

Methane and Waste Prevention Proposed Rule

(aka Venting & Flaring rule)

Bureau of Land Management
Tribal /Public Outreach

February 16/18, March 1/3, 2016



Waste Prevention Rule

Framework for Action

- Too much natural gas is lost in oil and gas production.
 - Waste of public energy resources
 - Loss of royalty revenues
 - Environmental harms
- Modern technologies and practices can reduce this waste.
- Existing regulations need updating.
- BLM aims to harmonize with State and EPA actions on natural gas waste and methane emissions.



Waste Prevention Rule *Outreach*

- Tribal and public outreach designed to continue the dialog with interested parties.
- Tribal meetings and public sessions:
 - Farmington – February 16
 - Oklahoma City – February 18
 - Denver – March 1
 - Dickinson – March 3



Waste Prevention Rule Outreach

- Purpose of outreach
 - Convey major components of proposal
 - Answer your questions
 - Welcome your input
 - **Comment period closes April 8, 2016**



Waste Prevention Rule

Major Topics

- Reducing Flaring
 - Waste Minimization Plan (43 CFR 3162.3-1)
 - Flaring Limits (43 CFR 3179.1-.11)
- Reducing Leaks (43 CFR 3179.301-.305)
- Reducing Venting
 - Drilling & Production (43 CFR 3179.101-.102)
 - Equipment & Operations (43 CFR 3179.201-.204)
- Royalty Provisions
 - Royalty Minimum on Competitive Leases (43 CFR 3103.3-1)
 - Royalties on Flared Gas (43 CFR 3179.4,.103-.105)
 - Royalty Free Use (43 CFR 3178)



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Waste Minimization Plan (WMP)

*Addition to APD** (43 CFR 3162.3-1)

- WMP accompanies an APD for an oil well.
 - Purpose – encourage operators to develop a strategy for minimizing waste up front
 - Plan conveys strategy for addressing waste from V&F
 - Failure to submit is grounds for denying/delaying APD
- WMP includes:
 - Anticipated completion date and gas production rate
 - Gas pipeline system location map
 - Coordination efforts with midstream gas processors
- Similar to North Dakota requirements



*Application for Permit to Drill

Reducing Flaring

Flaring over venting (43 CFR 3179.6(a))

- Flare rather than vent any gas that is not captured except:
 - When technically infeasible;
 - Under emergency conditions;
 - When storage vessel emissions are below 6 tons per year; or
 - When venting occurs through operation of a natural gas-activated pneumatic controller or pump.



Reducing Flaring

Flaring and venting limits (43 CFR 3179.6(b))

- Limits on flaring and venting from a lease:
 - **YEAR 1**: 7,200 Mcf/well/month
 - **YEAR 2**: 3,600 Mcf/well/month
 - **YEAR 3 and beyond**: 1,800 Mcf/well/month
- Limit applies to:
 - Total gas volume flared over a production month from all oil wells on lease;
 - Divided by the number of oil wells producing for at least 10 days during that month.
- 1,800 Mcf/well/month tracks UT and WY



Reducing Flaring

Alternative limits and exemption (43 CFR 3179.7)

- Applies to leases issued before rule effective date.
- BLM may approve an alternative limit if limit would cause operator to cease production; or
- Lease will receive a two-year exemption if:
 - Lease not connected to a gas pipeline;
 - Lease is more than 50 straight-line miles from gas processing plant; **and**
 - Currently flaring or venting at average rate that exceeds flaring limit by at least 50%.



Reducing Flaring

Measuring and Reporting (43 CFR 3179.8)

- Estimate or measure (using a meter) gas volumes vented or flared, and report to ONRR (30 CFR part 1200).
- Measurement (metering) required if:
 - Estimated volume of gas vented or flared from flare stack or manifold equals or exceeds 50 Mcf per day; or
 - BLM determines additional accuracy is necessary.



Reducing Flaring

Other measures (43 CFR 3179.10)

- If new oil well connected to a pipeline forces well(s) already connected off a pipeline, BLM may limit production.
- If gas capture capacity is not yet available, BLM may delay APD, or approve APD with conditions for gas capture/limitations on production.



Reducing Flaring

Coordination with State (43 CFR 3179.11)

- In cases of 'mixed-ownership,' BLM would coordinate with State on enforcement action that adversely affects production of oil or gas from non-Federal and non-Indian mineral interests.



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Reducing Leaks

Operator responsibility (43 CFR 3179.301,.305)

- Applies to all wells (oil or gas) that produce gas.
- Inspect for gas leaks:
 - Equipment and equipment components at wellhead;
 - Operated facilities; and
 - Compressors.
- Inspections occur during production operations.
- May satisfy requirements by complying with LDAR under 40 CFR part 60, subpart OOOOa (EPA).
- Maintain records and make available upon request.
- Similar to CO, WY, and EPA proposed requirements.



