ (2016\$)		Interim Domestic SC-CH ₄ (2016\$)	
	7%	3%	7%	3%	7%	3%	7%	3%
2017	\$8	\$26	\$4	\$13	\$0	\$0	\$0	\$0
2018	\$8	\$27	\$8	\$27	\$8	\$26	\$0	\$0
2019	\$9	\$27	\$9	\$27	\$9	\$27	\$8	\$27
2020	\$9	\$28	\$9	\$28	\$9	\$28	\$9	\$28
2021	\$9	\$29	\$9	\$29	\$9	\$29	\$9	\$29
2022	\$10	\$30	\$10	\$30	\$10	\$30	\$10	\$30
2023	\$10	\$31	\$10	\$31	\$10	\$31	\$10	\$31
2024	\$11	\$32	\$11	\$32	\$11	\$32	\$11	\$32
2025	\$11	\$33	\$11	\$33	\$11	\$33	\$11	\$33
2026	\$11	\$34	\$11	\$34	\$11	\$34	\$11	\$34
2027			\$6	\$18	\$12	\$35	\$12	\$35
2028							\$12	\$36
NPV (7%)	<u>\$66</u>	-	<u>\$65</u>	-	<u>\$64</u>	-	<u>\$62</u>	-
NPV (3%)	-	<u>\$252</u>	-	<u>\$252</u>	-	<u>\$252</u>	-	<u>\$251</u>
Difference from baseline (NPV7)			(\$1.0)		(\$1.9)		(\$3.8)	
Difference from baseline (NPV3)				(\$0.15)		(\$0.30)		(\$0.67)
Annualized difference (7%)			(\$0.13)		(\$0.26)		(\$0.48)	
Annualized difference (3%)				(\$0.02)		(\$0.03)		(\$0.07)

*Totals may not sum due to rounding.

**Social benefits calculated as described in this RIA and not as presented in the 2016 RIA.

4.3 Net Benefits

The 2017 final rule is estimated to result in positive net benefits from the baseline, meaning that the reduction of compliance costs will exceed the reduction in cost savings and the value of the forgone emissions reductions.

Impacts over the 11-year evaluation period (2017-2027):

- Total net benefits ranging from \$35 – 52 million (NPV and interim domestic SC-CH₄ using a 7% discount rate); or
- Total net benefits ranging from \$19 – 29 million (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Tables 4.3a to 4.3d show the estimated net benefits of the final delay rule and alternatives in detail.

Table 4.3a: Estimated Net Benefits (High Cost Scenario) of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays; Considering the Value of Emissions (interim domestic SC-CH₄ based on a 7% discount rate) (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Net benefits for 2016 Final Rule (lower cost estimate)	Net benefits for 2016 Final Rule (higher cost estimate)	Net benefits for 6-month delay using 11-year analysis (lower cost estimate)	Net benefits for 6-month delay using 11-year analysis (higher cost estimate)	Net benefits for 1-year delay using 11-year analysis (lower cost estimate)	Net benefits for 1-year delay using 11-year analysis (higher cost estimate)	Net benefits for 2-year delay using 12-year analysis (lower cost estimate)	Net benefits for 2-year delay using 12-year analysis (higher cost estimate)
2017	(\$87)	(\$87)	(\$43)	(\$43)	\$0	\$0	\$0	\$0
2018	(\$70)	(\$86)	(\$78)	(\$86)	(\$86)	(\$86)	\$0	\$0
2019	(\$62)	(\$83)	(\$66)	(\$84)	(\$70)	(\$86)	(\$86)	(\$86)
2020	(\$76)	(\$106)	(\$69)	(\$94)	(\$62)	(\$82)	(\$70)	(\$85)
2021	(\$107)	(\$141)	(\$91)	(\$123)	(\$75)	(\$106)	(\$62)	(\$82)
2022	(\$112)	(\$154)	(\$109)	(\$147)	(\$107)	(\$141)	(\$75)	(\$105)
2023	(\$79)	(\$127)	(\$95)	(\$140)	(\$112)	(\$154)	(\$106)	(\$140)
2024	(\$42)	(\$103)	(\$60)	(\$115)	(\$79)	(\$126)	(\$111)	(\$153)
2025	(\$45)	(\$114)	(\$44)	(\$109)	(\$42)	(\$103)	(\$78)	(\$126)
2026	(\$44)	(\$112)	(\$44)	(\$113)	(\$45)	(\$114)	(\$41)	(\$103)
2027			(\$22)	(\$56)	(\$43)	(\$112)	(\$45)	(\$113)
2028							(\$43)	(\$111)
NPV (7%)	<u>(\$523)</u>	<u>(\$766)</u>	<u>(\$504)</u>	<u>(\$740)</u>	<u>(\$486)</u>	<u>(\$714)</u>	<u>(\$452)</u>	<u>(\$665)</u>

NPV (3%)							
Difference from baseline (NPV7)	\$18	\$26	\$37	\$52	\$71	\$101	
Difference from baseline (NPV3)							
Annualized difference (7%)	\$2.44	\$3.50	\$4.88	\$7.00	\$8.90	\$12.77	

Table 4.3b: Estimated Net Benefits (Low Cost Scenario) of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays; Considering the Value of Emissions (interim domestic SC-CH₄ based on a 7% discount rate) (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Net benefits for 2016 Final Rule (lower cost estimate)	Net benefits for 2016 Final Rule (higher cost estimate)	Net benefits for 6-month delay using 11-year analysis (lower cost estimate)	Net benefits for 6-month delay using 11-year analysis (higher cost estimate)	Net benefits for 1-year delay using 11-year analysis (lower cost estimate)	Net benefits for 1-year delay using 11-year analysis (higher cost estimate)	Net benefits for 2-year delay using 12-year analysis (lower cost estimate)	Net benefits for 2-year delay using 12-year analysis (higher cost estimate)
2017	(\$83)	(\$83)	(\$41)	(\$41)	\$0	\$0	\$0	\$0
2018	(\$66)	(\$82)	(\$74)	(\$82)	(\$83)	(\$83)	\$0	\$0
2019	(\$58)	(\$79)	(\$62)	(\$80)	(\$66)	(\$82)	(\$82)	(\$82)
2020	(\$72)	(\$102)	(\$65)	(\$90)	(\$58)	(\$78)	(\$66)	(\$81)
2021	(\$103)	(\$137)	(\$87)	(\$119)	(\$71)	(\$102)	(\$58)	(\$78)
2022	(\$108)	(\$150)	(\$105)	(\$143)	(\$103)	(\$136)	(\$71)	(\$101)
2023	(\$75)	(\$122)	(\$91)	(\$136)	(\$107)	(\$149)	(\$102)	(\$136)
2024	(\$38)	(\$99)	(\$56)	(\$111)	(\$74)	(\$122)	(\$107)	(\$149)
2025	(\$41)	(\$110)	(\$39)	(\$104)	(\$38)	(\$99)	(\$74)	(\$122)
2026	(\$39)	(\$108)	(\$40)	(\$109)	(\$41)	(\$109)	(\$37)	(\$98)
2027			(\$19)	(\$54)	(\$39)	(\$107)	(\$40)	(\$109)
2028							(\$38)	(\$107)
NPV (7%)	<u>(\$494)</u>	<u>(\$737)</u>	<u>(\$476)</u>	<u>(\$712)</u>	<u>(\$459)</u>	<u>(\$686)</u>	<u>(\$427)</u>	<u>(\$639)</u>

NPV (3%)							
Difference from baseline (NPV7)	\$17	\$25	\$35	\$51	\$67	\$98	
Difference from baseline (NPV3)							
Annualized difference (7%)	\$2.31	\$3.37	\$4.62	\$6.75	\$8.44	\$12.31	

Table 4.3c: Estimated Net Benefits (High Cost Scenario) of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays; Considering the Value of Emissions (interim domestic SC-CH₄ based on a 3% discount rate) (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Net benefits for 2016 Final Rule (lower cost estimate)	Net benefits for 2016 Final Rule (higher cost estimate)	Net benefits for 6-month delay using 11-year analysis (lower cost estimate)	Net benefits for 6-month delay using 11-year analysis (higher cost estimate)	Net benefits for 1-year delay using 11-year analysis (lower cost estimate)	Net benefits for 1-year delay using 11-year analysis (higher cost estimate)	Net benefits for 2-year delay using 12-year analysis (lower cost estimate)	Net benefits for 2-year delay using 12-year analysis (higher cost estimate)
2017	(\$69)	(\$69)	(\$34)	(\$34)	\$0	\$0	\$0	\$0
2018	(\$52)	(\$68)	(\$60)	(\$68)	(\$68)	(\$68)	\$0	\$0
2019	(\$44)	(\$64)	(\$47)	(\$65)	(\$51)	(\$67)	(\$68)	(\$68)
2020	(\$56)	(\$87)	(\$50)	(\$75)	(\$43)	(\$63)	(\$50)	(\$66)
2021	(\$87)	(\$121)	(\$71)	(\$104)	(\$55)	(\$86)	(\$42)	(\$62)
2022	(\$91)	(\$134)	(\$89)	(\$127)	(\$86)	(\$120)	(\$55)	(\$85)
2023	(\$58)	(\$106)	(\$74)	(\$119)	(\$91)	(\$133)	(\$86)	(\$119)
2024	(\$21)	(\$82)	(\$39)	(\$93)	(\$57)	(\$105)	(\$90)	(\$132)
2025	(\$23)	(\$92)	(\$22)	(\$87)	(\$20)	(\$81)	(\$56)	(\$104)
2026	(\$21)	(\$89)	(\$22)	(\$90)	(\$22)	(\$91)	(\$19)	(\$80)
2027			(\$10)	(\$44)	(\$20)	(\$88)	(\$22)	(\$90)
2028							(\$19)	(\$87)
NPV (7%)	-	-	-	-	-	-	-	-

NPV (3%)	<u>(\$455)</u>	<u>(\$770)</u>	<u>(\$444)</u>	<u>(\$755)</u>	<u>(\$434)</u>	<u>(\$741)</u>	<u>(\$415)</u>	<u>(\$712)</u>
Difference from baseline (NPV7)								
Difference from baseline (NPV3)		\$10	\$15	\$20	\$29	\$40	\$58	
Annualized difference (3%)		\$1.35	\$1.96	\$2.70	\$3.93	\$5.02	\$7.30	

Table 4.3d: Estimated Net Benefits (Low Cost Scenario) of the 2016 Final Rule, 2017 Final Delay Rule, and Proposed Alternative Delays; Considering the Value of Emissions (interim domestic SC-CH₄ based on a 3% discount rate) (\$ in millions)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Net benefits for 2016 Final Rule (lower cost estimate)	Net benefits for 2016 Final Rule (higher cost estimate)	Net benefits for 6-month delay using 11-year analysis (lower cost estimate)	Net benefits for 6-month delay using 11-year analysis (higher cost estimate)	Net benefits for 1-year delay using 11-year analysis (lower cost estimate)	Net benefits for 1-year delay using 11-year analysis (higher cost estimate)	Net benefits for 2-year delay using 12-year analysis (lower cost estimate)	Net benefits for 2-year delay using 12-year analysis (higher cost estimate)
2017	(\$65)	(\$65)	(\$33)	(\$33)	\$0	\$0	\$0	\$0
2018	(\$48)	(\$64)	(\$56)	(\$64)	(\$64)	(\$64)	\$0	\$0
2019	(\$40)	(\$60)	(\$43)	(\$61)	(\$47)	(\$63)	(\$64)	(\$64)
2020	(\$52)	(\$83)	(\$46)	(\$71)	(\$39)	(\$59)	(\$46)	(\$62)
2021	(\$83)	(\$117)	(\$67)	(\$99)	(\$51)	(\$82)	(\$38)	(\$58)
2022	(\$87)	(\$129)	(\$85)	(\$123)	(\$82)	(\$116)	(\$51)	(\$81)
2023	(\$54)	(\$101)	(\$70)	(\$115)	(\$86)	(\$129)	(\$81)	(\$115)
2024	(\$16)	(\$78)	(\$35)	(\$89)	(\$53)	(\$101)	(\$86)	(\$128)
2025	(\$19)	(\$88)	(\$17)	(\$82)	(\$15)	(\$77)	(\$52)	(\$100)
2026	(\$16)	(\$85)	(\$17)	(\$86)	(\$18)	(\$87)	(\$15)	(\$76)
2027			(\$8)	(\$42)	(\$15)	(\$84)	(\$17)	(\$86)
2028							(\$15)	(\$83)
NPV (7%)	-	-	-	-	-	-	-	-

NPV (3%)	<u>(\$419)</u>	<u>(\$735)</u>	<u>(\$410)</u>	<u>(\$721)</u>	<u>(\$400)</u>	<u>(\$706)</u>	<u>(\$381)</u>	<u>(\$679)</u>
Difference from baseline (NPV7)								
Difference from baseline (NPV3)		\$10	\$14	\$19	\$28	\$38	\$56	
Annualized difference (3%)		\$1.28	\$1.90	\$2.57	\$3.79	\$4.77	\$7.05	

4.4 Distributional Impacts

4.4.1 Energy Systems

The 2017 final delay 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, particularly in the short-term. However, since the relative changes in production are expected to be small, we do not expect that the 2017 final delay rule will significantly impact the price, supply, or distribution of energy.

