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**AIR QUALITY
GENERAL PERMIT TO CONSTRUCT/OPERATE
OIL & GAS FACILITIES
(For Minor Facilities)
2022 GP-OGF (Version 3)
OKLAHOMA**

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
707 NORTH ROBINSON, P. O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677**

In compliance with the provisions of the Oklahoma Clean Air Act, as amended (27A O.S., et seq.) and rules promulgated thereunder, operators of oil and gas facilities (OGF), as described under Part 1, Section III below, are hereby granted permission to construct/operate such facilities as specified in an Authorization to Construct/Operate (hereinafter referred to as an "Authorization") issued under this permit by the Department of Environmental Quality (DEQ). Parts 1 through 3 and Appendices A through D of this permit specify emission limitations and standards that constitute applicable requirements, including state-only requirements, and include operational requirements and limitations necessary to ensure compliance with all applicable air pollution rules. All OGF shall remain subject to the Oklahoma Clean Air Act, Okla. Stat. tit. 27A §§ 2-5-101 to -118 and the rules promulgated thereunder at Okla. Admin. Code ("OAC"), Air Pollution Control, Title 252, Chapter 100-1-1 to -47-14.

The owner or operator of an OGF may request that the facility be granted coverage under this permit by submitting to the Air Quality Division (AQD) a complete application that includes appropriate forms and fees for an OGF General Permit. Eligible facilities may apply for coverage under this permit at any time during the permit term, noting on the applicable form whether the facility will have enforceable limits set below 80 TPY or 100 TPY.

Signed and issued this day, _____.

DRAFT

_____ Kendal Stegmann, Division Director

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PART 1 - REQUIREMENTS FOR GENERAL PERMIT

This Permit is issued for the oil and gas facility (OGF) source category to establish (A) terms and conditions to implement applicable air pollution rules and regulations applicable to OGF, and (B) federally-enforceable limits (FEL), legally and practically enforceable limits (PEL), and/or caps on emissions. The Permit is issued after finding that there are a significant number of facilities that have the same or substantially similar operations, emissions, and activities that are subject to the same or similar standards, limitations, and operating and monitoring requirements.

SECTION I. AUTHORITY

This permit is developed in accordance with the provisions of OAC 252:100-7-15 and 100-7-18.

SECTION II. APPLICABILITY

This permit authorizes construction and/or operation of OGF with potential emissions less than 100 tons/year (TPY) of a regulated pollutant in an attainment area, less than 10 TPY of any single hazardous air pollutant (HAP), and less than 25 TPY of total HAPs.

SECTION III. ELIGIBILITY

- A. This permit is limited to air pollutant emitting sources located at OGF that are designed and operated for the production, gathering, processing, storage, or transportation of crude oil, refined petroleum products, natural gas, and natural gas liquids (NGL), including condensate.

The following types of facilities are generally eligible for coverage under this permit:

1. New facilities.
2. Existing facilities, including those with previously issued minor source construction and/or operating permits, or those previously exempted from the requirement to obtain a permit.
3. Facilities existing prior to the effective date of any applicable standard that would have created specific quantifiable and enforceable emission rates.

- B. The following facilities are not eligible for this permit:

1. Facilities for which material facts were misrepresented or omitted from the application and the applicant knew or should have known of such misrepresentation or omission.
2. Facilities with emissions units that are affected sources subject to:
 - a. OAC 252:100-8 (Permits for Part 70 Sources)

b. OAC 252:100-17 (Incinerators)

- C. The following facilities are not eligible to obtain an Authorization to Construct under this permit, but may be eligible for coverage under an Authorization to Operate if they obtain a minor source construction permit and all relevant requirements and limitations in that construction permit are incorporated into the Authorization to Operate:
1. Facilities with combustion equipment fired with liquid petroleum gas (LPG) or natural gas with a maximum total sulfur content greater than 162 ppmv; or diesel fuel or No. 2 fuel oil with a total sulfur content greater than 0.05% by weight.
 2. Stationary reciprocating engines burning diesel fuel with a total sulfur content greater than 15 ppm by weight.
 3. Facilities storing/distributing crude oil that cannot demonstrate a maximum H₂S concentration of 6 ppmw for all categories of crude oil stored at the facility. Such demonstration must be documented using the methods outlined in Appendix B of this permit.
 4. Facilities that use incinerators, regenerative or non-regenerative carbon absorbers, or catalytic systems to control emissions of H₂S.
 5. Facilities with a VOC loading facility subject to OAC 252:100-37-16(a) or OAC 252:100-39-41.
 6. Facilities that load gasoline into gasoline cargo tanks with a maximum calculated design throughput of 20,000 gallons per day or greater. Such facilities are bulk gasoline terminals subject to 40 CFR Part 60, Subpart XX or XXa and to 40 CFR Part 63, Subpart BBBB.
 7. Facilities with glycol dehydration units that process natural gas with an H₂S content greater than 4 ppmv.
 8. Facilities with more than one amine unit.
 9. Facilities with amine units under the following conditions: (1) that process natural gas with an H₂S content greater than 4 ppmv; or (2) that do not control emissions from the rich amine flash tank and amine regeneration vent. To be considered controlled, the rich amine flash tank may either be routed to the inlet, fuel gas system, or a flare. The amine regeneration still vent must be routed to a flare meeting the requirements of OAC 252:100-31-26. Facilities with amine units that process natural gas with an H₂S content greater than 4 ppmv, or that do not control emissions from the rich amine flash tank and amine regeneration vent, require a site-specific determination of compliance with the H₂S ambient concentration limit of OAC 252:100-31-7.

