Overview of Proposed Changes to Air Quality Permitting Rules – Emergency Rulemaking: Subchapter 7, Oil and Natural Gas Permit By Rule (PBR)

Special Air Quality Advisory Council Meeting
April 24, 2024

OKLAHOMA Environmental Quality

Tom Richardson, P.E.
Rules & Planning Section
Air Quality Division
Oklahoma Department of Environmental Quality

Introduction

Summary of topics for today's meeting:

- EPA's New Source Performance Standards (NSPS), Subpart OOOOb
- Legally and Practicably Enforceable (LPE) Limits for Tank Batteries
  - DEQ Interpretation
  - Informal Verbal Feedback from EPA
- Proposed Rule Language
- Responses to Written Comments
- Next Steps

NSPS, Subpart OOOOb

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA–HQ–OAR–2021–0317; FRL–8510–01–OAR]

RIN 2060–AV16

Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is finalizing multiple actions to reduce air pollution emissions from the Crude Oil and Natural Gas source category. First, the EPA is finalizing revisions to the new source performance standards (NSPS) regulating greenhouse gases (GHGs) and volatile organic compounds (VOCs) emissions for the Crude Oil and Natural Gas source category pursuant to the Clean Air Act (CAA). Second, the EPA is finalizing emission guidelines (EG) under the CAA for states to follow in developing, submitting, and implementing state plans to establish performance standards to limit GHG emissions from existing sources (designated facilities) in the Crude Oil and Natural Gas source category. Third, the EPA is finalizing several related actions stemming from the joint

the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *https://www.regulations.gov/*.

FOR FURTHER INFORMATION CONTACT: Ms. Amy Hambrick, Sector Policies and Programs Division (E143–05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina, 27711; telephone number: (919) 541–0964; email address: *hambrick.amy@epa.gov*.

SUPPLEMENTARY INFORMATION: *Preamble acronyms and abbreviations.* Throughout this document the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AMEL alternative means of emission limitation
ANSI American National Standards Institute
API American Petroleum Institute
ARPA–E Advanced Research Projects Agency–Energy
ASME American Society of Mechanical Engineers
ASTM ASTM, International
AVO audible, visual, and olfactory
AWP alternative work practice
bbl barrels of crude oil
BLM Bureau of Land Management
boe barrels of oil equivalents
BOEM Bureau of Ocean Energy
FEAST Fugitive Emissions Abatement Simulation Toolkit
FR Federal Register
FrEDI EPA's Framework for Evaluating Damages and Impacts model
FRFA final regulatory flexibility analysis
g/hr grams per hour
GHG greenhouse gas
GHGI Inventory of U.S. Greenhouse Gas Emissions and Sinks
GHGRP Greenhouse Gas Reporting Program
GOR gas-to-oil ratio
H_2S hydrogen sulfide
HAP hazardous air pollutant(s)
ICR information collection request
IRFA initial regulatory flexibility analysis
IWG Interagency Working Group on the Social Cost of Greenhouse Gases
kg kilograms
kg/hr kilograms per hour
kt kilotons
lb/yr pounds per year
low-E low emission
LDAR leak detection and repair
LPE legally and practicably enforceable
Mcf thousand cubic feet
MW megawatt
NAAQS national ambient air quality standards
NAICS North American Industry Classification System
NDE no detectable emissions
NIE no identifiable emissions
NESHAP national emission standards for hazardous air pollutants
NGO non-governmental organization
NHV net heating value
NO_X nitrogen oxides
NSPS new source performance standards
NTTAA National Technology Transfer and Advancement Act
O_2 oxygen
OAQPS Office of Air Quality Planning and Standards
OGI optical gas imaging

EPA United States Environmental Protection Agency

Oil and Natural Gas Sources Covered by EPA's Final New Source Performance Standards (NSPS) and Emissions Guidelines, by Site