We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context.

Impacts in Year 1:

- A decrease in natural gas production of 9.0 Bcf (0.033% of the total U.S. production); and
- There is no estimated change in crude oil production in Year 1. An increase in crude oil production of 91,000 barrels in Year 2 (0.003% of the total U.S. production).

Table 4.4a shows the estimated incremental production by requirement in the short-term. Table 4.4b shows the estimated incremental production for the 2016 final rule, and the 2017 final delay rule and proposed alternative delays, for each year examined.

Table 4.4a: Estimated Incremental Production, Year 1

Requirement	Year 1
Natural Gas (Bcf)	
Capture Target Req.	0.0
Pneumatic Controllers	-1.05
Pneumatic Pumps	-0.78
Liquids Unloading	-1.96
Storage Tanks	-0.04
LDAR	-5.19
Total Natural Gas	-9.02
Requirement	Year 1
Crude Oil (million bbl)	

Capture Target Req.	0.00
Total Crude	0.00

Table 4.4b: Estimated Incremental Production, 2017 Final Delay Rule and Proposed Alternative Delay Periods (Crude Oil in MMbbl; Natural Gas in Bcf)

Year	Baseline		6-Month Delay		1-Year Delay		2-Year Delay	
	Crude Oil	Natural Gas	Crude Oil	Natural Gas	Crude Oil	Natural Gas	Crude Oil	Natural Gas
2016	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0
2017	0.00	9.0	0.00	4.5	0.00	0.0	0.00	0.0
2018	-0.09	16.3	-0.05	12.7	0.00	9.0	0.00	0.0
2019	-0.26	18.3	-0.18	17.3	-0.09	16.3	0.00	9.0
2020	-1.46	23.0	-0.86	20.6	-0.26	18.3	-0.09	16.3
2021	-2.97	24.5	-2.21	23.7	-1.46	23.0	-0.26	18.3
2022	-3.24	28.3	-3.10	26.4	-2.97	24.5	-1.46	23.0
2023	-2.30	30.9	-2.77	29.6	-3.24	28.3	-2.97	24.5
2024	-1.68	37.1	-1.99	34.0	-2.30	30.9	-3.24	28.3
2025	-2.12	40.5	-1.90	38.8	-1.68	37.1	-2.30	30.9
2026	-2.15	40.5	-2.14	40.5	-2.12	40.5	-1.68	37.1
2027			-1.08	20.2	-2.15	40.5	-2.12	40.5
2028							-2.15	40.5
Total	-16.3	268.3	-16.3	268.3	-16.3	268.3	-16.3	268.3
Difference from baseline			-	-	-	-	-	-

*Totals may not sum due to rounding.

4.4.2 Royalty Impacts

In the short-term, the final 2017 delay rule is expected to reduce annual royalties to the Federal Government, tribal governments, States, and private landowners relative to the baseline. Over 11 years (2017-2027), we expect a small increase in total royalties relative to the baseline, likely due to production slightly shifting into the future where commodity prices are expected to be higher.

Specifically, we estimate a reduction in royalties of \$2.61 million in Year 1. However, over 11 years of implementation (2017-2027), we estimate an increase in royalties from the baseline of \$1.26 million (NPV using a 7% discount rate) or \$380,000 (NPV using a 3% discount rate). Table 4.4c shows the estimated incremental royalty for the 2016 final rule, and the estimated changes from the 2017 final delay rule and alternative delays, for each year examined.

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.³⁰

³⁰ OMB Circular A-4 “Regulatory Analysis.” September 17, 2003. Available on the web at https://www.whitehouse.gov/omb/circulars_a004_a-4/.

Table 4.4c: Estimated Incremental Royalty in the Baseline and with the 2017 Final Delay Rule and Alternatives (\$ in millions)

Year	Baseline	6-Month Delay	1-Year Delay	2-Year Delay
	Cost savings for 2016 Final Rule	Cost savings for 6-month delay using 11-year analysis	Cost savings for 1-year delay using 11-year analysis	Cost savings for 2-year delay using 12-year analysis
2017	\$2.61	\$1.31	\$0.00	\$0.00
2018	\$4.72	\$3.85	\$2.97	\$0.00
2019	\$4.95	\$5.24	\$5.53	\$3.46
2020	(\$2.29)	\$1.73	\$5.76	\$6.33
2021	(\$15.7)	(\$9.39)	(\$3.08)	\$5.46
2022	(\$18.0)	(\$17.5)	(\$17.0)	(\$3.87)
2023	(\$8.60)	(\$13.5)	(\$18.5)	(\$17.5)
2024	(\$0.13)	(\$4.38)	(\$8.64)	(\$18.7)
2025	(\$3.19)	(\$1.76)	(\$0.33)	(\$9.08)
2026	(\$3.52)	(\$3.39)	(\$3.25)	(\$0.31)
2027		(\$1.70)	(\$3.41)	(\$3.13)
2028				(\$3.11)
NPV (7%)	<u>(\$23.3)</u>	<u>(\$22.6)</u>	<u>(\$22.0)</u>	<u>(\$20.8)</u>
NPV (3%)	<u>(\$31.3)</u>	<u>(\$31.1)</u>	<u>(\$30.9)</u>	<u>(\$30.3)</u>
Difference from baseline (NPV7)		\$0.63	\$1.26	\$2.51
Difference from baseline (NPV3)		\$0.19	\$0.38	\$0.94
Annualized difference (7%)		\$0.08	\$0.17	\$0.32
Annualized difference (3%)		\$0.02	\$0.04	\$0.09

4.4.3 Employment Impacts

E.O. 13563 reaffirms the principles established in E.O. 12866, but calls for additional consideration of the regulatory impact on employment. It 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 2017 final delay rule temporarily suspends or delays certain requirements of the BLM’s 2016 final rule on waste prevention and is a temporary 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 the employment would be positive.

In the RIA for the 2016 final 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 to the extent that the compliance costs would force the operator to shut in production, the 2016 final rule had provisions that would exempt these operations from compliance. Based on these factors, the BLM determined that the 2016 final 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.

We do not believe that the 2017 final delay rule substantially alters the investment or employment decisions of firms for two reasons. First, the RIA for the 2016 final rule determined that the rule would not substantially alter the investment or employment decisions of firms, and therefore delaying the 2016 final rule would likewise not be expected to impact those decisions.

4.4.4 Small Business Impacts

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. We conclude that small entities represent the overwhelming majority of entities operating in the onshore crude oil and natural gas extraction industry and, therefore, the 2017 final delay rule will impact a substantial number of small entities.

To examine the economic impact of the 2017 final delay 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.

The BLM identified up to 1,828 entities that operate Federal and Indian leases and recognized that the overwhelming majority of these entities are small business, as defined by the SBA. We estimated the potential reduction in compliance costs to be about \$60,000 per entity during the one year when the 2016 final rule requirements are suspended or delayed. This represents the average maximum amount by which each operator would be positively impacted by the 2017 final delay rule.

We used existing BLM information and research concerning firms that have recently completed Federal and Indian wells and the financial and employment information on a sample of these firms, as available in company annual report filings with the Securities and Exchange Commission (SEC). From the original list of companies, we identified 55 company filings. Of those companies, 33 were small businesses, as defined by the SBA.

From data in the companies' 10-K filings to the SEC, the BLM was able to calculate the companies' profit margins³¹ for the years 2012, 2013, and 2014. We then calculated a profit margin figure for each company when subject to the average annual reduction in compliance costs associated with this proposed rule. For these 26 small companies, the estimated per-entity reduction in compliance costs would result in an average increase in profit margin of 0.17 percentage points (based on the 2014 company data).³²

4.4.5 Impacts on Tribal Lands

The 2017 final delay rule applies to oil and gas operations on both Federal and Indian leases. From 2013 to 2015, BLM's Automated Fluid Minerals Support System indicates that oil and gas wells on Indian leases accounted for roughly 15% and 11%, respectively, of the total wells on Federal and Indian Lands. Based on the results described in sections 4.1 to 4.4.4 of this RIA, we generally expect that the impacts associated with operations on Indian leases may be determined by scaling down the total impacts by the share of oil wells on Indian lands and the share of gas wells on Indian lands. As such, we expect the impacts on Tribal Lands to be between 11% and 15% of those levels described in sections 4.1 to 4.4.4.

Estimated reductions in compliance costs associated with operations on Indian leases. We estimate a total reduction in compliance costs over the 11-year evaluation period (2017-2028) of

³¹ The profit margin was calculated by dividing the net income by the total revenue as reported in the companies' 10-K filings.

³² Since this analysis examines the profit margins of businesses that are more likely to be public, it is biased towards small businesses with larger revenue. Therefore, we anticipate that the reduction in compliance costs expected with this 2017 final delay rule will pose a larger increase in the profit margins for small businesses than that shown. Even if that positive impact is greater, it is unlikely to achieve the level of being significant.

up to \$13.6 million (NPV using a 7% discount rate) or up to \$7.6 million (NPV using a 3% discount rate).

Estimated reduction in benefits associated with operations on Indian leases. We estimate a total reduction in cost savings of up to \$5.45 million (NPV using a 7% discount rate) or \$3.10 million (NPV using a 3% discount rate) and forgone methane emissions reductions valued at up to \$290,000 (NPV and interim domestic SC-CH₄ using a 7% discount rate) or up to \$46,000 (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Estimated net benefits associated with operations on Indian leases. We estimate positive net benefits, meaning that the reduction of compliance costs will exceed the reduction in cost savings and the change in the value of emissions. We estimate net benefits over 11 years between \$5 – 8 million (NPV and interim domestic SC-CH₄ using a 7% discount rate) or \$3 – 4 million (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Incremental production associated with operations on Indian leases. We estimate a decrease in natural gas production of up to 1.35 Bcf in Year 1. There is no estimated change in crude oil production in Year 1; however, there is an estimated increase in crude oil production of up to 13,600 barrels in Year 2.

Incremental royalty associated with operations on Indian leases. We estimate a reduction in royalties initially. However, over the 11-year evaluation period (2017-2028), we estimate a slight increase in royalties of up to \$95,000 (NPV using a 7% discount rate) or \$29,000 (NPV using a 3% discount rate).

4.4.6 Additional Considerations

In this section, we qualitatively discuss other potential impacts of the 2017 final delay rule.

Potential impact on new drilling on Federal lands. The RIA for the 2016 final rule considered that potentially higher development costs for new operations on Federal and Indian lands could make these properties less desirable than non-Federal and non-tribal properties, and that, in response, operators might conceivably shift future activity away from Federal and Indian lands to non-Federal and non-Indian properties or, less conceivably, away from the affected areas or regions entirely. The RIA then explained why the BLM did not think that such a response would occur, citing industry preference to site development in areas with the capacity to transport all gas that is produced and the fact that control technologies are currently available and widely used by the industry.

This 2017 final delay rule will temporarily alleviate the compliance burden of the 2016 final rule, thereby reducing the costs of developing new oil and gas resources on Federal and Indian lands in the short-term. Therefore, we do not expect the previously stated concerns to be an issue for the 2017 final delay rule.

Impact on lease bids as a result of higher regulatory costs. The RIA for the 2016 final rule also expressed the concern that any added and significant regulatory costs would reduce the level of bonus bids that the Federal Government would receive for new Federal leases or the upfront payments that a tribal government would receive for its new leases. The BLM awards the rights to develop an oil and gas lease on Federal lands to the company that bids the highest amount at auction. Leases that do not receive bids may be acquired through a non-competitive process. The RIA then explained why the BLM did not think that such a response would occur, since it did not consider the compliance costs of the 2016 final rule to be significant for new leases, explaining that EPA regulations addressed many of the requirements affecting new operations.

This 2017 final delay rule will temporarily alleviate the compliance burden of the 2016 final rule, thereby reducing the costs of developing new oil and gas resources on Federal and Indian Lands in the short-term. Therefore, we do not expect the previously stated concerns to be an issue.