10. Facilities with amine units that process more than 0.1276 long ton per day (LTPD) of sulfur. Facilities with amine units without sulfur recovery that process more than 0.1276 LTPD of sulfur would be a major source for SO₂.
 11. Facilities with “new fuel-burning equipment,” as that term is defined in OAC 252:100-33, with a rated heat input of 50 MMBtu/hr or greater (excluding reciprocating engines).
 12. Facilities with selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) control systems on any engine (except for emergency engines) or other combustion source. These are control systems that require injection of ammonia, and do not include 3-way catalyst (NSCR) or oxidation catalyst.
 13. Facilities that require a specific limitation(s) not otherwise addressed in order to maintain compliance with the cap.
 14. Facilities located in an area that is federally designated as non-attainment.
 15. Facilities that request an Alternative Emissions Reduction Authorization under OAC 252:100-11.
 16. Facilities requesting control efficiencies above the levels allowed in Appendix A of this Permit.
 17. Facilities requesting unit specific limits not allowed or required under the general permit.
- D. Conditions established in an individual minor source construction permit and incorporated into an Authorization to Operate, may supersede conditions established in the GP-OGF, as long as the requirements that are incorporated are in compliance with all currently applicable rules and regulations.
- E. The DEQ may not issue a permit authorization sought by an applicant that has not paid all monies owed to the DEQ or is not in substantial compliance with the Environmental Quality Code, DEQ rules and the terms of any existing DEQ permits and orders. The DEQ may impose special conditions on the applicant to ensure compliance and/or a separate schedule which the DEQ considers necessary to achieve required compliance.
- F. The DEQ may refuse issuance of an Authorization to an applicant even though the facility meets the above eligibility criteria. In such a case, DEQ will provide to the facility a written explanation providing the reason(s) for the decision.

SECTION IV. AUTHORIZATIONS

An applicant requesting an authorization under this permit may obtain coverage in one of the following ways.

- A. An applicant proposing to construct a new facility that meets all of the eligibility requirements, excluding those facilities listed in Part 1, Section III.C, may apply for an Authorization to Construct by submitting a complete Notice of Intent (NOI) to Construct application that includes the appropriate forms and fees for an OGF General Permit. Coverage under this permit is effective, and the permittee may commence construction, upon receipt by the DEQ of the NOI to Construct and fees or confirmation of fees received (a receipt) by the DEQ. The earliest of (1) a legible dated U.S. Postal Service postmark (private metered postmarks are not acceptable); (2) a dated receipt from a commercial carrier or the U.S. Postal Service; (3) a DEQ date stamped application; or (4) a date of receipt of a digital copy of an application is acceptable documentation of receipt of the NOI to Construct. A confirmation letter is issued by the DEQ after confirming that the application is administratively complete, the proper fee has been received, and that the facility is eligible for coverage under this permit. For changes that occur prior to issuance of an authorization to operate, the applicant may utilize a NOM to obtain coverage for additional emission units.
- B. An applicant proposing to construct a new facility that meets the eligibility requirements listed in Part 1, Section III.C, must apply for a minor source construction permit for the facility since a case-by-case determination is most likely required to establish enforceable limitations for some particular emission unit. All relevant requirements and limitations in the minor source construction permit shall be incorporated into the Authorization to Operate under this permit.
- C. An applicant proposing to obtain coverage under this permit for an existing, previously permitted facility, need only submit an application for an Authorization to Operate if the facility meets all of the eligibility requirements, including those listed in Part 1, Section III.C. Under this scenario, facilities that have not obtained authorization under an NOI to Construct, coverage under the GP-OGF is not effective until the issuance of the Authorization to Operate.
- D. An applicant proposing to obtain coverage under this permit for an existing facility, not previously required to be permitted, need only submit an application for an Authorization to Operate, unless the facility is required to obtain an individual construction permit based on the criteria in Part 1, Section III.C. Under this scenario, for facilities that have not obtained authorization under an NOI to Construct, coverage under the GP-OGF is not effective until the issuance of the Authorization to Operate.
- E. An applicant proposing to modify an existing facility (e.g., add, modify, reconstruct, or replace equipment or increase emissions) already covered by an Authorization to Operate under this general permit must meet the requirements specified in Part 3, Section II of this permit. Note that an applicant proposing to modify an existing facility only needs to obtain a new Authorization to Operate if the change is not provided for in the definition of Notice of Modification (NOM). However, if a minor source individual construction permit is required to make a modification as described under Part 1, Section III.C of this permit, a new Authorization to Operate is required.

- F. An applicant proposing to operate under an individual minor source permit for an existing facility already covered by an Authorization to Construct under this permit must meet the requirements for a minor source individual permit and submit the required applications forms and fees within the specified time frame. The fees include those required for the individual construction permit fee as well as individual operating permit fees.

SECTION V.PERMIT TERM

This permit shall remain valid and in effect unless it is modified or revoked in accordance with DEQ rules.

If this permit is modified, the DEQ shall establish the terms and conditions under which existing Authorizations under this permit will be authorized under the modified General Permit.

PART 2 – SPECIFIC CONDITIONS

Facilities shall be designed, constructed, and operated to meet the following terms and conditions, and any other applicable air pollution rules specified in this permit, the facility's Authorization, and any other requirements specified by rule or statute.

SECTION I. FACILITY-WIDE REQUIREMENTS

The following specific conditions apply facility-wide.

Emissions Cap

- A. Emission limitations included here shall be applicable to each facility upon the submittal of an administratively complete application for a Notice of Intent to Construct or an issued Authorization to Operate. This general permit establishes emissions limitations for Class I and Class II facilities covered under this permit as a facility-wide emissions cap. Class II facilities shall limit actual emissions to less than the major source levels of 100 TPY of any regulated air pollutant or 10 TPY of a single HAP/25 TPY of any combination of HAP. Class I facilities shall limit actual emissions to less than 80% of the major source levels. Fugitive emissions of HAP shall be included in the demonstration of compliance with the applicable single HAP and combined HAP limits of this Subsection, without regard to whether the facility belongs to a listed source category under the definition of "major source" in OAC 252:100-8-2.
- B. Compliance with these emission limitations shall be determined at least monthly and be based on a 12-month rolling total. As an alternative method for compliance with the 12-month rolling total emission limits, facilities can calculate, per Appendix E, the maximum projected actual emissions for all equipment based on specific oil, and gas, and water throughputs and hours of operation (base set of emissions calculations). The applicant then may use those emission calculations as the demonstration of compliance with the cap provided that the throughputs and hours of operations (maintained on a monthly and 12-month rolling total) used in those calculations have not been exceeded.
 - 1. When electing to utilize the alternative method, the applicant must submit the base set of emission calculations to be relied on as part of the initial application or part of a NOM.
 - 2. Changes in process or equipment may require an update to the base set of emission calculations and must be submitted as part of a NOM.
 - 3. Transition to/from the monthly emission calculations to the alternative compliance method is only allowed at the beginning of a month.
- C. The facility throughput and/or equipment hours of operation shall be constrained as necessary to not exceed any facility-wide emissions cap.