Location and Equipment or Process Covered	Required to or Would Be Required to Reduce Emissions under EPA Rules (if finalized as proposed)	Rules that Apply: 2012 NSPS for VOCs (OOOO)	2016 NSPS for Methane & VOCs (OOOOa)	2023 Final NSPS for Methane & VOCs (OOOOb)	2023 Final Emissions Guidelines for Methane (OOOOc)
Oil and Natural Gas Well Sites					
Completions of hydraulically fractured wells	✓	●	●	●	
Compressors at centralized tank batteries	✓			●	●
Fugitive emissions	✓		●	●	●
Liquids unloading	✓			●	●[1]
Pneumatic controllers	✓	●	●	●	●
Pneumatic pumps	✓		●	●	●
Storage vessels	✓	●	●[3]	●	●
Sweetening units	✓	●[1]	●[2]	●[2]	●[2]
Associated gas from oil wells	✓			●	●
Natural Gas Gathering and Boosting Compressor Stations					
Compressors	✓	●	●	●	●
Fugitive emissions	✓		●	●	●
Pneumatic controllers	✓	●	●	●	●
Pneumatic pumps	✓			●	●
Storage vessels	✓	●	●[1]	●	●
Sweetening units	✓	●[2]	●[2]	●[2]	●[2]
Natural Gas Processing Segment					
Compressors	✓	●	●	●	●
Fugitive emissions	✓		●	●	●
Pneumatic controllers	✓	●	●	●	●
Pneumatic pumps	✓		●	●	●
Storage vessels	✓	●	●[3]	●	●
Sweetening units	✓	●[2]	●[2]	●[2]	●[2]
Transmission and Storage Segment					
Compressors	✓		●	●	●
Fugitive emissions	✓		●	●	●
Pneumatic controllers	✓		●	●	●
Pneumatic pumps	✓			●	●
Storage vessels	✓	●	●[3]	●	●

All of the sources listed above are covered by EPA's Super Emitter Program

[1] Added in 2022 supplemental proposal

[2] Covered for SO_2 only

[3] Covered for VOCs only

Final Rule Published: March 8, 2024

Effective Date for Final Rule: **May 7, 2024**

Summary of NSPS Subpart OOOOb Requirements

Part 60, Subpart OOOOb (new)

- Applies to **new** sources only (those constructed, reconstructed, or modified *after* Dec. 6, 2022)
- Effective 60 days after publication in the *Federal Register:* **May 7, 2024**
- Establishes GHG emission limits in the form of methane as well as VOC and SO_2 emission limits
- Affected facilities include:
  - Oil or natural gas well
  - Centrifugal compressor
  - Reciprocating compressor
  - Process controller(s) (fka pneumatic controllers)
  - Storage vessel(s) (now considered as "tank battery" rather than as single tank with emissions > 6 TPY VOC or > 20 TPY methane for the entire tank battery)
  - Process unit equipment (at natural gas plant)
  - Sweetening unit
  - Natural gas-driven pump(s)
  - Fugitive emissions components
- Compliance dates vary based on type of equipment, including 1-year for installing zero-emission process controllers and pumps and 2-years to eliminate flaring at oil wells
- Includes super-emitter events, third-party certification program, and response to EPA

Legally and Practicably Enforceable (LPE) Limits

NSPS Subpart OOOOb defines “storage vessel affected facility” differently than did previous rules (Subparts OOOO and OOOOa):

§ 60.5365b Am I subject to this subpart?

(e) **Each storage vessel affected facility**, which is a tank battery that has the potential for emissions as specified in either paragraph (e)(1)(i) or (ii) of this section. A tank battery with the potential for emissions below both of the thresholds specified in paragraphs (e)(1)(i) and (ii) of this section is not a storage vessel affected facility provided the owner/operator keeps records of the potential for emissions calculation for the life of the storage vessel or until such time the tank battery becomes a storage vessel affected facility because the potential for emissions meets or exceeds either threshold specified in either paragraph (e)(1)(i) or (ii) of this section.

Legally and Practicably Enforceable (LPE) Limits

EPA defined LPE limits in the Preamble to the rule (89 FR 16897):

e. Legally and Practicably Enforceable (LPE) Limitations

In this action, the EPA is finalizing the proposed criteria that must be met for a permit limit or other requirement to qualify as a legally and practicably enforceable limit for purposes of determining whether a tank battery is an affected facility or designated facility under NSPS OOOOb. A legally and practicably enforceable limit must include a quantitative production limit and quantitative operational limit(s) for the equipment, or quantitative operational limits for the equipment; an averaging time period for the production limit, if a production-based limit is used, that is equal to or less than 30 days; established parametric limits for the production and/or operational limit(s), and where a control device is used to achieve an operational limit, an initial compliance demonstration (*i.e.,* performance test) for the control device that establishes the parametric limits; ongoing monitoring of the parametric limits that demonstrates continuous compliance with the production and/or operational limit(s); recordkeeping by the owner or operator that demonstrates continuous compliance with the limit(s) in; and periodic reporting that demonstrates continuous compliance.