Indirect economic impacts in regions where flaring would have been in excess of the limits. In general, economic impacts can be estimated at the direct, indirect, and induced levels. Direct impacts result from expenditures associated with the operations (or compliance with the regulation) and include, for example, labor, equipment, and capital. Indirect impacts result from the suppliers of the purchased goods and services used in the operations and hiring workers to deliver those goods and services. These “second round” impacts would not occur if not for the operations themselves. Induced impacts result from the employees of the operations and suppliers at a household level.

The RIA for the 2016 final rule expressed concern that the requirements might generate negative indirect or induced impacts if operators choose to reduce investment and thereby reduce transactions made with suppliers or service providers, particularly in regions where oil-well gas flaring is the highest and where the operator might not achieve the gas capture targets. The BLM explained that several aspects of the 2016 final rule were designed to account for ongoing State efforts, including the flexibility to issue variances upon a determination by the BLM that a State or tribal government’s regulation meets or exceeds the requirements of BLM’s respective provision(s).

This 2017 final delay rule temporarily alleviates the compliance burden of the 2016 final rule with respect to the gas-capture requirements. Therefore, we do not expect the previously stated concerns to be an issue.

Concerns that changes required under the 2017 final delay rule would trigger permitting requirements. The RIA for the 2016 final rule noted stakeholders’ concerns that operators might need to obtain regulatory approvals, such as rights-of-way or Clean Air Act permits, for various actions required by the 2016 final rule. For example, the 2016 final rule might have required the operator to take action which would “modify” a source, thus triggering EPA compliance requirements. Or, an operator might have needed to obtain new approvals for rights-

of-way or supplement the pre-existing National Environmental Policy Act analysis to account for the additional environmental impacts from adding capture equipment to the site.

This 2017 final delay rule will temporarily alleviate the compliance burden of the 2016 final rule, thereby eliminating any potential short-term need for additional permitting requirements related to the 2016 final rule's requirements. Therefore, we do not expect the previously stated concerns to be an issue.

Impact on existing wells and potential concerns over premature abandonment. The RIA for the 2016 final rule questioned whether existing wells can economically support the additional costs posed by the requirements or whether the operator would respond by prematurely abandoning the well. The RIA then explained that the BLM did not think the rule would force operators to prematurely abandon wells, since the rule has exemption clauses to prevent that from happening. This 2017 final delay rule temporarily alleviates the compliance burden of the 2016 final rule, thereby reducing the compliance burdens on existing wells in the short-term. Therefore, we do not expect the previously stated concerns to be an issue.

4.5 Impacts of Alternative Six-Month or Two-Year Suspension or Delay of Requirements

We estimated the impacts of a shorter suspension or delay of six months and a longer suspension or delay of two years of the same 2016 final rule requirements, as proposed. In comparison to the option proposed, a shorter delay would result in fewer cost savings for the industry, but also in a smaller reduction in cost savings and a smaller change in the value of emissions reductions. Relative to the 2017 final delay rule, a longer delay would result in greater cost savings for the industry, but also in greater reduction in cost savings and a larger change in the value of emissions reductions. Estimates for the relative impacts are shown in the tables in sections 4.1 to 4.4.

4.5.1 Alternative Six-Month Delay

Fewer reductions in compliance costs than the 2017 final delay rule. With a six-month suspension or delay, we estimate fewer reductions in compliance costs (excluding the savings that would have been realized from product recovery) relative to a one-year suspension or delay. We estimate a total reduction in compliance costs over the 11-year evaluation period (2017-2028) ranging from \$36 – 45 million (NPV using a 7% discount rate) or \$20 – 25 million (NPV using a 3% discount rate).

Fewer reductions in benefits than the 2017 final delay rule. With a six-month suspension or delay, we estimate fewer reductions in cost savings and a smaller change in the value of emissions (from the baseline) relative to a one-year suspension or delay. We estimate a total reduction in cost savings over the 11-year evaluation period (2017-2028) of \$18 million (NPV using a 7% discount rate) or \$10 million (NPV using a 3% discount rate). We also estimate

forgone methane emissions reductions of \$1.0 million (NPV and interim domestic SC-CH₄ using a 7% discount rate) or \$150,000 (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Additional net benefits. With a six-month suspension or delay, we estimate a reduction of compliance costs that exceeds the reduction in cost savings, but fewer net benefits than the proposed one-year delay. We estimate the following net benefits over the 11-year evaluation period (2017-2028):

- Total net benefits ranging from \$17 – 26 million (NPV and interim domestic SC-CH₄ using a 7% discount rate) or \$10 – 15 million (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Incremental royalty associated with operations on Indian leases. With a one-year suspension or delay, we estimate a greater overall increase in royalties over the 11-year evaluation period (2017-2028). We estimate royalty gains of \$0.63 million (NPV using a 7% discount rate) or \$0.19 million (NPV using a 3% discount rate).

4.5.2 Alternative Two-Year Delay

Additional estimated reductions in compliance costs from the 2017 final delay rule. With a two-year suspension or delay, we estimate additional reductions in compliance costs, excluding the savings that would have been realized from product recovery. We estimate a total reduction in compliance costs over the 12-year evaluation period (2017-2029) ranging from \$141 – 176 million (NPV using a 7% discount rate) or \$79 – 99 million (NPV using a 3% discount rate).

Additional reduction in benefits from the 2017 final delay rule. With a two-year suspension or delay, we estimate additional reductions in cost savings, additional emissions, and additional social costs associated with those emissions. We estimate a total reduction in cost savings over the 12-year evaluation period (2017-2029) of \$70 million (NPV using a 7% discount rate) or \$41 million (NPV using a 3% discount rate). We also estimate forgone methane emissions reductions of \$3.8 million (NPV and interim domestic SC-CH₄ using a 7% discount rate) or \$670,000 (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Additional net benefits. With a two-year suspension or delay, we estimate a reduction of compliance costs that exceeds the reduction in cost savings. We estimate the following net benefits savings over 12 years:

- Total net benefits ranging from \$67 – 101 million (NPV and interim domestic SC-CH₄ using a 7% discount rate) or \$38 – 58 million (NPV and interim domestic SC-CH₄ using a 3% discount rate).

Incremental royalty associated with operations on Indian leases. With a two-year suspension or delay, we estimate a greater overall increase in royalties over the 12-year evaluation period (2017-2029). We estimate royalty gains of \$2.51 million (NPV using a 7% discount rate) or \$0.94 million (NPV using a 3% discount rate).

5. Statutory And Executive Order Reviews

5.1 Executive Order 12866 Regulatory Planning and Review

E.O. 12866 requires agencies to assess the benefits and costs of regulatory actions, and for significant regulatory actions, submit a detailed report of their assessment to the OMB for review. A rule may be significant under E.O. 12866 if it meets any of four criteria. A significant regulatory action is any rule that may:

- Have an annual effect on the economy of \$100 million or more or 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;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The OMB has reviewed the BLM's 2017 final rule and has determined that it is not an economically significant action according to the criteria of E.O. 12866.

5.2 Executive Order 13771 Reducing Regulation and Controlling Regulatory Costs

E.O. 13771 requires agencies to do the following:

- Unless prohibited by law, identify at least two existing regulations to be repealed when it proposes for notice and comment or otherwise promulgates a new regulation;
- Unless otherwise required by law or consistent with advice provided in writing by the Director of OMB, ensure that the cost of all new regulations, including repealed regulations, to be finalized in fiscal year 2017, be less than or equal to \$0; and
- To the extent permitted by law, ensure that any new incremental costs associated with new regulations be offset by the elimination of existing costs associated with at least two prior regulations.

OMB issued guidance for implementing E.O. 13771, on April 5, 2017, that defines a deregulatory action as "an action that has been finalized and has total costs less than zero." Second, existing regulatory actions that are vacated or remanded by a court generally do not qualify for savings (for the purpose of adhering to Section 2 of the Executive Order). Third, the guidance states that agencies follow OMB Circular A-4 when determining the cost savings generated by a deregulatory action. However, for deregulatory actions that revise or repeal recently issued rules, agencies should not estimate cost savings that exceed the originally estimated costs of the issued rule.

The BLM has complied with E.O. 13771 and the OMB implementation guidance for that order. This 2017 final delay rule delays implementation of an existing regulation, and we estimate that it will result in cost savings.

5.3 Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act of 1996

The Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act, unless the head of the agency certifies that the rule would not have a significant economic impact 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 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 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 rule would likely affect a substantial number of small entities.

However, the BLM believes that the rule would not have a significant economic impact on a substantial number of small entities. Although the rule will affect a substantial number of small entities, the BLM does not believe that these effects will be economically significant. The rule is a deregulatory action that delays costly requirements that the 2016 final rule placed on operators. Operators do not have to undertake the compliance activities, either operational or administrative, until January 17, 2019. The screening analysis conducted by BLM estimates the average reduction in compliance costs to be just a small fraction of a percent of the profit margin for small companies, which is not a large enough impact to be considered significant.

5.4 Unfunded Mandates Reform Act of 1995

Under the Unfunded Mandates Reform Act (UMRA), agencies must prepare a written statement about benefits and costs prior to issuing a rule that is likely to result in aggregate expenditure by State, local, and tribal governments, or by the private sector, of \$100 million or more in any one year, and prior to issuing any final rule for which a rule was published.

This 2017 final delay rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any one year. Thus, the rule is also not subject to the requirements of section 205 of UMRA.

This 2017 final delay 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.

5.5 Executive Order 13211 Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

Under E.O. 13211, agencies are required to prepare and submit to OMB a Statement of Energy Effects for significant energy actions. This Statement is to include a detailed statement of “any adverse effects on energy supply, distribution, or use (including a shortfall in supply, price increases, and increase use of foreign supplies)” for the action and reasonable alternatives and their effects.

Section 4(b) of E.O. 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 E.O. 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 [OIRA] as a significant energy action.”

The incremental production estimated to result from the 2017 final delay rule represents a small fraction of the total U.S. production. Also, even though the 2017 final delay rule provides regulatory relief from the 2016 final rule requirements that pose substantial costs, the reduction in compliance costs represents such a small fraction of company net incomes that we believe that the rule is unlikely to impact the investment decisions of firms. Due to these reasons, we do not expect that this 2017 final delay rule will significantly impact the supply, distribution, or use of energy. As such, the rule is not a “significant energy action” as defined in E.O. 13211.

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7. Appendix

Interim SC-CH₄ Estimates and Associated Uncertainty

“As discussed in Section 3.2 of this RIA, the BLM estimated the forgone climate benefits from the proposed action using interim estimates of the domestic social cost of methane (SC-CH₄). These SC-CH₄ estimates developed under E.O. 13783 will be used in regulatory analysis until improved domestic estimates can be developed, which will take into consideration the recent recommendations from the National Academies of Sciences, Engineering, and Medicine for a comprehensive update to the current methodology to ensure that the social cost of greenhouse gas estimates reflect the best available science. While the Academies’ review focused on the methodology to estimate the social cost of carbon (SC-CO₂), the recommendations on how to update many of the underlying modeling assumptions also pertain to the SC-CH₄ estimates since the framework used to estimate SC-CH₄ is the same as that used for SC-CO₂.

The following discussion describes the methodology used to develop these estimates and the ways in which the modeling addressed quantified sources of uncertainty.”

The domestic SC-CH₄ estimates rely on an ensemble of three integrated assessment models (IAMs): DICE 2010, FUND 3.8, and PAGE 2009.³³ The three IAMs translate emissions into changes in atmospheric greenhouse concentrations, atmospheric concentrations into changes in temperature, and changes in temperature into economic damages. The emissions projections used in the models are based on specified socio-economic (GDP and population) pathways. These emissions are translated into atmospheric concentrations, and concentrations are translated into warming based on each model’s simplified representation of the climate and a key parameter, equilibrium climate sensitivity. The effect of these Earth system changes is then translated into consumption-equivalent economic damages. These key inputs were harmonized across the three models: a probability distribution for equilibrium climate sensitivity; five scenarios for economic, population, and emissions growth; and discount rates. Future damages are discounted using constant discount rates of both 3 and 7%, as recommended by OMB Circular A-4.