Reducing Leaks

Instruments/methods (43 CFR 3179.302)

- Use one or more of following methods:
 - Optical gas imaging device (e.g., infrared camera);
 - Monitoring device not listed but approved for use;
 - Other instrument-based comprehensive program approved by BLM
- Alternatively, if operator has less than 500 wells within jurisdiction of single BLM field office, may use portable analyzer, assisted by audio, visual, and olfactory inspection.



Reducing Leaks

Inspection requirements (43 CFR 3179.303)

- Inspect semi-annually for leaks from wellhead equipment, facilities, and compressors as follows:

If the operator inspects	And in two consecutive inspections the operator	The operator
(1) Semi-annually	Detects no more than 2 leaks at the site inspected	Must inspect at least annually
(2) Annually	Detects 3 or more leaks at the site inspected	Must inspect at least semi-annually
(3) Semi-annually	Detects 3 or more leaks at the site inspected	Must inspect at least quarterly
(4) Quarterly	Detects no more than 2 leaks at the site inspected	Must inspect at least semi-annually



Reducing Leaks

Repairing leaks (43 CFR 3179.304)

- Repair leak not later than 15 calendar days after discovery.
- Follow-up inspection using same method used to detect leak.
- Complete additional repairs within 15 days
 - Conduct follow-up inspection and repair.



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Reducing Venting

Well drilling/completion (43 CFR 3179.101-.102)

- Produced gas must be:
 - Captured and sold;
 - Combusted at flare pit or stack with automatic igniter;
 - Used in operations on lease; or
 - Injected.
- Volumes flared during completion operations are limited (3179.103).



Reducing Venting

Pneumatic controllers (43 CFR 3179.201)

- Pneumatic controller covered:
 - Continuous bleed rate greater than 6 scf/hr*; and
 - Not subject to 40 CFR 60.5360 through 60.5390 (EPA).
- Replace existing pneumatic controller with low bleed-rate pneumatic controller (6 scf/hr or less).
- Within 1 year of final rule's effective date.
- Tracks Colorado and Wyoming requirements.

*standard cubic feet per hour



Reducing Venting

Pneumatic pumps (43 CFR 3179.202)

- Covers pneumatic chemical injection or diaphragm pump
 - Not covered if subject to 40 subpart OOOOa (EPA).
- Replace pneumatic pump with zero-emissions pump or route to flare.
- Within 1 year of final rule's effective date.
- Requirement does not apply if:
 - Pneumatic pump required based on functional needs, and
 - No existing flare device exists on site, or routing to device is technically infeasible.
- Tracks Wyoming requirements



Reducing Venting

Storage vessels (43 CFR 3179.203)

- Storage vessel covered if:
 - Not covered by 40 CFR part 60, subpart OOOO (EPA); and
 - VOC emissions equal to or greater than 6 tpy*.
- Determine emissions within 60 days, and 30 days after new production source added to vessel.
- Within 6 months, operator must route tank vapor to a combustion device, continuous flare, or a sales line.
- Requirements no longer apply if emissions decline to 4 tpy or less for continuous 12 month period.
- Similar to Colorado, Wyoming and EPA (new sources) requirements.

*tons per year



Reducing Venting

Liquids unloading (43 CFR 3179.204)

- Existing wells
 - Use practices to maximize gas recovery and flare gas not recovered, unless technically infeasible or unduly costly.
 - Notify BLM when:
 - Well purging exceeds 24 hours during month; or
 - Gas vented exceeds 75 Mcf during month.
- New wells:
 - May not use well purging to unload liquids;
 - Except when returning a well to production following a well workover or a shut-in for more than 30 days.



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Royalty on Competitive Leases

Royalty on production (43 CFR 3103.3-1)

- Aligns royalty provisions with statutory authority:
 - Leases issued after the rule:
 - 12½ percent on all noncompetitive leases; and
 - A base rate of **not less than** 12½ percent on all competitive leases.
- No change to royalty rates at this time.
- No effect on leases currently in effect.



Royalty Provisions

Royalty-free Venting and Flaring(43 CFR 3179.4)

- Unavoidably lost and royalty-free:
 - Gas lost during normal operations including:
 - Drilling, completions, well tests;
 - Emergencies;
 - Evaporation from storage vessels;
 - Downhole well maintenance and liquids unloading;
 - Leaks; and
 - Normal operations pneumatic controllers and pumps
 - Gas flared or vented from a well not connected to gas capture infrastructure.
- Other losses avoidable and royalties apply



Royalty Provisions

Production testing (43 CFR 3179.103-.104)

- Gas flared during well's initial production test is royalty-free until:
 - Operator obtains adequate reservoir information;
 - 30 days have passed since beginning of test;
 - Flared 20 million cubic feet (MMcf) of gas; or
 - Production begins.
- BLM may extend for additional 60 days.
- During subsequent well tests, operator may flare gas for no more than 24 hours royalty-free unless BLM approves or requires a longer period.