Legally and Practicably Enforceable (LPE) Limits

The rule identifies the required elements (89 FR 17045):

§ 60.5365b(e)(2)

(i) For purposes of determining the applicability of a storage vessel tank battery as an affected facility, a legally and practicably enforceable limit must include the elements provided in paragraphs (e)(2)(i)(A) through (F) of this section.

(A) A quantitative production limit and quantitative operational limit(s) for the equipment, or quantitative operational limits for the equipment;

(B) An averaging time period for the production limit in (e)(2)(i)(A) of this section, if a production-based limit is used, that is equal to or less than 30 days;

(C) Established parametric limits for the production and/or operational limit(s) in (e)(1)(i)(A) of this section, and where a control device is used to achieve an operational limit, an initial compliance demonstration (i.e., performance test) for the control device that establishes the parametric limits;

(D) Ongoing monitoring of the parametric limits in (e)(2)(i)(C) of this section that demonstrates continuous compliance with the production and/or operational limit(s) in (e)(2)(i)(A) of this section;

(E) Recordkeeping by the owner or operator that demonstrates continuous compliance with the limit(s) in (e)(2)(i)(A) through (D) of this section; and

(F) Periodic reporting that demonstrates continuous compliance.

Legally and Practicably Enforceable (LPE) Limits

Steps in the process:

1. Submit an application for an authorization to construct under the O&NG PBR which establishes LPE limits (in advance) based on an estimate of throughput, stream composition, operating parameters, and the control scenario.
2. Demonstrate initial compliance.
3. Demonstrate continuous compliance.
4. Recordkeeping.
5. Reassess on modification or reconstruction.

Permit-Limited Cap on Emissions

An important issue: Demonstration of Initial Compliance

Question: Does the acceptance of a cap short-circuit the requirement to demonstrate initial compliance during the first 30 days that the tank battery receives liquids?

DEQ's Answer: Yes. It is the DEQ's interpretation that a cap on emissions (accepted in advance of operation) that is established in a federally enforceable New Source Review (NSR) permit (a DEQ-issued construction permit) is sufficient to limit potential to emit (PTE) so that a tank battery will not meet the definition of "storage vessel affected facility" under NSPS Subpart OOOOb.

EPA's Informal Verbal Feedback

An important issue: Demonstration of Initial Compliance

EPA's Answer: The EPA rule writers intended that the owner/operator demonstrate initial compliance using the "maximum average daily throughput" during the first 30 days of production.

After the initial compliance demonstration, it is acceptable to demonstrate continuous compliance with the LPE limits each calendar month, recording actual monthly throughput and calculating monthly and 12-month rolling total emissions of VOCs and methane.

Chapter 100 Changes

TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 100. AIR POLLUTION CONTROL

SUBCHAPTER 7. PERMITS FOR MINOR FACILITIES

PART 9. PERMITS BY RULE

Please turn in your folder to the proposed amendments to rule text in Chapter 100, Subchapter 7.

This document is available on the web:
Subchapter 7. Permits for Minor Facilities (Amended)

Please select the **Rulemaking** tab.

Chapter 100, Subchapter 7 Changes

TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 100. AIR POLLUTION CONTROL

SUBCHAPTER 7. PERMITS FOR MINOR FACILITIES

PART 9. PERMITS BY RULE

252:100-7-60.5. Oil and natural gas sector

(a) **Applicability**. This PBR is issued for minor facilities and area sources in the oil and natural gas (O&NG) sector. This includes but is not limited to facilities subject to federal standards, primarily Subparts IIII, JJJJ, OOOO, ~~and~~ OOOOa, and OOOOb of the federal NSPS, 40 CFR Part 60, and Subparts HH and ZZZZ of the federal NESHAP, 40 CFR Part 63, as cited in this PBR and incorporated by reference in OAC 252:100-2 and Appendix Q to Chapter 100. Specifically, this PBR applies to the following:

All changes proposed today address the Permit By Rule (PBR) for the Oil and Natural Gas Sector (a.k.a., the O&NG PBR).

The current language in the O&NG PBR allows facilities to be constructed and operated even if those facilities will be subject to NSPS Subpart OOOOb. This additional language is just for clarification and completeness.

(1) **Eligible minor facilities and area sources**. New and existing minor facilities and area sources in the O&NG sector are eligible for this PBR, provided they comply with the conditions in (A) through (G) of this paragraph.

(A) The facility has actual emissions of ~~40 TPY~~ or less of each regulated air pollutant, except HAPs and GHGs.

(B) The facility has potential emissions of each regulated air pollutant, except HAPs, that are less than the emission levels that require prevention of significant deterioration (PSD), nonattainment new source review (NNSR), and Part 70 permits.