The domestic share of the global SC-CH₄—i.e., an approximation of the climate change impacts that occur within U.S. borders—is calculated directly in both FUND and PAGE. However, DICE 2010 generates only global estimates. Therefore, U.S. damages are approximated as 10% of the global values from the DICE model runs, based on the results from a regionalized version of the model (RICE 2010) reported in Table 2 of Nordhaus (2017).³⁴ Although the regional shares reported in Nordhaus (2017) are specific to SC-CO₂, they still provide a reasonable interim approach for approximating the U.S. share of marginal damages from methane emissions. Direct transfer of the domestic share from the SC-CO₂ may understate the U.S. share of the global SC-CH₄ estimates based on DICE due to the combination of three factors: a) regional damage estimates are known to be highly correlated with output shares (Nordhaus 2017, 2014), b) the

³³ The full models names are as follows: Dynamic Integrated Climate and Economy (DICE); Climate Framework for Uncertainty, Negotiation, and Distribution (FUND); and Policy Analysis of the Greenhouse Gas Effect (PAGE).

³⁴ Nordhaus, William D. 2017. Revisiting the social cost of carbon. *Proceedings of the National Academy of Sciences of the United States*, 114(7): 1518-1523.

U.S. share of global output decreases over time in all five EMF-22 based socioeconomic scenarios used for the model runs, and c) the bulk of the temperature anomaly (and hence, resulting damages) from a perturbation in emissions in a given year will be experienced earlier for CH₄ than CO₂ due to the shorter lifetime of CH₄ relative to CO₂.

The steps involved in estimating the social cost of CH₄ is similar to that of CO₂. The three integrated assessment models (FUND, DICE, and PAGE) are run using the harmonized equilibrium climate sensitivity distribution, five socioeconomic and emissions scenarios, constant discount rates described above. Because the climate sensitivity parameter is modeled probabilistically, and because PAGE and FUND incorporate uncertainty in other model parameters, the final output from each model run is a distribution over the SC-CH₄ in year “t” based on a Monte Carlo simulation of 10,000 runs. For each of the IAMs, the basic computational steps for calculating the social cost estimate in a particular year t are: 1) calculate the temperature effects and (consumption-equivalent) damages in each year resulting from the baseline path of emissions; 2) adjust the model to reflect an additional unit of emissions in year t; 3) recalculate the temperature effects and damages expected in all years beyond t resulting from this adjusted path of emissions, as in step 1; and 4) subtract the damages computed in step 1 from those in step 3 in each model period and discount the resulting path of marginal damages back to the year of emissions. In PAGE and FUND step 4 focuses on the damages attributed to the US region in the models. As noted above, DICE does not explicitly include a separate US region in the model and therefore, US damages are approximated in step 4 as 10% of the global values based on the results of Nordhaus (2017). This exercise produces 30 separate distributions of the SC-CH₄ for a given year, the product of 3 models, 2 discount rates, and 5 socioeconomic scenarios. The estimates are equally weighted across models and socioeconomic scenarios in order to consolidate the results into one distribution for each discount rate.

The following table presents the average domestic SC-CH₄ estimates across all the model runs for each discount rate for the years 2015 to 2050. As with the global SC-CH₄ estimates, the domestic SC-CH₄ increases over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater climatic change, and because GDP is growing over time and many damage categories are modeled as proportional to gross GDP.

Table. Interim Domestic Social Cost of CH₄, 2015-2020 (in 2016\$ per metric ton CH₄)*

Year	Discount Rate and Statistic	
	7% Average	3% Average
2015	\$46	\$150
2020	55	180
2025	68	200
2030	81	230
2035	96	260
2040	110	290
2045	130	330
2050	140	350

* SC-CH₄ values are stated in \$/metric ton CH₄ and rounded to two significant digits. The estimates vary depending on the year of CH₄ emissions and are defined in real terms, i.e., adjusted for inflation using the GDP implicit price deflator.

The limitations and uncertainties associated with the global SC-CH₄ estimates, which were discussed in detail in the 2016 RIA, likewise apply to the domestic SC-CH₄ estimates presented in this analysis. Some uncertainties are captured within the analysis, as discussed in detail in this appendix, while other areas of uncertainty have not yet been quantified in a way that can be modeled. As with the methodology used to calculate SC-CO₂ estimates, limitations include the incomplete or inadequate representation in the integrated assessment models of several important factors: catastrophic and non-catastrophic impacts, adaptation and technological change, inter-regional and inter-sectoral linkages, uncertainty in the extrapolation of damages to high temperatures, and the relationship between the discount rate and uncertainty in economic growth over long time horizons. The science incorporated into these models understandably lags behind the most recent research, and the limited amount of research linking climate impacts to economic damages makes the modeling exercise even more difficult.

There are several limitations specific to the estimation of SC-CH₄. For example, the SC-CH₄ estimates do not reflect updates from the IPCC regarding atmospheric and radiative efficacy. Another limitation is that the SC-CH₄ estimates do not account for the direct health and welfare impacts associated with tropospheric ozone produced by methane. In addition, the SC-CH₄ estimates do not reflect that methane emissions lead to a reduction in atmospheric oxidants, like hydroxyl radicals, nor do they account for impacts associated with CO₂ produced from methane oxidizing in the atmosphere. These individual limitations and uncertainties do not all work in the same direction in terms of their influence on the SC-CH₄ estimates.

Recognizing the limitations and uncertainties associated with estimating the social cost of greenhouse gases, the research community has continued to explore opportunities to improve estimates of SC-CO₂ and other greenhouse gases.

Treatment of Uncertainty in Interim Domestic SC-CH₄ Estimates

In order to adhere to the principles of full disclosure and transparency of Circular A-4, this analysis relies on data and models that contain a significant degree of uncertainty. As an interim approach, until a more comprehensive update can be completed, this RIA relies upon the inputs and modeling developed by the now-disbanded Interagency Working Group for the purposes of providing discrete alternative scenarios that reflect the best available Federal agency estimates of social costs.

There are other sources of uncertainty in the SC-CH₄ estimates used in this RIA. Some uncertainties pertain to aspects of the natural world, such as quantifying the physical effects of greenhouse gas emissions on Earth systems. Other sources of uncertainty are associated with current and future human behavior and well-being, such as population and economic growth, GHG emissions, the translation of Earth system changes to economic damages, and the role of adaptation. It is important to note that even in the presence of uncertainty, scientific and economic analysis can provide valuable information to the public and decision makers, though the uncertainty should be acknowledged and, when possible, taken into account in the analysis (National Academies 2013).³⁵

The domestic SC-CH₄ estimates consider various sources of uncertainty through a combination of a multi-model ensemble, probabilistic analysis, and scenario analysis. We provide a summary of this analysis here; more detailed discussion of each model and the harmonized input assumptions can be found in the 2017 National Academies report. For example, the three IAMs used collectively span a wide range of Earth system and economic outcomes to help reflect the uncertainty in the literature and in the underlying dynamics being modeled. The use of an ensemble of three different models at least partially addresses the fact that no single model includes all of the quantified economic damages. It also helps to reflect structural uncertainty across the models, which stems from uncertainty about the underlying relationships among GHG emissions, Earth systems, and economic damages that are included in the models. Bearing in mind the different limitations of each model and lacking an objective basis upon which to differentially weight the models, the three integrated assessment models are given equal weight in the analysis.

Monte Carlo techniques were used to run the IAMs a large number of times. In each simulation, the uncertain parameters are represented by random draws from their defined probability distributions. In all three models, the equilibrium climate sensitivity is treated probabilistically based on the probability distribution from Roe and Baker (2007) calibrated to the IPCC AR4

³⁵ Institute of Medicine of the National Academies. 2013. Environmental Decisions in the Face of Uncertainty. The National Academies Press.

consensus statement about this key parameter.³⁶ The equilibrium climate sensitivity is a key parameter in this analysis because it helps define the strength of the climate response to increasing GHG concentrations in the atmosphere. In addition, the FUND and PAGE models define many of their parameters with probability distributions instead of point estimates. For these two models, the model developers' default probability distributions are maintained for all parameters other than those superseded by the harmonized inputs (i.e., equilibrium climate sensitivity, socioeconomic and emissions scenarios, and discount rates).

For the socioeconomic and emissions scenarios, uncertainty is included in the analysis by considering a range of scenarios selected from the Stanford Energy Modeling Forum exercise, EMF-22. Given the dearth of information on the likelihood of a full range of future socioeconomic pathways at the time the original modeling was conducted, and without a basis for assigning differential weights to scenarios, the range of uncertainty was reflected by simply weighting each of the five scenarios equally for the consolidated estimates.

The outcome of accounting for various sources of uncertainty using the approaches described above is a frequency distribution of the SC-CH₄ estimates for emissions occurring in a given year for each discount rate. Unlike the approach taken for consolidating results across models and socioeconomic and emissions scenarios, the SC-CH₄ estimates are not pooled across different discount rates because the range of discount rates reflects both uncertainty and, at least in part, different policy or value judgements; uncertainty regarding this key assumption is discussed in more detail below. The frequency distributions reflect the uncertainty around the input parameters for which probability distributions were defined, as well as from the multi-model ensemble and socioeconomic and emissions scenarios where probabilities were implied by the equal weighting assumption. It is important to note that the set of SC-CH₄ estimates obtained from this analysis does not yield a probability distribution that fully characterizes uncertainty about the SC-CH₄ due to impact categories omitted from the models and sources of uncertainty that have not been fully characterized due to data limitations.

The following figure presents the frequency distribution of the domestic SC-CH₄ estimates for emissions in 2020 for each discount rate. Each distribution represents 150,000 estimates based on 10,000 simulations for each combination of the three models and five socioeconomic and emissions scenarios.³⁷ In general, the distributions are skewed to the right and have long right tails, which tend to be longer for lower discount rates. To highlight the difference between the impact of the discount rate on the SC-CH₄ and other quantified sources of uncertainty, the bars below the frequency distributions provide a symmetric representation of quantified variability in the SC-CH₄ estimates conditioned on each discount rate.

³⁶ Specifically, the Roe and Baker distribution for the climate sensitivity parameter was bounded between 0 and 10 with a median of 3 °C and a cumulative probability between 2 and 4.5 °C of two-thirds.

³⁷ Although the distributions in the figure are based on the full set of model results (150,000 estimates for each discount rate), for display purposes the horizontal axis is truncated with 0.001 to 0.013% of the estimates lying below the lowest bin displayed and 0.471 to 3.356% of the estimates lying above the highest bin displayed, depending on the discount rate.

Circular A-4 recommends that costs and benefits be discounted using rates of 3% and 7% to reflect the opportunity cost of consumption and capital, respectively. As illustrated by the frequency distributions in the figure, the assumed discount rate plays a critical role in the ultimate estimate of the social cost of methane.

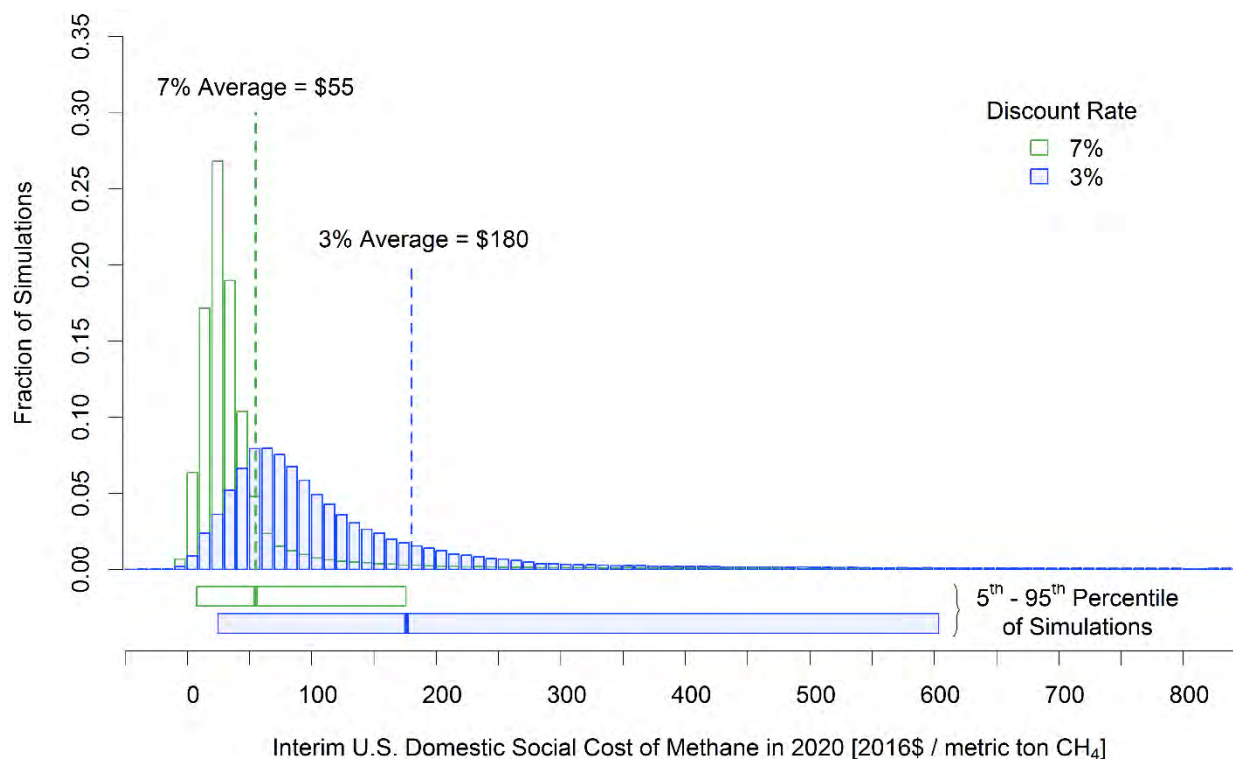


Figure. Frequency Distribution of Interim Domestic SC-CH₄ Estimates for 2020 (in 2016\$ per metric ton CH₄)