- D. Maintenance, Startup, and Shutdown (MSS) emissions shall be included as part of the facility-wide emissions cap.

Emission Calculations

- E. Actual emissions shall be calculated and documented in accordance with OAC 252:100-5-2.1(c) and (d), or as otherwise specified in this permit or an Authorization. Various processes rely on representative gas and liquid analyses to determine emissions. DEQ guidance addresses criteria for accepting representative versus site-specific analyses: “Representative Sampling Guidance” which is found in the AQD guidance section of the DEQ website. The emissions calculations required here shall include the items identified below that are contained in the De Minimis Facilities list in OAC 252:100, Appendix H.

Storage Tanks

- Fuel/VOC storage tanks with less than 400 gallons capacity, or fuel/VOC storage tanks with less than 10,567 gallons capacity built after July 23, 1984, or tanks storing fuel/VOC that has a true vapor pressure at storage conditions less than 1.5 psia. This includes Fuel Oils Nos. 2 - 6, Nos. 2-GO - 4-GO, Diesel Fuel Oils Nos. 2-D - 4-D, and Kerosene.*
- Tanks containing separated water produced from oil and gas operations.
- Emergency use equipment, unless utilized in excess of 500 hours per year, and associated fuel storage tankage.*

Blowdowns

- Blowdown of compressors or other vessels containing natural gas or liquid hydrocarbons for maintenance due to emergency circumstances.

Combustion Equipment

- Space heaters and boilers less than 10 MMBTU/hr heat input.**
- Emissions from non-natural gas fueled stationary internal combustion engines rated less than 50 hp output.**
- Emissions from gas turbines with less than 215 kilowatt rating of electric output.**
- Natural gas fueled internal combustion engines rated <150 hp and <20 years old.**
- Emergency use equipment, unless utilized in excess of 500 hours per year, and associated fuel storage tankage.*

Fugitive Emission Sources

- Pneumatic starters on reciprocating engines, turbines, compressors, or other equipment.*
- Instrument systems utilizing air or natural gas.*

MSS

- Pipeline Maintenance Pigging Activities.
- General maintenance, upkeep, and replacement activities, including those which do not alter the capacity of process, combustion or control equipment nor increase regulated pollutant emissions, unless subject to NESHAP or NSPS.*

- Crude oil tank bottom reclaiming.*

Miscellaneous

- Vent emissions from gas streams used as buffer or seal gas in rotating pump and compressor seals.*
- Engine crankcase vents and equipment lubricating sumps.*

In lieu of specific monitoring, recordkeeping, and calculations:

- De Minimis Facilities activities designated with an asterisk (*) can use a simplified method of representing emissions by assuming emissions are 5 TPY for all emission units contained within the defined activity.
- For those activities designated with **, each emission unit within the defined activity can use a simplified method of representing emissions by assuming emissions are 5 TPY for each emission unit.
- For those activities requiring specific calculations or where a facility elects to not use the simplified method, the calculation methods specified in the individual sections shall be used.

Oklahoma Air Pollution Control Rules

- F. In no case shall the permittee cause or allow the emission of any regulated air pollutant in such a concentration as to cause or contribute to a violation of ambient air quality standards or other applicable air pollution rules. [OAC 252:100-3]
- G. Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in OAC 252:100-13. [OAC 252:100-13]
- H. For all emissions units not subject to an opacity limit promulgated under 40 CFR Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
1. Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
 2. Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 3. An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
 4. Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

- I. The permittee shall take reasonable precautions to minimize or prevent pollution from the release of fugitive dust into the air by any operation or activity, as required under OAC 252:100-29. [OAC 252:100-29]
- J. Gas-fired combustion equipment operated under this permit shall be fueled only with liquid petroleum gas (LPG) or natural gas with a maximum total sulfur content of 162 ppmv. Compliance shall be demonstrated at least once per calendar year and may be demonstrated by one of the following recordkeeping requirements. [OAC 252:100-31 & 100-43]
1. For gaseous fuel, a current gas company bill or a current gas contract, tariff sheet, or transportation contract for the natural gas fuel that demonstrates the maximum total sulfur content of the natural gas fuel does not exceed 10 grains/100 scf.
 2. Technical data or gas sampling data demonstrating that the maximum total sulfur content of natural gas from the facility's production area does not exceed 10 grains/100 scf.
 3. Representative fuel sampling data (including in-line analyzer data, lab analysis, or sampling by colorimetric testing), that shows the maximum total sulfur content of the natural gas fuel does not exceed 10 grains/100 scf. If using hydrogen sulfide colorimetric testing to demonstrate compliance, the measured concentration of hydrogen sulfide must be less than 9 grains/100 scf or 146 ppmv.
- K. Liquid-fired combustion equipment operated under this permit shall be fueled only with gasoline, diesel or No. 2 through No. 6 fuel oil. Liquid fuels are limited to a maximum of 0.05% sulfur by weight, except for engines that are subject to 40 CFR Part 60, Subparts IIII and/or JJJJ, which must use fuel that meets the more stringent requirements of those subparts (see Part 2, Sections IV.M and IV.N). The permittee shall certify in the NOI to Construct compliance with the standard and provide with the application for an Authorization to Operate a fuel composition analysis that shows total sulfur content. Thereafter, the permittee shall obtain a fuel analysis that shows total sulfur content once per load received and shall maintain records of the required fuel sulfur analysis. A one-time certification of sulfur content of a grade of fuel, with subsequent receipts stating the fuel grade delivered from the supplier, is sufficient to document compliance with this requirement. A new certification shall be obtained from each new supplier. [OAC 252:100-31 & 100-43]
- L. Glycol dehydration units and amine units operated under this permit shall not process natural gas or natural gas liquids with a hydrogen sulfide concentration greater than 4 ppmv. Compliance shall be demonstrated at least once per calendar year and may be demonstrated by one of the following recordkeeping requirements. [OAC 252:100-31 & 100-43]
1. A current gas contract, tariff sheet, or transportation contract that demonstrates the maximum hydrogen sulfide concentration of the natural gas or natural gas liquids does not exceed 4 ppmv (0.25 grains/100 scf).