(C) The facility does not emit or have potential emissions of 10 TPY or more of any single HAP or 25 TPY or more of any combination of HAPs.

(D) For the purpose of determining if a facility is eligible for registration under this PBR, the calculation of actual emissions may include emission reductions that will be made enforceable by registration under this PBR.

(E) Only for the purpose of determining if a facility is eligible for registration under this PBR, the calculation of potential emissions shall not include emission reductions resulting from any physical or operational limitation (including capacity limitations, use of air pollution control equipment, and/or restrictions on hours of operation or on the type or amount of material combusted, stored, or processed). ~~Affected~~ However, affected sources or potentially affected sources subject to a federal standard (NSPS or NESHAP) may include enforceable limitations imposed by the federal standards in the calculation of potential emissions.

(F) The facility must meet the criteria in 252:100-7-15(b)(1)(C) through (E).

(G) The facility is not otherwise a Part 70 source.

This language amends the eligibility criteria for the O&G PBR by exempting GHGs from the 40 TPY eligibility threshold.

This language was amended to clarify that limitations on emissions imposed by any federal New Source Performance Standard (NSPS) or National Emissions Standard for Hazardous Air Pollutants (NESHAP) may be used to determine eligibility for the O&NG PBR. Limits accepted under the O&NG PBR (discussed later) are imposed under the O&NG PBR and are discussed in more detail later.

(2) **Equipment and processes**. This PBR covers equipment and processes located at minor facilities and area sources in the O&NG sector that meet the criteria contained in 252:100-7-60.5(a)(1). Covered equipment and processes under this PBR include, but are not limited to:

(A) The affected facilities listed in 40 CFR Section 60.5365 of NSPS Subpart OOOO, ~~and~~ 40 CFR Section 60.5365a of NSPS Subpart OOOOa, and 40 CFR Section 60.5365b of NSPS Subpart OOOOb.

(B) Stationary compression ignition internal combustion engines, as specified in 40 CFR Section 60.4200 of NSPS Subpart IIII, which are located at minor facilities in the O&NG sector.

This language adds a reference to NSPS Subpart OOOOb and clarifies that all emissions units addressed by that rule may be covered by the O&NG PBR. While this clarification is not strictly necessary to ensure coverage, including this language is less likely to lead to confusion.

(d) **Requested process-specific legally and practicably enforceable limitations - storage vessel affected facilities (tank batteries).** An owner or operator shall designate on the PBR registration form(s) that the following legally and practicably enforceable (LPE) limits are applicable to a specified storage vessel affected facility under 40 CFR Part 60, Subpart OOOOb. The permittee shall submit a notice of enforceability on forms provided by the DEQ to add or remove the applicability of LPE limits to or from any tank battery, whether the tank battery consists of a single storage vessel or multiple storage vessels that are manifolded together for liquid transfer.

(1) The storage vessel affected facility shall be limited to less than 6 TPY of VOC emissions and less than 20 TPY of methane emissions, calculated as cumulative emissions from all storage vessels within the tank battery, with both limits based on a 12-month rolling total.

(A) Demonstration of compliance with the VOC and methane emission limits shall include the following:

(i) A monthly quantitative throughput volume.

(ii) The composition of tank contents and any process stream (actual or representative consistent with DEQ policy as established by the Director) necessary to perform the calculations below.

(iii) Emission calculation methods for working, breathing, and flashing emissions approved by the Director.

(iv) Process operating parameters, including temperatures and pressures relied on in the compliance calculations.

(v) The method, if any, used to capture emissions, and divert emissions to a process and/or route emissions to a control device.

(vi) Calculations showing that, given the tank contents, throughput, and process operating parameters (including downtime), the emissions from the tank battery will not exceed the LPE limits for VOC or methane.

The vast majority of the new rule language is in new subsection (d). This subsection provides the mechanism for facilities to accept legally and practicably enforceable (LPE) limits on tank batteries to keep those tank batteries from becoming classified as "storage vessel affected facilities" under NSPS Subpart OOOOb.

New paragraph (1) under subsection (d) establishes limits on volatile organic compound (VOC) and methane emissions.

New subparagraph (A) establishes the foundational elements that will be used for the demonstration of compliance with the LPE limits.

Language highlighted in yellow was added after the proposed rule changes were posted on **March 15**.

(B) Applicants that elect to comply with the LPE limits through one or more of the following options shall meet these operational and parametric limits:

(i) If using a nonassisted flare:

(I) a closed vent system that routes emissions from the storage vessel affected facility to the flare.