In addition to the approach to accounting for the quantifiable uncertainty described above, the scientific and economics literature has further explored known sources of uncertainty related to estimates of the social cost of carbon and other greenhouse gases. For example, researchers have examined the sensitivity of IAMs and the resulting estimates to different assumptions embedded in the models (see, e.g., Pindyck 2013, Hope 2013, Anthoff and Tol 2013, Nordhaus 2014, and Waldhoff et al. 2011, 2014). However, there remain additional sources of uncertainty that have not been fully characterized and explored due to remaining data limitations. Additional research is needed to expand the quantification of various sources of uncertainty in estimates of the social cost of carbon and other greenhouse gases (e.g., developing explicit probability distributions for more inputs pertaining to climate impacts and their valuation). On the issue of intergenerational discounting, some experts have argued that a declining discount rate would be appropriate to analyze impacts that occur far into the future (Arrow et al., 2013). On damage functions, other experts have found that those used in most IAMs have no theoretical or empirical foundation, claiming that the overall model is able to “obtain almost any result one desires” (Pindyck 2013). Naturally, the indeterminate amount of uncertainty surrounding the IAMs used to approximate

social costs for specific greenhouse gas emissions merits additional research and analysis and further peer-review in order to better ascertain the best available science and economics in accordance with E.O. 13783.

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Attachment 18

BLM, **BLM's Responses to Public Comments** on Final Rule, Waste Prevention, Production Subject to Royalties, and Resource Conservation (Nov. 2016) (excerpts)

Another commenter added that whenever unit operations include and thereby affect Federal or Indian lands, the BLM has the authority and duty to prevent waste from that unit.

Response: See Section VI.D of the preamble to the final rule for the response to comments regarding application of the rule to non-Federal tracts in unitized areas and CAs. Regarding the comments on BLM jurisdiction, see Sections III.B.3 and III.C of the preamble to the final rule. These sections respectively outline the relationship with other Federal, state, and industry activities and explain the legal authority for the regulation.

Comment Excerpt: The scope of the rule is overly broad and difficult for operators to interpret and implement. BLM should provide clarity on the percentage of total royalties under BLM authority to which the requirements would apply. BLM has done this in other guidance such as the Commingling Guidance.¹⁹ BP recommends that the requirements apply only to sites where BLM or the tribes are a majority interest owner with more than a 51% interest prior to royalty measurement and that the cost/benefit analysis done by BLM must consider whether there is a benefit at 51% of the interest.

Proposed Revisions

§3179.2(a) This subpart applies to all of the following with more than 51% interest prior to royalty measurement:

¹⁹ Instruction Memorandum — Commingling Guidance

Response: The BLM has the authority and obligation to collect royalties on production of Federal and Indian mineral resources regardless of the percentage of Federal and Indian mineral interest in the resource. Thus, the BLM does not believe that it is appropriate to arbitrarily limit the applicability of the rule's provisions based on the proportion of the Federal or Indian mineral interest at issue in the lease, unit, or communitized area. The BLM did not adopt this comment's recommendation in the final rule.

5.1.2 Coverage of Marginal Wells

Comment Summary: A few commenters suggested changes to the rule regarding marginal wells. Some commenters asserted that the BLM should provide a general exclusion for marginal wells. One commenter asserted that in some areas such as the San Juan Basin, average profits are quite low and the rule would result in premature abandonment. The commenter encouraged the BLM exclude wells with production levels less than 90 MCFEPD. Another commenter asserted that New Mexico would be disproportionately impacted due to a large number of marginal producing wells; approximately 75% of New Mexico's producing formations produce less than 15 BOEPD. The commenter stated that the U.S. Congress has repeatedly exempted marginal

wells from auditing and regulatory requirements [see the Royalty Simplification and Fairness Act of 1996 and Accounting (& Audit) Relief for Marginal Properties (RIN 1010-AC30)].

On the other hand, another commenter asserted that there should not be exemptions for marginal or stripper wells. The commenter asserted that there is not necessarily a correlation between low producing wells and levels of methane or VOCs. They noted that older wells are more subject to breakdown and leakage. They also suggested that fracked wells tend to have very short productive lives, with production falling by 80-90 % in within three years. With the number of fracking wells increasing, the commenter asserted that it would be ill thought out to exempt them.

Response: See Section V.B.3 of the preamble to the final rule for the response to comments that the BLM should exclude marginal wells from the LDAR provisions. With respect to the gas capture requirements, as stated in Section V.A.2 of the preamble to the final rule, the final rule adopts the flaring allowable concept, which represents the volume of flared gas that is exempt from the capture target on a per well basis. This amount decreases over time. Additionally, operators of existing leases may obtain an alternative gas capture requirement by demonstrating 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. The BLM notes that several other provisions in the final rule also contain this exemption for operators.

5.1.3 Coverage of Gathering Lines and Facilities

Comment Excerpt: BLM has proposed to apply the royalty and waste prevention requirements to “onshore wells, tanks, compressors and other facilities located on leases, Federally approved units or communitized areas.”¹¹⁴ In so doing BLM has proposed individual equipment standards or limits for continuous-bleed pneumatic controllers, pneumatic pumps, crude oil and condensate storage vessels, equipment leaks, oil development wells, liquids unloading activities and well completion activities. These standards and limits apply to each type of covered equipment (e.g., a pneumatic device) or activity (liquids unloading).

Centralized Gathering Facilities on Leases

We urge BLM to clarify and ensure that its proposed requirements apply to centralized gathering facilities located on leases. By its terms, the proposal applies to individual equipment and activities located on leases, units and communitized areas, regardless of whether such equipment is connected with or located at any particular type of facility. It is critical that BLM apply the requirements in this way given recent scientific studies demonstrating that centralized gathering facilities are significant sources of waste and pollution and that historical inventories underestimate emissions from such facilities:

- Mitchell (2015). A February 2015 study by Colorado State University examined methane emissions from 114 randomly selected gathering facilities in multiple states.¹¹⁸

Attachment 19

BLM, Environmental Assessment, Waste Prevention, Production Subject to Royalties, and Resource Conservation Delay Final Rule (Dec. 2017)

ENVIRONMENTAL ASSESSMENT

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

**Waste Prevention, Production Subject to Royalties, and
Resource Conservation Delay
Final Rule
DOI-BLM-WO-WO30000-2018-0001-EA**

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Introduction

This Environmental Assessment (EA) examines the environmental impacts that may occur as a result of temporarily suspending and delaying certain requirements imposed by the Bureau of Land Management's (BLM) 2016 final rule, "Waste Prevention, Production Subject to Royalties, and Resource Conservation" ("2016 final rule") (See 81 FR 83008 (Nov. 18, 2016)). The 2016 final rule applied nationwide to onshore Federal and Indian oil and gas development. The provisions of the 2016 final rule relevant to this EA pertained to the loss of Federal and Indian natural gas through venting, flaring, and leaks.

The 2016 final rule became effective on January 17, 2017. However, many of the rule's provisions were to be phased-in over time, becoming operative in January 2018. The analysis within this EA considers the potential environmental impacts from the regulatory Proposed Action (as defined later) to temporarily suspend or delay certain portions of the 2016 final rule until January 17, 2019.

1.1 Background

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. In fiscal year (FY) 2016, sales volumes from Federal onshore production lands accounted for 9 percent of domestic natural gas production, and 5 percent of total U.S. oil production. Over \$1.9 billion in royalty was collected from all oil, natural gas, and natural gas liquids transactions in FY 2016 on Federal and Indian Lands. Royalties on production are shared with States or distributed to tribes and Indian allottee owners.

In response to oversight reviews and recognition of increased flaring from Federal and Indian leases, the BLM developed the 2016 final rule, which was published in the *Federal Register* on November 18, 2016. See 81 FR 83008 (Nov. 18, 2016). The 2016 final 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).

The 2016 final 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.

Immediately after the 2016 final 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.

The petitioners in this litigation are the Western Energy Alliance (WEA), the Independent Petroleum Association of America, the States of Wyoming, Montana, North Dakota, and Texas. This litigation has been consolidated and is now pending in the U.S. District Court for the District of Wyoming. *Wyoming v. U.S. Dep't of the Interior*, Case No. 2:16-cv-00285-SWS (D. Wyo.). Petitioners assert that the BLM was arbitrary and capricious in promulgating the 2016 final rule and that the rule exceeds the BLM's statutory authority. Shortly after filing petitions for judicial review, petitioners filed motions for a preliminary injunction, seeking a stay of the rule pending the outcome of the litigation. These motions were denied by the court on January 16, 2017, and the rule went into effect the following day.

Although the court denied the motions for a preliminary injunction, it did express concerns that the BLM may have usurped the authority of the Environmental Protection Agency (EPA) and the States under the Clean Air Act, and questioned whether it was appropriate for the 2016 final rule to be justified based on its environmental and societal benefits, rather than on its resource conservation benefits alone. The next stage in the litigation is the court's consideration of the merits of the petitioner's claims. The court's decision on these claims could result in the 2016 final rule being overturned.

In the Regulatory Impact Analysis (RIA) prepared for the 2016 final rule, the BLM estimated that the requirements of the 2016 final rule would pose compliance costs, not including potential cost savings for product recovery, of approximately \$114 to 279 million per year (2016 RIA at 4). The BLM had concluded that while many of the requirements were consistent with or very similar to EPA regulations for new sources, current industry practice, or similar to the requirements found in some existing State regulations, the 2016 final rule would be an economically significant rule with estimated costs and benefits exceeding \$100 million per year (2016 RIA at 138).

Comments received by many oil and gas companies and trade associations representing members of the oil and gas industry suggested that the BLM's proposed and final rules were unnecessary and would cause substantial harm to the industry. During the litigation following the issuance of the 2016 final rule, the petitioners argued that the BLM underestimated the compliance costs of the final rule and that the costs would drive the industry away from Federal and Indian lands, thereby reducing royalties and harming State and tribal economies. The petitioners also argued that the 2016 final rule would cause marginal wells to be shut-in, thereby ceasing production and reducing economic benefits to local, State, tribal, and Federal governments. The BLM recognizes that the 2016 final rule poses a substantial burden to industry, particularly for those requirements that are set to become effective on January 17, 2018.

Since late January 2017, the President has issued several Executive Orders (EO) that necessitate the review of the BLM's 2016 final rule. On January 30, 2017, the President issued EO 13771, entitled "Reducing Regulation and Controlling Regulatory Costs," which requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal

regulations. In addition, on March 28, 2017, the President issued EO 13783, entitled “Promoting Energy Independence and Economic Growth.” Section 7(b) of EO 13783 directs the Secretary of the Interior to review four specific rules, including the 2016 final rule, for “consistency with the policy set forth in section 1 of [the] order and, if appropriate...publish for notice and comment proposed rules suspending, revising, or rescinding those rules.” Among other things, section 1 of EO 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 EO 13783, Secretary of the Interior Ryan Zinke issued Secretarial Order (SO) 3349, entitled “American Energy Independence,” on March 29, 2017. Among other things, SO 3349 directs the BLM to review the 2016 final rule to determine whether it is fully consistent with the policy set forth in Section 1 of EO 13783.

1.2 Purpose and Need for the Proposed Action

Pursuant to EO 13771, EO 13783, and SO 3349, the BLM reviewed the 2016 final rule and found that some provisions of the 2016 final rule would add regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation. Following up on its initial review, the BLM is currently reviewing the 2016 final rule to develop an appropriate proposed revision—to be promulgated through notice-and-comment rulemaking—that would propose to align the 2016 final rule with the policies set forth in section 1 of EO 13783. The purpose of and need for the Proposed Action analyzed in this EA is to ensure that operators do not incur substantial and unnecessary compliance costs associated with regulatory requirements that may be revised or rescinded in the near future.