2. Technical data or gas sampling data demonstrating the hydrogen sulfide concentration of natural gas or natural gas liquids from the facility's production area does not exceed 4 ppmv (0.25 grains/100 scf).
 3. Representative sampling data (including on-line analyzer data, lab analysis, or sampling by colorimetric testing), that shows the hydrogen sulfide concentration of the natural gas or natural gas liquids does not exceed 4 ppmv (0.25 grains/100 scf).
- M. Petroleum or condensate stored, processed, treated, loaded, and/or transferred at a drilling or production facility prior to lease custody transfer is exempt from OAC 252:100-37. Methanol stored at a drilling or production facility for use on site is also exempt from OAC 252:100-37. [OAC 252:100-37-4(b)]
- N. Any vapor-loss control devices and mechanical seals required by OAC 252:100-37 shall be properly installed, maintained, and operated. [OAC 252:100-37-5]
- O. Emission units, and control devices associated with any emission units constructed under this permit, shall comply with all applicable requirements of OAC 252:100-43, and Appendix A of this permit. Records of operation and maintenance procedures required by the manufacturer for any control devices used in Appendix A shall be kept. [OAC 252:100-43]
- P. The permittee shall install, use, and maintain such monitoring equipment as specified in Appendix A of this permit, except as otherwise specified elsewhere in this permit or in an Authorization, or in applicable rules or statutes. [OAC 252:100-43]
- Q. The permittee shall document that all testing is conducted using methods specified in 40 CFR Parts 51, 60, 61, or 63, as applicable, or as otherwise specified in this permit or in an Authorization. A copy of these records shall be retained with the records containing the facility's test results. [OAC 252:100-43]

Federal Regulations

- R. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including, but not limited to, the following:
1. Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022. [40 CFR §§60.5360a - 60.5439a]
 - a. § 60.5360a What is the purpose of this subpart?
 - b. § 60.5365a Am I subject to this subpart?
 - c. § 60.5370a When must I comply with this subpart?
 - d. § 60.5395a What VOC standards apply to storage vessel affected facilities?

- e. § 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
 - f. § 60.5411a What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels?
 - g. § 60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?
 - h. § 60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?
 - i. § 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
 - j. § 60.5416a What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my centrifugal compressor, reciprocating compressor, pneumatic pump, and storage vessel affected facilities?
 - k. § 60.5417a What are the continuous control device monitoring requirements for my centrifugal compressor and storage vessel affected facilities?
 - l. § 60.5420a What are my notification, reporting, and recordkeeping requirements?
 - m. § 60.5425a What parts of the General Provisions apply to me?
 - n. § 60.5430a What definitions apply to this subpart?
2. Subpart OOOOb - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022. [40 CFR §§60.5360b - 60.5439b]
- a. § 60.5360b What is the purpose of this subpart?
 - b. § 60.5365b Am I subject to this subpart?
 - c. § 60.5370b When must I comply with this subpart?
 - d. § 60.5395b What GHG and VOC standards apply to storage vessel affected facilities?

- e. § 60.5410b How do I demonstrate initial compliance with the standards for each of my affected facilities?
 - f. § 60.5411b What additional requirements must I meet to determine initial compliance for my covers and closed vent systems?
 - g. § 60.5412b What additional requirements must I meet for determining initial compliance of my control devices?
 - h. § 60.5413b What are the performance testing procedures for control devices?
 - i. § 60.5415b How do I demonstrate continuous compliance with the standards for each of my affected facilities?
 - j. § 60.5416b What are the initial and continuous cover and closed vent system inspection and monitoring requirements?
 - k. § 60.5417b What are the continuous monitoring requirements for my control devices?
 - l. § 60.5420b What are my notification, reporting, and recordkeeping requirements?
 - m. § 60.5425b What parts of the General Provisions apply to me?
 - n. § 60.5430b What definitions apply to this subpart?
- S. NSPS Subpart OOOOb has been amended since promulgation and remains subject to further federal action. If federal legislation, rulemaking, or a court ruling invalidates all or part of Subpart OOOOb, the invalidated portions will no longer be applicable through this permit. Where a specific requirement is removed, waived, or otherwise explicitly rendered unnecessary in 40 CFR Part 60, Subpart OOOOb, that requirement is also waived or rendered unnecessary in this permit. If the emission limits underlying the legally and practically enforceable limits of Part 2, Section II.D are revised, those limits default to the minimum established in the revised rule. Further, in order to maintain consistency with EPA policy, ODEQ is staying enforcement of this subpart until a final decision is made at the federal level.
- T. The permittee shall comply with all applicable requirements set forth in NESHAP 40 CFR Part 63, including but not limited to, the following:
- 1. Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. [40 CFR §§63.11080 - 63.11100]
 - a. § 63.11081 Am I subject to the requirements in this subpart?
 - b. § 63.11082 What parts of my affected source does this subpart cover?
 - c. § 63.11083 When do I have to comply with this subpart?
 - d. The emission limitations and management practices of § 63.11086, § 63.11087, § 63.11088, and § 63.11089.
 - e. § 63.11092 What testing and monitoring requirements must I meet?
 - f. § 63.11093 What notifications must I submit and when?
 - g. § 63.11094 What are my recordkeeping requirements?
 - h. § 63.11095 What are my reporting requirements?

- i. § 63.11098 What parts of the General Provisions apply to me?
 - j. § 63.11100 What definitions apply to this subpart?
- 2. Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities.
[40 CFR §§63.11110 - 63.11132]
 - a. § 63.11110 What is the purpose of this subpart?
 - b. § 63.11111 Am I subject to the requirements in this subpart?
 - c. § 63.11112 What parts of my affected source does this subpart cover?
 - d. § 63.11113 When do I have to comply with this subpart?
 - e. § 63.11115 What are my general duties to minimize emissions?
 - f. § 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.
 - g. § 63.11124 What notifications must I submit and when?
 - h. § 63.11125 What are my recordkeeping requirements?
 - i. § 63.11126 What are my reporting requirements?
 - j. § 63.11130 What parts of the General Provisions apply to me?
 - k. § 63.11131 Who implements and enforces this subpart?
 - l. § 63.11132 What definitions apply to this subpart?