(II) a combustion destruction efficiency of at least 95%.

(III) the flare shall meet the following applicable requirements of 40 CFR § 60.18: visible emissions requirements in § 60.18(c)(1); the pilot flame requirements in § 60.18(c)(2); the heating value requirements in § 60.18(c)(3)(ii); exit velocity requirements in § 60.18(c)(4); and the operational requirements in § 60.18(e).

(ii) If using a nonassisted enclosed combustion device:

(I) a closed vent system that routes emissions from the storage vessel affected facility to the combustor.

(II) a combustion destruction efficiency of at least 95%.

(III) the combustor shall meet the following applicable requirements for flares in 40 CFR § 60.18: visible emissions requirements in § 60.18(c)(1); the pilot flame requirements in § 60.18(c)(2); the heating value requirements in § 60.18(c)(3)(ii); and the operational requirements in § 60.18(e).

(IV) the maximum design capacity (MMBTU/hr) of the gases combusted as established by the manufacturer or operator during a performance test.

(iii) If using a VRU:

(I) a closed vent system that captures all emissions from the storage vessel affected facility and routes all emissions to a process.

(II) the openings of the storage vessels shall be closed and sealed (e.g., covered by a gasketed lid, cap, or other appropriate methods) during normal operation.

New subparagraph (B) provides the control options and control requirements. The applicant must submit forms (under development) which specify which control option (or options) will be used. If, for example, an applicant elects to use a vapor recovery unit (VRU) with a flare as a back-up control device, the applicant must specify both options. In that case, requirements for both options will apply.

Compliance options for LPE limits under the O&NG PBR are limited to VRUs and **nonassisted** flares and **nonassisted** enclosed combustion devices. For other purposes (not LPE limits), other types of flares will be allowed if operated in accordance with NSPS Subpart OOOOb.

(C) The emission reductions associated with the option(s) selected under (B) shall only be included in emissions calculations to show compliance with limits in (1) above when the following initial and periodic and/or continuous monitoring requirements are met:

(i) If using a nonassisted flare or enclosed combustion device:

(I) perform an initial visible emission observation of the flare or enclosed combustion device using Method 22 in Appendix A of 40 CFR Part 60, with a minimum observation time of six (6) minutes, within 60 days of initial operation.

(II) continuously monitor at least once every five minutes for the presence of a pilot flame or combustion flame using a device (including, but not limited to, a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of detecting that the pilot or combustion flame is present at all times. An alert must be sent whenever the pilot or combustion flame is unlit.

(III) perform an initial, and semi-annually thereafter, determination of the net heating value of the gasses combusted using the equation in 40 CFR § 60.18(f)(3), GPA Method 2261, or other approved method.

(IV) for a flare, perform an initial, and semi-annually thereafter, determination of the exit velocity of the gasses combusted, calculated by dividing the volumetric flowrate by the unobstructed (free) cross sectional area of the flare tip. Volumetric flowrate shall be determined by Method 2 in Appendix A of 40 CFR Part 60, or a generally accepted model or calculation methodology.

(V) for an enclosed combustion device, perform an initial, and semi-annually thereafter, demonstration that the actual heat content (MMBTU/hr) of the gases combusted are within the design values established by the manufacturer or operator during a performance test. The heat content of the combusted gases shall be determined by a generally accepted model or calculation methodology.

(VI) whenever the closed vent system, flare, or enclosed combustion device experiences outages and/or downtime, maintain calculations of associated emissions for the purpose of determining compliance with the limits in paragraph (1).

(ii) If using a VRU, whenever the closed vent system and/or VRU experiences outages and/or downtime, maintain calculations of associated emissions for the purpose of determining compliance with the limits in paragraph (1).

New subparagraph (C) provides the requirements to demonstrate initial and continuous compliance with the LPE limits.

Units (i) for nonassisted flares and enclosed combustion devices and (ii) for VRUs provide the specific requirements.

In response to a comment on the proposed rule, the DEQ added Gas Processors Association (GPA) Method 2261 as an alternative for determining net heating value. Other approved methods are also allowed.

Language in subunit (VI) added for completeness.

(D) Reporting of any exceedances of these limits in accordance with DEQ guidance.

(E) Recordkeeping updated monthly and maintained for a period of five (5) years, including:

(i) Records of contents stored,
(ii) Monthly and 12-month rolling total throughputs,
(iii) Records of parameters monitored as required in subparagraphs (A) and (B) above,
(iv) Monthly and 12-month rolling total emissions calculations used to demonstrate compliance,
(v) Times and emissions when the system used to comply with the LPE limits is not operating in accordance with the requirements established in this subsection, and
(vi) Records of all periods of uncontrolled venting.
(vii) Equipment specifications, manuals, and/or maintenance records, as appropriate.