1.3 Scoping and Identification of Issues

The primary environmental issues associated with venting and flaring during oil and gas production were discussed in the EA that accompanied the 2016 final rule (the “2016 EA”). *See generally* Environmental Assessment: Waste Prevention, Production Subject to Royalties, and Resource Conservation (DOI-BLM-WO-WO2100-2017-001-EA) (Nov. 10, 2016).¹ In analyzing the impacts of the 2016 final rule, the 2016 EA focused on:

- Climate Change;
- Air Quality;
- Noise and Light;

¹ The 2016 EA is attached to this EA as Exhibit A and is incorporated by reference as set forth below.

- Wildlife Resources;
- Threatened and Endangered Species and Critical Habitat; and
- Socioeconomic Effects.

Internal scoping by the BLM for the current Proposed Action indicated that the key issues analyzed in the 2016 EA remain the key issues to analyze for the current Proposed Action. As such, this EA follows the 2016 EA by analyzing the environmental impacts of the Proposed Action with a focus on those key issues identified above.

The BLM has made this EA available to the public through www.regulations.gov.

2. Proposed Action and Alternatives

This EA examines the following alternatives:

1. Alternative A – No-Action Alternative. Under this alternative, the BLM would continue implementation of the 2016 final rule, contingent upon a Federal court decision.
2. Alternative B – BLM Proposed Action. Under this alternative, the BLM would temporarily suspend or delay certain requirements of the 2016 final rule until January 17, 2019.

2.1 Description of Alternative A: No-Action Alternative

The No-Action Alternative would maintain the existing regulatory requirements of 43 CFR part 3170, subparts 3178 and 3179, as well the amendments to 43 CFR parts 3100 and 3160 contained in the 2016 final rule. All of these requirements would apply to Federal and Indian (other than Osage Tribe) oil and gas leases; the requirements in subparts 3178 and 3179 would apply to federally approved units and communitization agreements as well. The pertinent requirements of the 2016 final rule and their implementation dates under Alternative A are summarized in the table in Section 2.3.

2.2 Description of Alternative B: The BLM Proposed Action

Under Alternative B, the BLM would temporarily suspend and delay certain requirements of the 2016 final rule until January 17, 2019. Those changes would effectively suspend or delay the implementation dates for the following provisions:

- Waste Minimization Plan (§ 3162.3-1(j));
- Gas Capture Requirements (§ 3179.7);
- Gas Measurement/Estimation (§ 3179.9);
- Existing Approvals to Flare Royalty Free (§ 3179.10);
- Well Drilling and Completions (§§ 3179.101 and 3179.102);
- Pneumatic Controllers and Pumps (§§ 3179.201 and 3179.202);
- Storage Vessels (§ 3179.203);
- Downhole Well Maintenance and Liquids Unloading (§ 3179.204); and
- Leak Detection and Repair (§§ 3179.301 to 3179.305).

The pertinent requirements of the 2016 final rule and their implementation dates under

Alternative B are summarized in the table in Section 2.3.

2.3 Summary of Requirements, Table Comparing Implementation Dates of Alternatives

43 CFR Citation	Requirements that Would Be Affected by the Proposed Action	Effective Date(s)	
		No-Action Alternative A	Proposed Action Alternative B
3162.3-1(j)	Waste Minimization Plan. The waste minimization plan must accompany an application for permit to drill (APD) for an oil well. In the waste minimization plan, the operator must describe how it will comply with requirements to control waste from venting and flaring. The operator must also explain how it plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste minimization plan is grounds for denying or disapproving an APD.	January 17, 2017	January 17, 2019
3179.7	Operators are required to reduce the flaring of gas by capturing 85 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 5,400 thousand cubic feet (Mcf) of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 17, 2018	January 17, 2019
	Operators are required to reduce the flaring of gas by capturing 90 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 3,600 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 1, 2020	January 1, 2021
	Operators are required to reduce the flaring of gas by capturing 90 percent of their adjusted total volume of gas produced each month. However, operators are allowed to	January 1, 2021	January 1, 2022

	exempt 1,500 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.		
	Operators are required to reduce the flaring of gas by capturing 90 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 1,200 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 1, 2022	January 1, 2023
	Operators are required to reduce the flaring of gas by capturing 95 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 900 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 1, 2024	January 1, 2025
	Operators are required to reduce the flaring of gas by capturing 95 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 750 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 1, 2025	January 1, 2026
	Operators are required to reduce the flaring of gas by capturing 98 percent of their adjusted total volume of gas produced each month. However, operators are allowed to exempt 750 Mcf of gas per well per month. Operators have the option to meet capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State.	January 1, 2026	January 1, 2027
3179.9	Measurement/estimation and reporting requirements for vented or flared gas if more than 50 Mcf/day.	January 17, 2018	January 17, 2019
3179.10	Approvals to flare royalty free in effect as of January 17, 2017, continue in effect until January 17, 2018.	January 17, 2018	January 17, 2019
3179.10	Gas that reaches the surface during drilling, well completion, and related operations	January 17,	January 17,

1 through 3179.10 2	must be captured and sold, flared, injected or used on-lease.	2017	2019
3179.20 1 through 3179.20 2	Operators must upgrade to lower-emission pneumatic equipment.	January 17, 2018	January 17, 2019
3179.20 3	Covered storage vessels with potential for volatile organic compound (VOC) emissions greater than 6 tons per year must route all tank vapors to sales lines, or flare the gas.	January 17, 2018	January 17, 2019
3179.20 4	Minimization of venting associated with downhole well maintenance and liquids unloading.	January 17, 2017	January 17, 2019
3179.30 1 through 3179.30 5	Instrument-based approach to leak detection, inspection, repair and documentation for sites that have begun production prior to January 17, 2017.	January 17, 2018	January 17, 2019
	Instrument-based approach to leak detection, inspection, repair and documentation for sites for sites that begin production after January 17, 2017.	60 days after beginning production	January 17, 2019

	Instrument-based approach to leak detection, inspection, repair and documentation for sites for sites that begin production after January 17, 2017.	60 days after an out-of-service site is brought back into service and re-pressurized	January 17, 2019
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2.4 Alternatives Considered but Eliminated from Further Analysis

The BLM initially considered suspending the entire 2016 final rule or delaying only the portions of the 2016 final rule that do not become effective until January 17, 2018. These alternatives were eliminated from further consideration because they do not meet the purpose and need of the Proposed Action, which is to ensure that operators do not incur substantial and unnecessary compliance costs associated with regulatory requirements that may be revised or rescinded in the near future.

Suspending the entire 2016 final rule would extend the suspension beyond those requirements for which immediate regulatory relief is warranted. For example, the BLM does not perceive a need to suspend the requirements of 43 CFR subpart 3178, which updated the BLM's requirements for the royalty-free use of oil and gas, as these requirements have not been controversial and are not expected to impose a significant compliance burden on operators. As an additional example, the BLM does not perceive a need to suspend the limitations on venting and flaring during initial production testing, subsequent well tests, and emergencies contained in sections 3179.103, 3179.104, and 3179.105. Although there may be room to improve these provisions as part of a comprehensive revision of the 2016 final rule, the BLM does not believe that these provisions impose sufficient burdens as to warrant immediate regulatory relief through a one-year suspension.

Conversely, delaying only the portions of the 2016 final rule that do not become effective until January 17, 2018, would leave intact requirements that would impose unnecessary burdens on operators. For example, such an approach would leave in place the waste minimization plan requirement of section 3162.3-1(j), which poses a significant administrative burden to both operators and the BLM. The BLM is reconsidering the efficacy of section 3162.3-1(j) and does not believe that generating and reviewing lengthy, unenforceable waste-minimization plans is a prudent use of operator or BLM resources during the period of this reconsideration.

Also, the BLM considered the appropriate length of a proposed suspension or delay. Ultimately, the BLM proposed a suspension or delay for one year, which the BLM believes to be the minimum length of time practicable within which to review the 2016 final rule and undertake a notice-and-comment rulemaking to revise that regulation, if necessary. A suspension or delay for a shorter period of time would fail to provide the regulatory certainty that is the purpose of this action, as the BLM is not certain that it could complete a reconsideration and revision of the

2016 final rule before the end of the suspension and delay period. On the other hand, a longer period—for example, two years—could suspend requirements beyond the period of BLM’s reconsideration and have the unintended consequence of needlessly complicating future rulemaking (or forcing another rulemaking) with respect to requirements that the BLM has chosen not to revise.

3. Affected Environment

This section describes the existing baseline condition of the human environment that may be affected by implementing the Proposed Action (Alternative B). In large part, this section summarizes and incorporates-by-reference the more detailed discussion of the affected environment contained in the EA for the 2016 final rule. The 2016 EA is attached hereto as Exhibit A for reference. Because the 2016 EA was signed on November 10, 2016, and there have been no significant environmental changes since that time, the BLM believes that the description of the affected environment in the 2016 EA remains accurate and adequate for analyzing the environmental impacts of regulatory actions pertaining to venting and flaring during Federal and Indian oil and gas production.

The BLM is incorporating-by-reference the explanation of the affected environment found in Section 3 of the 2016 EA (excluding section 3.3, which discussed the existing regulatory framework at the time).² Section 3 of the 2016 EA broadly described the environment in which BLM-administered oil and gas leases affected by the 2016 final rule and the Proposed Action are located. Section 3 also described existing trends related to environmental impacts of venting and flaring operations on Federal and Indian oil and gas leases. Section 3 explained that the BLM manages hundreds of millions of acres of public lands and mineral estate, and that lands managed by BLM are extraordinarily diverse. The BLM manages these lands for a variety of resource values and uses, including recreation, conservation, mining, livestock grazing, rights-of-way, and oil and gas development. The BLM oversees the development of Federal mineral resources in 32 States across the country; however, the majority of BLM-administered oil and gas leases are located in the West.

Section 3.2 of the 2016 EA explained that the venting and flaring of natural gas on Federal and Indian oil and gas leases generally occurs during drilling and production activities or during operation of production equipment. Table 2 in the 2016 EA listed and explained the following primary sources of venting and flaring on BLM-administered oil and gas leases: gas flaring from production operations (including associated gas); well completions and workovers; pneumatic controllers; pneumatic pumps; liquids unloading; oil and condensate storage tanks; and, leaks. Tables 4a and 4b in the 2016 EA provide estimates of the amount of natural gas that was vented or flared from BLM-administered leases in 2014.

Section 4.1 of the 2016 EA provided a detailed discussion of how venting and flaring from Federal and Indian oil and gas leases relates to climate change, air quality, noise and light pollution, and threatened and endangered species and critical habitat.³ The BLM is hereby incorporating that discussion by reference, with the following updates and clarifications concerning climate change.

² Exhibit A, pp. 15-23.

³ Exhibit A, pp. 26-35.

First, the 2016 EA references certain documents that have since been rescinded, in particular the 2013 President's Climate Action Plan, the subsequently issued Climate Action Plan: Strategy to Reduce Methane Emissions (March 2014), and the Council on Environmental Quality's climate change guidance, entitled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions." All three of these documents were rescinded, or ordered to be rescinded, by the President in Executive Order 13783, "Promoting Energy Independence and Economic Growth" (March 28, 2017). Accordingly, this EA does not adopt any of the conclusions or methodological approaches taken by these rescinded documents.

Second, the 2016 EA should not be interpreted to suggest that the climate change effects from implementing the 2016 final rule are precisely known. To clarify, while the 2016 EA includes modeled assessments of warming trends and associated climate impacts at regional, national, and global levels (relying in particular on the U.S. Global Change Research Program's (USGCRP) 3rd National Climate Assessment), it does not purport to predict, other than indirectly through the Social Cost of Carbon and Methane protocols, the degree of incremental impact that implementing the 2016 final rule would have on global or regional climate change or on changes to biotic and abiotic systems that accompany climate change.

Upon the promulgation of the 2016 final rule, there was a change in the regulatory framework governing venting and flaring from BLM-administered oil and gas leases. The 2016 final rule replaced NTL-4A, which had been in effect for more than 30 years and was explained in Section 3.3 of the 2016 EA. The 2016 final rule is expected to have impacts on the affected environment. In this EA, the BLM is incorporating those expected impacts into its assessment of the baseline environment.