Recordkeeping

- U. The permittee shall maintain records of emissions, including monthly and facility-wide 12-month rolling totals of NO_x, CO, VOC, and HAP emissions, and any compliance demonstrations required by this permit. When an amine unit is present or the facility combusts or flares sour gas (gases containing more than 10 ppmv sulfur), the permittee shall also maintain records of SO₂ emissions, including monthly and facility-wide 12-month rolling totals of SO₂ emissions, and any compliance demonstrations required by this permit. An emissions record shall describe calculated emissions of regulated air pollutants from all emission units. This record shall include the emission unit identification number, control method used, operating hours, and other operating parameters as specified in specific conditions for each emission unit. [OAC 252:100-43]
- V. For the alternative method of compliance with the 12-month rolling total emission limits, the permittee shall maintain and update as necessary the base set of emission calculations. [OAC 252:100-43]
- W. The permittee shall keep documents demonstrating the sulfur content of any fuel burned per paragraphs J and K of this section. [OAC 252:100-43]
- X. The permittee shall maintain an equipment inventory. Such inventory shall be updated each time there is any change to any facility equipment (i.e., addition, removal, or replacement) that is subject to this permit, except for the fugitive components addressed in Section VII. The records shall include the equipment description, equipment serial or identification number, date of the change, description of the change, NSPS and/or NESHAP applicability, and a calculation of the potential to emit of the facility. A copy or

summary of this record shall be provided with any application. If equipment is being added subject to NSPS or NESHAP that has not undergone the initial compliance demonstration as required by 40 CFR §60.8, the notification shall include a date and time for such required demonstration. [OAC 252:100-43]

SECTION II. STORAGE TANKS

The following specific conditions apply to VOC storage tanks (including produced water storage tanks).

Emission Calculations

- A. To demonstrate compliance with Part 2, Section I of this permit, the permittee shall calculate actual emissions or the maximum projected actual emissions of VOC and HAP from all storage tanks with a capacity of 400 gallons or more that store VOCs (including produced water storage tanks). The permittee shall calculate emissions of VOC and HAP from these storage tanks based on actual or projected throughputs, the maximum allowed control efficiency in Appendix A of the GP-OGF, and AP-42 Chapter 7 and/or AQD approved software programs. Flash emission calculations shall follow the procedures presented in the AQD guidance documents, “VOC Emissions/Flashing Losses from Hydrocarbon Storage Tanks” and “Representative Sampling Guidance.” Storage tanks using vapor balancing during unloading shall include captured loading loss emissions in tank emissions or use the designated turnover factor K_N in working loss emissions calculations. [OAC 252:100-43]

Federally Enforceable Limits

- B. Emissions from a storage vessel affected facility as defined in 40 CFR Part 60 Subpart OOOO and OOOOa, as requested in the GP-OGF application or NOM, shall be limited to less than 6 TPY of VOC. Compliance shall be demonstrated at least monthly based on a 12-month rolling total. [OAC 252:100-7-15(d)(3) & 100-7-18(f)(2)]
- C. Averaging of facility-wide throughput across tanks at a storage vessel battery, constructed, modified, or reconstructed after November 16, 2020, and on or before December 6, 2022, which consists of two or more storage vessels, shall only be allowed if it meets all the design and operational criteria specified below: [§60.5365a(e)(3)]
1. The storage vessels must be manifolded together with piping such that all vapors are shared among the headspaces of the storage vessels;
 2. The storage vessels must be equipped with a closed vent system that is designed, operated, and maintained to route the vapors back to the process or to a control device; and
 3. The vapors collected in (1) above must be routed back to the process or to a control device that reduces VOC emissions by at least 95.0 percent.

- D. Emissions from a storage vessel affected facility as defined in 40 CFR Part 60 Subpart OOOOb, as requested in the GP-OGF application or NOM, shall be limited to less than 6 TPY of VOC and less than 20 TPY of methane. Compliance shall be demonstrated monthly as cumulative emissions from all storage vessels within the tank battery, with both limits based on a 12-month rolling total. Demonstration of compliance with the VOC and methane emission limits shall include the following:
1. A monthly quantitative throughput volume.
 2. The composition of tank contents and any process stream data (actual or representative consistent with DEQ policy as established by the Director) necessary to perform the calculations below.
 3. Emission calculation methods for working, breathing, and flashing emissions approved by the Director.
 4. Process operating parameters, including temperatures and pressures relied on in the compliance calculations.
 5. The method, if any, used to capture emissions, and divert emissions to a process and/or route emissions to a control device.
 6. 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.
- E. Applicants that elect to comply with the LPE limits of Subsection D through one or more of the following options shall meet these operational and parametric limits:
1. If using a nonassisted flare:
 - a. a closed vent system of sufficient design and capacity to ensure that all gases, vapors, and fumes from the storage vessels are routed to the flare.
 - b. a combustion destruction efficiency of at least 95%.
 - c. the flare shall meet the applicable requirements of Appendix A Section F.
 2. If using a nonassisted enclosed combustion device:
 - a. a closed vent system of sufficient design and capacity to ensure that all gases, vapors, and fumes from the storage vessels are routed to the combustor.
 - b. a combustion destruction efficiency of at least 95%.
 - c. the combustor shall meet the applicable requirements Appendix A Section F.
 - d. the maximum design capacity (MMBTU/hr) of the gases combusted as established by the manufacturer or operator during a performance test.
 3. If using a VRU:

- a. a closed vent system of sufficient design and capacity to ensure that all gases, vapors, and fumes from the storage vessels are routed to the process.
 - b. 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.
 4. 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 Subsection D.
- F. As an alternative method for compliance with the 12-month rolling total storage vessel affected facility emission limits, facilities can calculate maximum projected actual emissions for the tank based on specific oil, and gas, and water throughputs and hours of operation. The applicant then may use those calculations as the demonstration of compliance provided the throughputs and hours of operations (maintained on a monthly and 12-month rolling total) used in those calculations have not been exceeded and where no other physical or operational changes have occurred.
- G. Fugitive emissions are not required to be included in the compliance demonstration with the criteria pollutant limits of the cap, except for listed source categories under the major source definition. Fugitive emissions of HAP shall be included in the demonstration of compliance with the HAP limits of the cap in all cases. Fugitive emissions are not required to be included in the compliance demonstration with the FEL in B or the LPE in D.