(2) [RESERVED]

New subparagraph (D) requires reporting of any exceedances. This approach was chosen rather than a more cumbersome requirement to report continued compliance.

New subparagraph (E) establishes recordkeeping requirements.

Placeholder.

(e) **Exceptions to Otherwise Applicable State-Only Requirements.** When an owner or operator elects to obtain coverage under the oil and natural gas PBR (OAC 252:100-7-60.5) the following exceptions to otherwise applicable state requirements shall govern the equipment and operations covered by the PBR:

(1) GHG emissions, as an aggregate, or as individual components (e.g., methane) may be included in the facility's PBR notwithstanding the provisions of OAC 252:100-7-2.1, Minor permits for greenhouse gas (GHG) emitting facilities.

(2) Regardless of any limits on methane included in the PBR or inclusion of any reporting requirements or other provisions in the permit that may affect methane or GHG emissions, neither methane nor GHG (as an aggregate) will be considered to be regulated air pollutants for the purposes of the following:

(A) The determination of "actual emissions" from a given facility as defined in 252:100-5-1.1.

(B) The emissions inventory requirements of OAC 252:100-5-2.1.

(C) "Regulated pollutant (for fee calculation)," as defined in 252:100-5-1.1, subject to annual operating fees under OAC 252:100-5-2.2.

(D) The determination whether a facility is a "major source" as defined in OAC 252:100-8-2.

(E) The determination whether a facility is a "major stationary source" as defined in OAC 252:100-8-31 for facilities in attainment areas or in OAC 252:100-8-51 for facilities in nonattainment areas.

(F) The determination whether a facility's project is a "major modification" as defined in OAC 252:100-8-31 for facilities in attainment areas or in OAC 252:100-8-51 for facilities in nonattainment areas.

(3) These exceptions may be set aside at the discretion of the Director.

New subsection (e) carves out exceptions from other state-only rule language in Chapter 100.

Because this is an emergency rulemaking, these exceptions are meant to isolate the amended O&NG PBR from restrictions included in other parts of Chapter 100 that could contradict authorities endorsed in the revised PBR.

It is anticipated that these issues will be addressed more completely when (and if) permanent rule changes are brought to the Council.

Summary of Comments and DEQ Responses

The DEQ received written comments from one stakeholder: **The Petroleum Alliance of Oklahoma**

Comments were submitted as an attachment to an email message from Mr. Howard L. (Bud) Ground, Directory of Regulatory Affairs, on April 10, 2024.

A Response to Comments document has been posted on the web and a copy has been placed in the folder of each Council Member.

Here I will provide a summary of each comment and the DEQ's response.

Summary of Comments and DEQ Responses

1. **COMMENT:** The Petroleum Alliance of Oklahoma (hereafter "the Alliance") requested clarity on how the enforceable limits will be set and asked, "Will the limits be based on monthly or annual average through-puts and pressures?" The Alliance stated that the Permit By Rule (PBR) may be of limited benefit if the potential to emit (PTE) calculation is not allowed to be based on an annual average.

   RESPONSE: Ultimately, the final answer to this question could depend on written guidance from EPA and DEQ's interpretation of that guidance. However, until said written guidance is received, DEQ will proceed with our current interpretation as described below.

   Annual volatile organic compound (VOC) and methane legally and practicably enforceable (LPE) limits for tank batteries are established in proposed new Subsection (d) of the PBR (OAC 252:100-7-60.5). The PBR is set up to require compliance with the tons per year limits based on 12-month rolling totals demonstrated monthly using monthly throughputs. The applicant is required to document pressures used in the calculations. This is consistent with past permitting policies.

   In response to the concern expressed by the Alliance over PTE calculations, applications for registration under the PBR should be based on applicant's best projection of emissions which will demonstrate compliance with the limits requested. Compliance with the limits must then be demonstrated as stated above.

Summary of Comments and DEQ Responses

DEQ received informal verbal feedback from EPA (expanding on the concepts in the preamble of the Subpart OOOOb rule and further clarifying EPA's Response to Comments in the preamble) stating that tank battery applicability must be based on the "maximum average daily throughput" determined during the first 30 days that the individual tank or tank battery receives fluids as defined in 40 CFR § 60.5430b. This "maximum average daily throughput," annualized to tons per year, would then be used to determine whether the individual storage tank or tank battery will *not* meet the definition of "storage vessel affected facility" as defined in 40 CFR § 60.5365b(e). Assuming an owner/operator collects throughput data every day, a simplified way of looking at this calculation is to think about the LPE limits as limits of less than 0.5 tons of VOCs and less than 1.67 tons of methane in the first 30 days of operation. This is a new interpretation of how to demonstrate initial compliance.