The promulgation of the 2016 final rule represents the adoption of Alternative C from the 2016 EA. Subject to the caveats previously explained, the BLM is incorporating-by-reference the 2016 EA's analysis of the expected environmental impacts of the 2016 final rule.⁴ Because many of the 2016 final rule's requirements relating to venting and flaring have not yet gone into effect (see Section 2.3 of this EA), an assessment of the expected impacts, as opposed to the realized impacts, of the 2016 final rule is appropriate.

The 2016 EA detailed the anticipated impacts of the 2016 final rule in Section 4.3. The 2016 EA explained that the 2016 final rule, through various prohibitions and requirements, is expected to reduce the amount of natural gas vented, leaked, and flared from Federal and Indian oil and gas leases, units, and communitized areas. This reduction in venting and flaring would reduce the release of various air pollutants/pollutant precursors, hazardous air pollutants (HAP), and GHGs. The reduction in flaring would reduce noise and light pollution, lessening the impacts of oil and gas development on nearby communities, wildlife, and recreationists.

⁴ Exhibit A, pp. 62-74.

With respect to climate change, the 2016 EA estimated that the 2016 final rule would have the beneficial impact of reducing methane emissions by between 175,000 and 180,000 tons per year (tpy). The 2016 final rule was also expected to have an adverse impact on climate change, by generating additional GHG emissions of about 12,800 tpy of carbon dioxide (CO₂) emissions due to operators' efforts to comply with new requirements for gas capture. Overall, the 2016 EA expected the 2016 final rule to reduce GHG emissions and have a beneficial impact on climate change.

With respect to air quality, the 2016 EA determined that the 2016 final rule would cause a reduction in the amount of Volatile Organic Compounds (VOC) and HAPs released as a result of BLM-regulated oil and gas development. The 2016 EA found that the reduction in VOCs and HAPs would be driven almost entirely by the venting prohibition, as flaring does not release VOCs or HAPs in substantial quantities. The 2016 EA also explained that, because the 2016 final rule would generate additional truck traffic, the 2016 final rule would generate some additional releases of air pollutants. Overall, however, the 2016 EA expected the 2016 final rule to have a beneficial impact on air quality.

With respect to noise and light pollution, the 2016 EA predicted that the gas capture and flaring limit requirements of the 2016 final rule could decrease the size, number, frequency, duration, and intensity (gas volume) of flares. This reduction in flaring would reduce noise and light pollution, thereby having a beneficial impact on nearby dwellings and residences, recreationists, and wildlife resources. However, because the 2016 final rule's flaring limits allow operators to average their flaring across a county or State, the 2016 EA acknowledged that the reduction in flaring may not be geographically uniform and that some areas may continue to see high (or higher) levels of flaring while others see substantial reductions.⁵ The 2016 EA also recognized that the 2016 final rule could result in the addition of more compressor stations and other equipment, which could increase noise pollution. However, these installations would be subject to site-specific review by representatives of the appropriate BLM field office, and would likely be placed in areas far from dwellings, to the extent possible. The 2016 EA also noted that the BLM often uses mitigation measures such as sound baffles and flare screening to reduce impacts in especially sensitive areas; the use of these techniques could be expanded to reduce the amount of noise and light pollution from flares or equipment.

With respect to wildlife resources, the 2016 EA stated that the 2016 final rule was expected to benefit wildlife indirectly through beneficial impacts to air quality, climate change, and noise and light pollution. However, the 2016 EA also noted potential adverse impacts from an increase in surface disturbance and habitat fragmentation resulting from an accelerated development of gathering-line infrastructure in response to the rule's gas-capture requirements. Potential adverse impacts on wildlife resources from increased truck traffic and the addition of

⁵ Exhibit A, p. 70.

flare devices to storage vessels was also noted but not measured. With respect to federally-listed threatened and endangered species and critical habitat, the 2016 EA explained that the BLM will continue to review proposed oil and gas production activities for compliance with applicable laws, including the Endangered Species Act (ESA). The BLM determined that the 2016 final rule may affect, but is not likely to adversely affect, listed species or their associated designated critical habitats.

With respect to the socioeconomic environment, the 2016 EA listed each land use plan that contains a detailed description of the socioeconomic baseline affecting the human environment within the planning area. This includes economic constraints to development as well as potential health concerns related to land uses with a focus on minority and low-income populations living near oil and gas operations. The BLM conducted an RIA to estimate the costs and benefits of the 2016 final rule.

The foregoing discussion establishes the existing baseline condition of the human environment that may be affected by implementing the Proposed Action (Alternative B). Because the baseline incorporates the expected effects of the 2016 final rule (effects on venting starting in 2017 and effects on flaring starting in 2018), the environment under the No-Action Alternative (Alternative A) is treated as indistinct from the baseline environment.

4. Environmental Effects

This chapter evaluates the direct and indirect effects on the human environment that may occur as a result of implementing the No-Action Alternative (Alternative A) and the Proposed Action (Alternative B).

The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) implementing regulations at 40 CFR 1508.8(a) define “direct effects” as “those effects which are caused by the action and occur at the same time and place.”

The CEQ’s regulations at 40 CFR 1508.8(b) define “indirect effects” as those effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on water and air and other natural systems, including ecosystems.”

When considering the environmental impacts of the regulatory Proposed Action, the BLM considers the current environmental baseline, which includes the implementation of the 2016 final rule without delay (Alternative A), and uses that baseline as the basis for measuring the impact of the Proposed Action (Alternative B).

Independent of the BLM’s Proposed Action, other Federal and State regulations affect both the baseline environment and the measured impact of the Proposed Action. For example, EPA regulations on oil and gas production under the Clean Air Act are expected to affect the current baseline environment. On June 3, 2016, EPA finalized a rule that went into effect on August 2, 2016. The final rule established and updated new source performance standards (NSPS) for emissions of methane and VOCs from oil and gas production. The regulations are codified in 40 CFR part 60, subpart OOOOa.⁶ These standards apply to new, modified, and reconstructed emissions sources in the oil and gas production sector. While these regulations target VOC emissions, they also require actions that reduce venting and leaks of gas. However, the EPA recently proposed to stay the fugitive emissions, pneumatic pumps at well sites, and professional engineer certification for closed vent system requirements for two years.⁷ The EPA has not yet finalized this proposal. To the extent possible, the BLM has incorporated the other Federal and State regulations into its analysis of the baseline and Proposed Action environments.

There is overlap between the 2016 final rule and the EPA rule with respect to several categories of new, modified, and reconstructed sources. Specifically, both rules could apply to oil well completions, and to new, modified, and reconstructed well sites and compressor stations subject

⁶ *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources*, Final Rule, 81 FR 35824 (June 3, 2016).

⁷ 82 FR 27645 and 82 FR 27641

to fugitive emissions monitoring and repair requirements. Similarly, there is potential overlap between the 2016 final rule and certain State regulations, including Colorado's Leak Detection and Repair (LDAR) requirements. Where EPA and State regulatory overlap exists, the Proposed Action to delay the 2016 final rule's requirements would not represent a change from the baseline environment. Because EPA regulations apply to new, modified, and reconstructed sources, the overlap with EPA regulations over time is expected to grow over time. Concomitantly, the impact of the proposed delay of the 2016 final rule's requirements is expected to decline over time.

4.1 Direct and Indirect Effects of Alternative A

The No-Action Alternative assumes that the requirements of the 2016 final rule would be implemented per the schedule outlined in the 2016 final rule. By maintaining the provisions of the 2016 final rule, the BLM would expect that the environmental effects presented in the 2016 EA (Alternative C) would be realized. There would be no incremental direct or indirect effects relative to the baseline environment.

4.1.1 Climate Change

There would be no incremental direct or indirect effects on climate change associated with the No-Action Alternative, since that option does not alter the baseline environment. By not taking action, the BLM would maintain the expected reductions of vented and flared gas from Federal and Indian oil and gas leases and would maintain the expected overall reductions in the amount of GHGs released to the atmosphere. The No-Action Alternative would maintain the relatively minor adverse impacts that are expected to be associated with the requirements in the 2016 final rule. In the EA for the 2016 final rule, the BLM described the relatively minor adverse impacts that the 2016 final rule would have on climate change. The BLM estimated additional amounts of carbon dioxide associated with the combustion of natural gas (as opposed to venting). These carbon dioxide emissions are estimated to be orders of magnitude smaller than the methane reductions expected. The BLM also estimated GHG emissions from additional vehicle traffic, due to increased use of trucking to transport natural gas liquids (NGLs) and due to the leak detection and repair requirements. The primary sources for these emissions are expected to be traffic, along with minimal amounts of natural gas lost during transfer operations.

Although Alternative A is anticipated to have positive effects on climate change because of reduced GHG emissions, the BLM notes that the actual effects of such reductions on global climate change are sufficiently uncertain as to be not reasonably foreseeable.

4.1.2 Air Quality

There would be no incremental direct or indirect effects on air quality associated with the No-Action Alternative, since that option does not alter the baseline environment. If the BLM were to select the No-Action Alternative, then it would ensure that the positive effects on air quality associated with the 2016 final rule would be realized.

By not taking action, the BLM would expect the 2016 Rule to result in reductions of vented and flared gas from Federal and Indian oil and gas leases and reductions in the amount of VOCs and HAPs released, resulting in beneficial impacts to air quality and public health. The reductions in VOCs and HAPs are expected to be driven almost entirely by the venting prohibition; flaring does not release VOCs or HAPs in substantial quantities and the reduction in flaring has a much larger impact on CO₂ emissions, recreational activities, and noise and light pollution than on air quality.

By not taking action, the BLM would also expect the relatively small adverse impacts associated with the requirements in the 2016 final rule. As explained in the 2016 EA, the BLM expects that the 2016 final rule would lead to additional air pollutant releases from increased truck traffic. The BLM concluded that these additional releases would be small relative to the overall reduction in air pollutants and that the adverse impacts from these emissions would be minimal (especially because the emissions will be geographically dispersed across BLM oil and gas producing regions nationwide).

4.1.3 Noise and Light Impacts

There would be no incremental direct or indirect effects on noise and light to dwellings, residences, and recreation associated with the No-Action Alternative, since that option does not alter the baseline environment. If the BLM were to select the No-Action Alternative, then it would expect that the effects on noise and light to dwellings, residences, and recreation associated with the 2016 final rule would be realized.

By not taking action, the BLM would expect reductions of vented and flared gas from Federal and Indian oil and gas leases and expect impacts of noise and light to dwellings, residences, and recreation. In the EA for the 2016 final rule, the BLM described how the rule would reduce the size, number, frequency, duration, and intensity (gas volume) of flares. This large-scale reduction in the routine flaring is expected to lead to less noise and light pollution, having a beneficial impact on nearby dwellings and residences.

By not taking action, the BLM would expect relatively small adverse impacts associated with the requirements in the 2016 final rule. As explained in the 2016 EA, the BLM anticipated that

the 2016 final rule could lead to higher levels of localized noise and light pollution for some areas. In the long run, it could result in the addition of more compressor stations, pipeline construction, and other equipment, and thus increased noise pollution. However, these installations would be subject to site-specific review by representatives of the appropriate BLM field office and their impacts could be reduced through mitigation measures.

4.1.4 Wildlife Resources; Threatened and Endangered Species and Critical Habitat

There would be no incremental direct or indirect effects on wildlife resources or on threatened or endangered species and critical habitat with the No-Action Alternative, since that option does not alter the baseline environment. If the BLM were to select the No-Action Alternative, then it would expect that the effects on wildlife associated with the 2016 final rule would be realized.

The 2016 EA stated that the 2016 final rule is expected to benefit wildlife indirectly through beneficial impacts to air quality, climate change, and noise and light pollution. However, the 2016 EA also noted potential adverse impacts from an increase in surface disturbance and habitat fragmentation resulting from an accelerated development of gathering-line infrastructure in response to the rule's gas capture requirements. Potential adverse impacts from increased truck traffic and the addition of flare devices to storage vessels was also noted. With respect to threatened and endangered species and critical habitat, the 2016 EA explained that the BLM will continue to review proposed oil and gas production activities that will result in additional surface disturbance, as well as pipeline right-of-way applications, for compliance with applicable laws, including the Endangered Species Act. The BLM determined, and the U.S. Fish and Wildlife Service (FWS) concurred, that the 2016 final rule may affect, but is not likely to adversely affect, listed species or their associated designated critical habitats. Since the baseline assumes the effects on wildlife associated with the 2016 final rule would be realized, the FWS has concurred again on the same determination for this Proposed Action. Finally, the BLM notes that any effects on threatened and endangered species and critical habitat attributable to Alternative A's impacts on climate change are sufficiently uncertain as to be not reasonably foreseeable.