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- H. For all storage tanks equipped with an external floating roof (EFR) and with a capacity of more than 40,000 gallons, and that are not subject to an NSPS standard, the permittee shall perform routine inspections of all seal closure devices at least once per calendar year; measure the secondary seal gap at least once per calendar year when the floating roof is equipped with a vapor-mounted primary seal; and maintain records of the above inspections and maintenance or other repairs. [OAC 252:100-43]
- I. Each storage vessel thief hatch shall be maintained and operated to ensure that the lid remains properly seated and sealed under normal operating conditions, including such times when working, standing/breathing, and flash emissions may be generated except during those times when it is necessary to use an opening as follows:
1. To add material to, or remove material from the storage vessel (this includes openings necessary to equalize or balance the internal pressure of the storage vessel following changes in the level of the material in the unit);
 2. To inspect or sample the material in the storage vessel; and
 3. To inspect, maintain, repair, or replace equipment located inside the storage vessel.

- J. VOC storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual storage conditions, except for petroleum or condensate stored, processed and/or treated at a drilling or production facility prior to lease custody transfer and except for methanol stored at drilling or production facilities, shall be equipped with a permanent submerged fill pipe, be bottom filled, or have a vapor recovery system installed.
[OAC 252:100-37-15 and OAC 252:100-39-41]
- K. VOC storage tanks constructed after December 28, 1974, with a capacity greater than 40,000 gallons storing a liquid with a vapor pressure of 1.5 psia or greater under actual storage conditions, except for petroleum or condensate stored, processed and/or treated at a drilling or production facility prior to lease custody transfer and except for methanol stored at drilling or production facilities, shall be a pressure vessel capable of maintaining working pressures that prevent the loss of VOC to the atmosphere, or shall be equipped with an external floating roof that meets the standards of OAC 252:100-37-15 (a)(1).
[OAC 252:100-37-15(a)]
- L. The permittee shall comply with all applicable requirements set forth in OAC 252:100-39-30.
1. Any petroleum liquid storage vessel operated under this permit which is equipped with an external floating roof, has a capacity greater than 40,000 gallons, and is located in Tulsa or Oklahoma County, is required to meet the additional requirements of OAC 252:100-39-30, Petroleum Liquid Storage including, but not limited to:
 - a. Standards of OAC 252:100-39-30(c)(1);
 - b. Monitoring requirements of OAC 252:100-39-30(c)(2), and;
 - c. Recordkeeping requirements of OAC 252:100-39-30(c)(3).
 2. These requirements do not apply to petroleum liquid storage vessels that:
 - a. Are used to store waxy, high pour point crude oil;
 - b. Have a capacity less than 422,675 gallons and are used to store produced crude oil or condensate prior to lease custody transfer;
 - c. Contain a petroleum liquid with a true vapor pressure less than 1.5 psia;
 - d. Contain a petroleum liquid with a true vapor pressure less than 4.0 psia, is of welded construction, and presently possesses a metallic-type shoe seal, a liquid-mounted foam seal, or a liquid-mounted liquid filled type seal;
 - e. Are of welded construction and are equipped with a metallic-type shoe primary seal and have a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal). [OAC 252:100-39-30(b)(2)]
- M. If a control device is used to reduce emissions, the permittee shall comply with the requirements specified in Appendix A of this Permit. [OAC 252:100-43]

Federal Regulations

- N. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including, but not limited to, the following:
1. Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. [40 CFR §§60.110 - 60.113]
 - a. § 60.110 Applicability and designation of affected facility.
 - b. § 60.111 Definitions.
 - c. § 60.112 Standard for volatile organic compounds (VOC).
 - d. § 60.113 Monitoring of operations.
 2. Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984. [40 CFR §§60.110a - 60.115a]
 - a. § 60.110a Applicability and designation of affected facility.
 - b. § 60.111a Definitions.
 - c. § 60.112a Standard for volatile organic compounds (VOC).
 - d. § 60.113a Testing and procedures.
 - e. § 60.114a Alternative means of emission limitation.
 - f. § 60.115a Monitoring of operations.
 3. Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 and On or Before October 4, 2023. [40 CFR §§60.110b - 60.117b]
 - a. § 60.110b Applicability and designation of affected facility.
 - b. § 60.111b Definitions.
 - c. § 60.112b Standard for volatile organic compounds (VOC).
 - d. § 60.113b Testing and procedures.
 - e. § 60.114b Alternative means of emission limitation.
 - f. § 60.115b Reporting and recordkeeping requirements.
 - g. § 60.116b Monitoring of operations.
 - h. § 60.117b Delegation of authority.
 4. Subpart Kc - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023. [40 CFR §§60.110c - 60.117c]
 - a. § 60.110c Applicability and designation of affected facility.
 - b. § 60.111c Definitions.

- c. § 60.112c Standard for volatile organic compounds (VOC).
 - d. § 60.113c Testing, monitoring, and inspection procedures.
 - e. § 60.114c Alternative means of emission limitation.
 - f. § 60.115c Recordkeeping requirements.
 - g. § 60.116c Reporting requirements.
 - h. § 60.117c Delegation of authority.
5. Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015.
[40 CFR §§60.5360 - 60.5430]
- a. §60.5360 What is the purpose of this subpart?
 - b. §60.5365 Am I subject to this subpart?
 - c. §60.5370 When must I comply with this subpart?
 - d. §60.5395 What standards apply to storage vessel affected facilities?
 - e. §60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
 - f. §60.5411 What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing materials from storage vessels, reciprocating compressors and centrifugal compressor wet seal degassing systems?
 - g. §60.5412 What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my storage vessel or centrifugal compressor affected facility?
 - h. §60.5413 What are the performance testing procedures for control devices used to demonstrate compliance at my storage vessel or centrifugal compressor affected facility?
 - i. §60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?
 - j. §60.5416 What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my storage vessel, centrifugal compressor and reciprocating compressor affected facilities?
 - k. §60.5417 What are the continuous control device monitoring requirements for my storage vessel or centrifugal compressor affected facility?
 - l. §60.5420 What are my notification, reporting, and recordkeeping requirements?
 - m. §60.5425 What part of the General Provisions apply to me?
 - n. §60.5430 What definitions apply to this subpart?

6. Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022.

[40 CFR §§60.5360a - 60.5439a]

- a. § 60.5360a What is the purpose of this subpart?
- b. § 60.5365a Am I subject to this subpart?
- c. § 60.5370a When must I comply with this subpart?
- d. § 60.5395a What VOC standards apply to storage vessel affected facilities?
- e. § 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
- f. § 60.5411a What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels?
- g. § 60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?
- h. § 60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?
- i. § 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
- j. § 60.5416a What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my centrifugal compressor, reciprocating compressor, pneumatic pump, and storage vessel affected facilities?
- k. § 60.5417a What are the continuous control device monitoring requirements for my centrifugal compressor and storage vessel affected facilities?
- l. § 60.5420a What are my notification, reporting, and recordkeeping requirements?
- m. § 60.5425a What parts of the General Provisions apply to me?
- n. § 60.5430a What definitions apply to this subpart?

7. Subpart OOOOb - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022. [40 CFR §§60.5360b - 60.5439b]
- a. § 60.5360b What is the purpose of this subpart?
 - b. § 60.5365b Am I subject to this subpart?
 - c. § 60.5370b When must I comply with this subpart?
 - d. § 60.5395b What GHG and VOC standards apply to storage vessel affected facilities?
 - e. § 60.5410b How do I demonstrate initial compliance with the standards for each of my affected facilities?
 - f. § 60.5411b What additional requirements must I meet to determine initial compliance for my covers and closed vent systems?
 - g. § 60.5412b What additional requirements must I meet for determining initial compliance of my control devices?
 - h. § 60.5413b What are the performance testing procedures for control devices?
 - i. § 60.5415b How do I demonstrate continuous compliance with the standards for each of my affected facilities?
 - j. § 60.5416b What are the initial and continuous cover and closed vent system inspection and monitoring requirements?
 - k. § 60.5417b What are the continuous monitoring requirements for my control devices?
 - l. § 60.5420b What are my notification, reporting, and recordkeeping requirements?
 - m. § 60.5425b What parts of the General Provisions apply to me?
 - n. § 60.5430b What definitions apply to this subpart?

- O. NSPS Subpart OOOOb has been amended since promulgation and remains subject to further federal action. If federal legislation, rulemaking, or a court ruling invalidates all or part of Subpart OOOOb, the invalidated portions will no longer be applicable through this permit. Where a specific requirement is removed, waived, or otherwise explicitly rendered unnecessary in 40 CFR Part 60, Subpart OOOOb, that requirement is also waived or rendered unnecessary in this permit. If the emission limits underlying the legally and practically enforceable limits of Part 2, Section II.D are revised, those limits default to the minimum established in the revised rule. Further, in order to maintain consistency with EPA policy, ODEQ is staying enforcement of this subpart until a final decision is made at the federal level.

Recordkeeping

- P. The permittee shall maintain records for all storage tanks with a capacity of 400 gallons or more that store VOC (as defined in OAC 252:100-1-3). The records shall include the tank identification number; date of manufacture; date of installation; tank capacity; type of tank; a description of the type of floating roof and seals if applicable; NSPS applicability;

whether equipped with a submerged fill pipe or vapor recovery system; and the type of liquid stored. [OAC 252:100-43]

- Q. The permittee shall maintain records of throughput and actual emissions or alternative throughput and maximum projected actual emissions calculations for each storage tank with a capacity of 400 gallons or more in accordance with Appendix E. [OAC 252:100-43]

SECTION III. VOC LOADING OPERATIONS

The following specific conditions apply to VOC loading operations.

Emission Calculations

- A. The permittee shall calculate actual emissions or the maximum projected actual emissions of VOC and HAP from loading operations to demonstrate compliance with Part 2, Section I of this permit. Emission calculations shall follow the procedures presented in the AQD guidance document, “Estimating Condensate and Crude Oil Loading Losses from Tank Trucks.” [OAC 252:100-43]

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- B. Each loading pipe handling a liquid with a vapor pressure of 1.5 psia or greater under actual storage conditions, except for petroleum or condensate stored, processed and/or treated at a drilling or production facility prior to lease custody transfer and except for methanol stored at drilling or production facilities, shall be equipped with a system for submerged filling of tank trucks or trailers which is installed and operated to maintain a 97% submergence factor. [OAC 252:100-37-16(b)]
- C. Loading operations at natural gas compressor stations are exempt from the requirements of 252:100-37-16(a) and (b). For the purposes of this section, natural 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, boosting, and transmission compressor stations. [OAC 252:100-37-16(c)(2)]
- D. If a control device is used to reduce emissions, the permittee shall comply with the requirements specified in Appendix A of this Permit. [OAC 252:100-43]

Federal Regulations

- E. The permittee shall comply with all applicable requirements set forth in NESHAP 40 CFR Part 63, including but not limited to, the following:

1. Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. [40 CFR §§63.11080 - 63.11100]
 - a. § 63.11081 Am I subject to the requirements in this subpart?
 - b. § 63.11082 What parts of my affected source does this subpart cover?
 - c. § 63.11083 When do I have to comply with this subpart?
 - d. The emission limitations and management practices of § 63.11086, § 63.11087, § 63.11088, and § 63.11089.
 - e. § 63.11092 What testing and monitoring requirements must I meet?
 - f. § 63.11093 What notifications must I submit and when?
 - g. § 63.11094 What are my recordkeeping requirements?
 - h. § 63.11095 What are my reporting requirements?
 - i. § 63.11098 What parts of the General Provisions apply to me?
 - j. § 63.11100 What definitions apply to this subpart?

Recordkeeping

- F. The permittee shall maintain records of throughput and actual emissions, or alternative throughput and maximum projected actual emissions calculations in accordance with Appendix E, for all loading operations. [OAC 252:100-43]

SECTION IV. COMBUSTION EQUIPMENT

The following specific conditions apply to combustion equipment.