It is important to note that the emergency rule language, as written, can accommodate either interpretation. Future guidance will be provided as necessary to finalize DEQ's policy, if/when EPA provides an official written position on this matter. Further, the future permanent version of this rule would be able to provide further clarification, if needed.

Summary of Comments and DEQ Responses

2. **COMMENT:** The Alliance referenced proposed OAC 252:100-7-60.5(d)(1)(A)(iii) and asked whether DEQ anticipates there will be different calculation methods for tank working, breathing, and flashing emissions than what is currently used under the PBR.

   RESPONSE: At this time, DEQ does not anticipate that there will be different calculation methods than those currently used under the PBR. Please see DEQ guidance – in particular the "Guidance on Estimating Flashing Losses and Guidance on Determining Representative Process Stream Composition Data for Oil and Gas Facilities" and the "Representative Sampling Guidance" – for additional information. See response to Comment #3, below, with regard to methane emissions calculations. Additional guidance or amendments to existing guidance may be necessary to address methane emissions calculations performed using methods *other* than process simulators.

Summary of Comments and DEQ Responses

3. **COMMENT:** The Alliance referenced proposed OAC 252:100-7-60.5(d)(1)(A)(v) and asked what calculation methods should be used to show compliance with the methane limits.

   RESPONSE: The focus of DEQ's guidance has been the calculation of VOC emissions, but process simulators (discussed in the guidance) also calculate methane emissions. In addition, the owner/operator may use any generally acceptable model or calculation methodology that accounts for flashing, working, and breathing losses to determine methane emissions.

4. **COMMENT:** The Alliance stated that during periods when operators are not utilizing a Vapor Recovery Unit (VRU) due to maintenance, the operators need the ability to permit a flare as a back-up control device. The Alliance asked whether this can be accomplished under the proposed PBR.

   RESPONSE: The revised PBR as proposed can accommodate the use of a flare as a back-up control device when a facility conducts the required monitoring of the flare to document operation. The PBR provides sufficient context for such an approach, but DEQ will issue additional guidance as necessary.

Summary of Comments and DEQ Responses

5. **COMMENT:** The Alliance stated that flow meters on low pressure streams to flares are not very accurate, and asked if operators will be able to estimate those low flows to flares.

   RESPONSE: The proposed PBR revision was written to limit the use of combustion control to unassisted flares and unassisted enclosed combustors as a control option to demonstrate compliance with LPE limits. Air-assisted or steam-assisted flares will require an individual facility permit or a modified version of the Oil & Gas General Permit (currently in development) to specify additional requirements to demonstrate compliance with LPE limits where those types of combustion devices are used as the control device. While determination of the flow of vapors emitted by storage vessels and directed by a closed vent system to an unassisted flare is helpful, as long as a pilot light is maintained (and confirmed), the PBR does not require measurement of the volumetric rate of vapor flow to the flare.

Summary of Comments and DEQ Responses

6. **COMMENT:** The Alliance requested confirmation that an existing facility that is covered by a PBR would not be required to have an LPE to stay under its current PBR. The Alliance also requested confirmation that facilities constructed after December 6, 2022, and before the emergency rules are in place, will not have the option to use LPEs (to exempt storage tank batteries from being regulated as "storage vessel affected facilities" under NSPS Subpart OOOOb) in a PBR. Finally, the Alliance requested confirmation that new facilities constructed after the emergency rules are in effect will need to obtain a PBR with LPEs if they do not want to be subject to the tank battery requirements of Subpart OOOOb.

   RESPONSE: The Alliance's understanding is correct. Note that a facility with an uncontrolled PTE based on the first 30 days of operation that was less than the VOC and methane thresholds in NSPS Subpart OOOOb could still request LPE limits.

7. **COMMENT:** The Alliance asked if the existing PBR can be used to allow new facilities that are subject to 40 CFR Part 60, Subpart OOOOb to be constructed and operated without LPE limits.

   RESPONSE: Yes, the current PBR could be used to allow new facilities subject to NSPS Subpart OOOOb to be constructed and operated without LPE limits.