4.1.5 Socioeconomics

There would be no incremental direct or indirect socioeconomic effects with the No-Action Alternative, since that option does not alter the baseline environment. If the BLM were to select the No-Action Alternative, then it would expect that the socioeconomic effects associated with the 2016 final rule would be realized. By not taking action, the BLM would expect reductions of vented and flared gas from Federal and Indian oil and gas leases and would expect overall reductions in the amount of GHGs released to the atmosphere.

Similarly, there would be no incremental direct or indirect effects on environmental justice, since the No-Action Alternative does not alter the baseline environment. By not taking action, the BLM would preserve the effects associated with the 2016 final rule on minority and low-income populations. The EA for the 2016 final rule concluded that the 2016 final rule would have a beneficial effect on minority and low-income population segment due the reductions in air pollutants.

However, the 2016 final rule would affect existing wells, which are likely to be marginal and therefore less likely to support additional compliance costs associated with the LDAR requirements. The additional costs could cause operators to shut-in marginal wells, thereby ceasing production and reducing economic benefits to local, State, tribal, and Federal governments. The percentage of oil and gas wells classified as marginal is reportedly high. According to the Interstate Oil and Gas Compact Commission (IOGCC) 2015 report,⁸ 69.1 and 75.9 percent of the nations' oil and gas wells, respectively, are marginal.

4.2 Direct and Indirect Effects of the Proposed Action (Alternative B)

The Proposed Action would suspend or delay certain requirements of the 2016 final rule until January 17, 2019. Operators are expected to continue their current operating practices, as they relate to venting and flaring, in a manner that is consistent with the BLM's requirements that will remain in effect as well as other applicable State and Federal regulations. The BLM would continue to administer its existing oil and gas regulations and prepare environmental documents under NEPA when making decisions allowing for the development of BLM-administered oil and gas resources. On a project-by-project basis, the BLM could, where appropriate, limit venting or flaring.

As a result of the Proposed Action, many of the impacts associated with the 2016 final rule would be shifted to the near future. While the No-Action Alternative would result in an immediate reduction in the venting and flaring of Federal and Indian gas, the Proposed Action would delay those reductions until January 2019.

This section describes the environmental effects of the Proposed Action.

4.2.1 Climate Change

With the Proposed Action, the BLM expects that GHG emissions from vented and flared gas from existing sources on Federal and Indian leases would continue until January 2019,

⁸ IOGCC, "Marginal Wells: Fuel for Economic Growth. 2015 Report." Available at <http://iogcc.ok.gov/Websites/iogcc/images/MarginalWell/MarginalWell-2015.pdf>.

modulated to some degree by State requirements and voluntary industry actions in some areas. Depending on the requirement, the GHG emissions from new, modified, and reconstructed sources may be covered by the EPA's NSPS, subpart OOOO and subpart OOOOa regulations and would not contribute to a deviation from the baseline.

As shown in Table 4a, the BLM estimates that the Proposed Action would result in additional methane emissions of 175,000 tons in Year 1. The data for these estimates is derived from Table 19 in the 2016 EA.⁹

According to the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2015*, total U.S. methane emissions in 2015 were about 655.7 million metric tons (MMT) of carbon dioxide equivalent (CO₂ Eq.).¹⁰ Therefore, we conclude that the additional methane emissions posed by the proposed action and estimated to occur in Year 1 represent about 0.61 percent of the total U.S. methane emissions in 2015.¹¹

Table 4a: Estimated Additional Methane Emissions by Requirement in Year 1 (in tons)¹²

Requirement	Methane Emissions
Capture Target Req.	NE
Pneumatic Controllers	18,000
Pneumatic Pumps	26,800
Liquids Unloading	33,700
Storage Tanks	7,100
LDAR	89,500
Total	175,000

On the other hand, there would be a reduction in GHG emissions from the Proposed Action relative to the baseline, due to the reduced use of trucking to transport NGLs and to conduct leak detection and repair activities and from the mitigation of minimal losses of natural gas during transfer operations. The BLM estimates these GHG reductions to be about 12,800 tpy of CO₂ Eq. in Year 1.¹³

⁹ Exhibit A, p. 64.

¹⁰ *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1995-2015 – Executive Summary*, U.S. Environmental Protection Agency (April 13, 2017), pp. ES-6.

¹¹ We converted the BLM's estimate of additional methane emissions from the Proposed Action into metric tons (using a factor of 1.10231 short ton per metric ton) and then to MMT CO₂ Eq. using the EPA's formula in Annex 6 of the Inventory, available at https://www.epa.gov/sites/production/files/2017-02/documents/2017_annex_6.pdf.

¹² Numbers may not sum to total due to rounding.

¹³ See Exhibit A, p. 65.

Under the Proposed Action, the expected impacts of the 2016 final rule on climate change would be delayed for approximately one year, when the suspended provisions of the 2016 final rule would come into effect.

Although the potential impacts of Alternative B in terms of GHG emissions are described here, the BLM notes that the actual effects of such emissions on global climate change are sufficiently uncertain as to be not reasonably foreseeable.

4.2.2 Air Quality

The Proposed Action is expected to affect local air quality in the short-term future. Natural gas contains VOCs, which are precursors to ozone and particulate matter, and various toxic air pollutants, such as benzene. These air pollutants affect the public health and welfare of humans, as well as the health of plant and wildlife species.

In comparison to the No-Action Alternative, the Proposed Action would result in additional natural-gas losses in the short-term future, thereby increasing various air pollutants/pollutant precursors, HAPs, and GHGs. Using data from Table 21 in the 2016 EA,¹⁴ the BLM estimates that the Proposed Action would result in additional VOC emissions of 250,000 tons in Year 1. Using data from Table 22 in the 2016 EA,¹⁵ the BLM estimates that the Proposed Action would result in additional HAP emissions of 1,860 tons in Year 1. See Table 4b.

The additional air pollutant releases from increased truck traffic spurred by the 2016 final rule are not expected to occur in the near-term future under the Proposed Action. Those reductions are summarized in Table 4c.¹⁶

Under the Proposed Action, the expected impacts of the 2016 final rule on air quality would be delayed for approximately one year, when the suspended provisions of the 2016 final rule would come into effect.

Table 4b: Estimated Additional VOC and HAP Emissions, Year 1 (in tons)¹⁷

Requirement	VOC Emissions	HAP Emissions
Capture Target Req.	NE	NE
Pneumatic Controllers	65,000	188
Pneumatic Pumps	7,000	13

¹⁴ Exhibit A, p. 67.

¹⁵ Exhibit A, p. 67.

¹⁶ See Exhibit A, p. 69.

¹⁷ Numbers may not sum to total due to rounding.

Liquids Unloading	121,000	1,220
Storage Tanks	32,500	328
LDAR	24,800	108
Total	250,000	1,860

Table 4c: Estimated Reductions in Truck Traffic-Related Air Pollutants Emitted in Year 1

Air Pollutant	Volume (tpy)
NO _x	20.29
PM ₁₀	1.45
PM _{2.5}	1.3
VOCs	0.8

4.2.3 Noise and Light Impacts

The Proposed Action is expected to have noise and light impacts on dwellings, residences, and recreation in the short-term future. The Proposed Action would delay the implementation of requirements expected to reduce gas flaring. The noise and light impacts of flaring during oil and gas operations were discussed in detail in the EA for the 2016 rule.¹⁸

In comparison to the No-Action Alternative, we would expect additional flaring with the Proposed Action in the short-term future, thereby increasing noise and light pollution and potentially affecting the communities living near oil and gas development, wildlife, night-sky resources, and recreationists.

Under the Proposed Action, we would expect to avoid, in the near-term, the adverse noise and light impacts associated with the requirements in the 2016 final rule. As explained in the 2016 EA, the BLM anticipated that the 2016 final rule could lead to higher levels of localized noise and light pollution for some areas and to the addition of more compressor stations and other equipment that increase noise pollution.

Under the Proposed-Action Alternative, the expected impacts of the 2016 final rule on noise and light pollution would be delayed for approximately one year, when the suspended provisions of the 2016 final rule would come into effect.

4.2.4 Wildlife Resources; Threatened and Endangered Species and Critical Habitat

¹⁸ Exhibit A, pp. 33-35.

Under the Proposed Action, the BLM expects near-term, adverse impacts on wildlife resources with respect to climate change, air quality, and noise and light pollution. These impacts would result from increased venting and flaring in the near-term. At the same time, the BLM expects wildlife resources to benefit from postponing the expected increase in surface disturbance and habitat fragmentation resulting from an accelerated development of gathering line infrastructure in response to the 2016 final rule's gas-capture requirements. The Proposed Action would also delay the potential adverse impacts from increased truck traffic and the addition of flare devices to storage vessels expected under the No-Action Alternative.

The expected impacts of the 2016 final rule on climate change, air quality, and noise and light pollution would be delayed for approximately one year, when the suspended provisions of the 2016 final rule would come into effect.

The BLM does not expect the Proposed Action to have additional impacts on federally listed threatened and endangered species and critical habitat. The BLM will continue to review proposed oil and gas production activities that will result in additional surface disturbance for compliance with applicable laws, including NEPA and the Endangered Species Act. Finally, the BLM notes that any effects on threatened and endangered species and critical habitat attributable to Alternative B's impacts on climate change are sufficiently uncertain as to be not reasonably foreseeable.

4.2.5 Socioeconomics

The Proposed Action is expected to have socioeconomic effects in the short-term future; however, the BLM does not expect those impacts to be significant. The Proposed Action would delay, for approximately one year, the implementation of requirements expected to reduce gas venting and flaring. The socioeconomic impacts of flaring during oil and gas operations were discussed in detail in the EA for the 2016 final rule.

In comparison to the No-Action Alternative, the Proposed Action would be expected to result in short-term forgone cost savings from natural gas recovery that would have accrued to the oil and gas industry with the 2016 final rule. However, the Proposed Action would also result in short-term forgone reductions in air pollution from vented, leaked, and flared natural gas that would have been realized with the 2016 final rule.

The one-year delay is not expected to have a significant impact on minority and low-income populations living near oil and gas operations. While minority and low-income populations living near oil and gas operations would have benefitted from the near-term reductions in emissions, the Proposed Action also delays the adverse impacts expected to be caused by increased truck traffic, increased localized flaring, and the buildout of capture infrastructure. In addition, any impacts to minority and low-income populations, related to proposed development

during the delay would be evaluated on a project-specific basis by the local BLM Field Office, which is better positioned to understand local communities, including minority and low-income populations.

5. Cumulative Effects

The CEQ regulations at 40 CFR 1508.7 define “cumulative effects” as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions.”

5.1 Cumulative Effects of the No-Action Alternative (Alternative A)

As there are no direct or indirect effects associated with the No-Action Alternative, there are also no cumulative effects associated with the No-Action Alternative. The No-Action Alternative does not represent a change from the current baseline environment.

5.2 Cumulative Effects of the Proposed Action (Alternative B)

The cumulative impacts to the human environment that would likely result from the Proposed Action are similar to the No-Action Alternative (the current baseline) because the only difference between the No-Action Alternative and the Proposed Action is that the cumulative effects of the 2016 final rule would begin to accrue in January 2019 rather than January 2018.

As explained in Section 4.2, in the short-term future, the BLM would anticipate additional GHG emissions which would have climate impacts and air quality impacts. As explained above, the BLM notes that the actual effects of Alternative B’s impacts on climate change are sufficiently uncertain as to be not reasonably foreseeable.

The BLM also anticipates that some of the expected adverse impacts of the 2016 final rule would be alleviated in the short-term future or occur to a lesser extent than under the baseline. These impacts would include the construction of roads, facility pads (including well pads and centralized tank batteries), pipelines, gathering lines, compressor stations, and electrical transmission lines. The BLM also anticipates fewer truck trips associated with alternative forms of gas compression and transport to market and with increased leak detection and repair inspections and activities.

Since the EPA regulations apply to new, modified, and reconstructed sources, the beneficial impacts to climate and air quality would be expected to grow over time. The BLM’s site-

specific inspection and approval procedures would still apply to any surface-disturbing project, and would ensure evaluation and mitigation of site-specific adverse impacts.

6. References

Environmental Assessment: Waste Prevention, Production Subject to Royalties, and Resource Conservation (DOI-BLM-WO-WO2100-2017-001-EA), U.S. Bureau of Land Management (Nov. 10, 2016).

Executive Order No. 13771, “Reducing Regulations and Controlling Regulatory Costs” (January 30, 2017).

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Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL-4A), U.S. Department of the Interior Geological Survey (Jan. 1, 1980).

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