Royalty Provisions

Emergencies (43 CFR 3179.105)

- Operator may flare (if feasible) or vent gas royalty-free during temporary and unavoidable emergency.
 - Up to 24 hours, and no more than 3 emergencies within any 30-day period.
- Following do not constitute emergencies:
 - More than 3 failures of the same equipment within any 365-day period;
 - Failure to install equipment of sufficient capacity;
 - Scheduled maintenance; and
 - Operator negligence.



Royalty-Free Use of Lease Production

When royalty is not due (43 CFR 3178.3)

- When:
 - Oil or gas produced from a lease, CA*, or unit.
- Used:
 - Used for operations and production purposes.
 - Including placing oil or gas in marketable condition.
- Where:
 - On the same lease, CA, or unit without being removed from the lease, CA, or unit PA.

*Communitization agreement



Royalty-Free Use of Lease Production

Does not require prior approval (43 CFR 3178.4)

- Fuel to power:
 - Artificial lift equipment, equipment used for enhanced recovery, and drilling rigs
- Gas to actuate pneumatic controllers or pumps;
- Fuel to heat, separate, or dehydrate production;
- Fuel to compress gas to place in marketable condition; and
- Oil produced from a lease, unit PA, or CA and pumped into a well on the same lease, unit PA, or CA to clean the well and improve production, e.g., hot oil treatment.



Royalty-Free Use of Lease Production

Requires prior approval (43 CFR 3178.5)

- Using oil as circulating medium in drilling operations;
- Injecting gas produced for increasing recovery of oil or gas;
- Using oil or gas at location downstream of FMP*, if removal and use occur on the lease, unit, or CA;
- Using gas initially removed from a lease, unit, or CA for treatment or processing because of particular physical gas characteristics, where gas returned to the lease, unit, or CA.

*Facility Measurement Point



Variations

State or Tribal (43 CFR 3179.401)

- Variance is requested by a State (for Federal land) or a Tribe (for Indian lands).
- BLM State Director may grant variance from individual provision of regulations, if BLM finds State or tribal regulation meets or exceeds requirements of the provision.



Regulatory Impact Analysis

- BLM determined rule is economically significant.
- Conducted Regulatory Impact Analysis (RIA).



Regulatory Impact Analysis

- Net benefits: \$115 – 188 million/year.
- Methane reductions: 164,000 – 169,000 tons/year.
- Additional royalties: \$9 – 11 million/year.
- Average per operator compliance costs: \$27,000 - \$36,000/year, not accounting for revenues from saved gas.



Waste Prevention – Tribal/Public Outreach



Questions?

Submit comments to:

www.Regulations.gov

ID:BLM-2016-0001-0001



Misc Materials



Reducing Flaring

Definitions (43 CFR 3179.3)

- Capture infrastructure - pipelines, facilities or other equipment used to capture, transport or process gas, including equipment to compress or liquefy natural gas, remove NGLs or generate electricity.
- Development oil well or development gas well - a well drilled to produce oil or gas from an established field in which hydrocarbons are being produced at a profit or expected profit.



Reducing Flaring

Existing determinations (43 CFR 3179.9)

- Approvals to flare or vent royalty-free, and/or to flare or vent above the 7,200 Mcf per month limit will continue for 90 days and then subject to rule.
- Provisions do not affect any determination made by BLM before or after effective date of final rule, regarding royalty-bearing status of flaring that occurred prior to effective date.



Royalty-Free Use of Lease Production

Uses moved off lease – do not require prior approval (43 CFR 3178.6)

- Oil or gas piped directly from one area of lease, unit, or CA to another area of same lease, unit, or CA where used without oil or gas being added or removed from pipeline while crossing lands not part of the lease, unit, or CA; or
- Well directionally drilled and wellhead is not located on lease, unit, or CA, and oil or gas used on same well pad for operations/production purposes for well.



Royalty-Free Use of Lease Production

Uses moved off lease – require prior approval (43 CFR 3178.7)

- Equipment or facility where operation conducted located off lease, unit, or CA for engineering, economic, resource-protection, or physical-accessibility reasons; **and**
- Operations conducted upstream of the FMP.
- If approved, operator may report as royalty-free only portion of oil or gas used as fuel allocable to production contributed by lease, unit, or CA where equipment located.



Royalty-Free Use of Lease Production Measurement or Estimation (43 CFR 3178.8)

- Measure or estimate volumes of royalty-free gas used in operations **upstream** of FMP.
- Measure if:
 - Gas removed **downstream** of the FMP and used in operations using measurement procedures in Onshore Order No. 5 or other successor regulation (43 CFR 3175).
 - Oil used in operations using the measurement procedures in Onshore Order No. 4 or other successor regulation (43 CFR 3174).
- Volumes measured or estimated following ONRR reporting requirements.