Summary of Comments and DEQ Responses

8. **COMMENT:** The Alliance requested confirmation that existing facilities that want federally enforceable limits in their PBR to exempt tanks from the requirements of NSPS Subpart OOOO or Subpart OOOOa will not be affected by the emergency rule but in the future may need to address Subpart OOOOc requirements for methane.

   RESPONSE: DEQ confirms that existing facilities do not need to make any changes to their current PBR if they have already taken a 6 TPY limit to exempt their tanks from the requirements of NSPS Subparts OOOO/OOOOa. DEQ also confirms that the existing facilities may need to address Subpart OOOOc requirements for methane in the future.

9. **COMMENT:** The Alliance asked if air-assisted flares will be allowed under the new PBR.

   RESPONSE: Air-assisted flares, as a control option to demonstrate compliance with LPE limits, are not allowed under the new PBR. However, an air-assisted flare may be used under the PBR to control emissions from "storage vessel affected facilities" subject to the requirements of §60.5395b or to control emissions from other units subject to NSPS, Subpart OOOOb, as long as the operation of the air-assisted flare complies with the requirements of that subpart.

Summary of Comments and DEQ Responses

10. **COMMENT:** The Alliance asked if the PBR registration form referenced in OAC 252:100-7-60.5(d) has been developed.

    RESPONSE: DEQ has not yet developed a revised PBR registration form. This form will be developed after the PBR language is finalized, and before the emergency rule goes into effect if it is approved.

11. **COMMENT:** The Alliance requested that the method referenced in proposed OAC 252:100-60.5(d)(1)(C)(III) be changed from 40 CFR § 60.18(f)(3) to include the use of the GPA 2261 method. The Alliance stated that the oil and natural gas industry commonly uses the GPA method and believes that it is more appropriate and less expensive.

    RESPONSE: Since GPA 2261 is an approved method under 40 CFR Part 75, DEQ concurs with the use of this method as an alternative to the ASTM method to determine net heating value specified in 40 CFR § 60.18(f)(3). The proposed rule language has been modified to add "GPA Method 2261, or other approved method" and now reads as follows:

    > (III) perform an initial, and semi-annually thereafter, determination of the net heating value of the gasses combusted using the equation in 40 CFR § 60.18(f)(3), GPA Method 2261, or other approved method.

Summary of Comments and DEQ Responses

12. COMMENT: The Alliance requested the following rule language change in proposed OAC 252:100-7-60.5(d)(1)(E). The Alliance stated that the change would eliminate a duplication of requirements:

(E) Recordkeeping updated monthly and maintained for a period of five (5) years, including:
(i) Records of contents stored,
(ii) Monthly and 12-month rolling total throughputs, or monthly and 12-month rolling total emissions calculations used to demonstrate compliance,
(iii) Records of parameters monitored as required in subparagraphs (A) and (B) above,
~~(iv) Monthly and 12-month rolling total emissions calculations used to demonstrate compliance,~~
~~(v)~~(iv) Times and emissions when the system used to comply with the LPE limits is not operating in accordance with the requirements established in this subsection, and
~~(vi)~~(v) Records of all periods of uncontrolled venting.
~~(vii)~~(vi) Equipment specifications, manuals, and/or maintenance records, as appropriate.

Summary of Comments and DEQ Responses

RESPONSE: The EPA rule establishes certain minimum requirements to demonstrate continuous compliance with the LPE limits. Due to the generic nature of the PBR, establishing a quantitative production limit as the *exclusive* method of demonstrating continuous compliance and creating such a limit in advance of construction would be problematic. Therefore, DEQ believes that an individual facility permit is a more appropriate vehicle for establishing such a limit, due to the complicated, facility-specific conditions that allow a throughput limit (on its own) to demonstrate compliance with an emission limit. Due to the more generic nature of a PBR, a cap on emissions (with compliance demonstrated through monthly and 12-month total calculations of emissions to show compliance with the cap) is required when demonstrating compliance with a tons per year emission limit, per long-standing EPA guidance. To demonstrate continuous compliance with the cap, monthly throughput quantities need to be recorded *and* emissions (both monthly and 12-month rolling totals) need to be calculated. This is the same policy currently used for the Oil & Gas General Permit. If necessary, DEQ will issue guidance to update, clarify, or modify the policies described in this Response to Comments document. No revision to the rule proposal has been made based on the requested change.

Chapter 100, Subchapter 7 Changes

That concludes my presentation on our proposed changes to Chapter 100, Subchapter 7.

Staff requests that the AQAC recommend the proposed rule revisions to Subchapter 7-60.5 as presented today to the EQB for adoption as an emergency rule.

Thank you!