Emission Calculations

- A. The permittee shall calculate actual emissions or the maximum projected actual emissions of NO_x, CO, and VOC from all combustion equipment, and calculate actual emissions or the maximum projected actual emissions of formaldehyde from engines, to demonstrate compliance with Part 2, Section I of this permit. For an engine, the emissions shall be calculated based on short-term limits (lb/hr) for each pollutant established in an application for an NOI to Construct, an application for an Authorization to Operate, or an NOM, times the actual hours of operation, and converted to tons. For all other combustion equipment, except flares and enclosed combustion devices, the emissions shall be calculated based on actual or projected hours of operation, maximum fired duty, and the emission factors for each pollutant established in the application or NOM, and converted to tons. For flares and enclosed combustion devices, the emissions shall be calculated based on heat input determined by any one of the following: (1) design capacity rating; (2) measured waste gas flow rate to the device; or (3) as calculated using the methodologies approved in Part 2 of the GP-OGF; and the emission factors for each pollutant established in the application or NOM, and converted to tons. [OAC 252:100-43]
- B. An emission factor considering add-on controls for formaldehyde is acceptable when testing demonstrates compliance with the CO limits. [OAC 252:100-43]

- C. Unless continuous operation (8,760 hours) is assumed for the calculation of actual emissions to demonstrate compliance with Part 2, Section I, the hours of operation of an engine or other combustion equipment shall be recorded with an hour meter, with a fuel meter recorded at least hourly, monitored and recorded manually each day, or electronic methods using measurements of parameters indicating total hours operated. If equipped with an hour meter or other similar measurement method, it must either be non-resettable or, if resettable, the date and hour each time the meter is reset must be maintained.
[OAC 252:100-43]

Engine Testing and Maintenance Requirements

- D. The permittee shall conduct an initial test of NO_x and CO emissions from any engine other than (1) an Emergency Use Engine, or (2) any engine equal to or less than 250 horsepower (hp). The initial test must be performed within 180 days of engine startup. This test may be counted as the first semi-annual test of an engine. Testing shall be conducted using EPA reference methods, if applicable, or a portable analyzer in accordance with a protocol meeting the requirements of the latest AQD “Portable Analyzer Guidance” document, or an equivalent method approved by AQD.
[OAC 252:100-43]
- E. For Class I facilities:
At least twice per calendar year, the permittee shall conduct tests of NO_x and CO emissions from any controlled engine greater than 250 hp. Testing shall be conducted using EPA reference methods, if applicable, or a portable analyzer in accordance with a protocol meeting the requirements of the latest AQD “Portable Analyzer Guidance” document, or an equivalent method approved by AQD. Testing is required for any engine that runs for more than 440 hours during a semi-annual period. Each semi-annual test shall be separated by at least 120 days. In the first year of operation, any engine started after March 31st only requires one test regardless of hours operated.
[OAC 252:100-43]
- F. For Class II facilities:
At least twice per calendar year, the permittee shall conduct tests of NO_x and CO emissions from any engine greater than 250 hp. Testing shall be conducted using EPA reference methods, if applicable, or a portable analyzer in accordance with a protocol meeting the requirements of the latest AQD “Portable Analyzer Guidance” document, or an equivalent method approved by AQD. Testing is required for any engine that runs for more than 440 hours during a semi-annual period. Each semi-annual test shall be separated by at least 120 days. In the first year of operation, any engine started after March 31st only requires one test regardless of hours operated. When two consecutive semi-annual tests show an uncontrolled engine to be in compliance with the emissions limitations shown in the permit, then the testing frequency may be reduced to annual testing. Upon any showing of non-compliance with emissions limitations or testing that indicates that emissions are within 10% of the emission limitations, the testing frequency shall revert to semi-annual.
[OAC 252:100-43]
- G. Four-stroke, rich-burn (4SRB) engines using NSCR catalyst shall be equipped with an Air to Fuel Ratio Controller (AFRC). The AFRC shall be inspected and maintained at least

once a month to ensure that the controller is functioning properly, is not in alarm mode, and is being operated in accordance with manufacturers' recommendations. Replacement of the oxygen sensor(s) is required every 2,200 operating hours or less, or in accordance with manufacturers' recommendations, and replacement shall be documented in accordance with Part 3, Section IV.A. A maintenance log of all AFRC inspections, periods of operation in alarm mode, and engine or AFRC maintenance shall be kept.

[OAC 252:100-43]

- H. If any engine tested is not in compliance with its hourly permit limits, the permittee shall make the necessary adjustments to bring the engine into compliance and an excess emissions report shall be filed in accordance with Part 3 Section III, of this permit.

Engine Addition, Modification, Reconstruction, or Replacement

- I. Addition, modification, reconstruction, or replacement of any engine is authorized under the following conditions.
1. The permittee shall send AQD an NOM within 15 days of the startup of the engine.
 2. The permittee shall comply with the emission limits cited in the NOM for that engine and those limitations shall become an enforceable part of the existing Authorization to Operate. The permittee shall include a copy of the NOM kept electronically or as a hard copy, either on-site, at a nearby manned facility, or at the nearest field office per the recordkeeping requirements of Part 3, Section IV.A.
 3. The engine is subject to initial and periodic testing requirements in accordance with Part 2, Section IV of this permit.

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- J. All fuel-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall ensure, based on manufacturer's data and good engineering practices, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. The permittee shall maintain maintenance records on engines to document compliance. [OAC 252:100-37-36]
- K. Each engine shall have a permanent identification plate attached that shows the make, model number, and serial number. [OAC 252:100-43]
- L. An Emergency Use Engine shall be equipped with a non-resettable hour meter. The permittee shall maintain a record of the operating hours for each Emergency Use Engine. [OAC 252:100-43]
- M. If a control device is used to reduce emissions, the permittee shall comply with the requirements specified in Appendix A of this Permit. [OAC 252:100-43]

Federal Regulations

- N. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including but not limited to, the following:
1. Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. [40 CFR §§60.40c - 60.48c]
 - a. §60.40c Applicability and delegation of authority
 - b. §60.41c Definitions
 - c. §60.42c Standards for sulfur dioxide (SO₂)
 - d. §60.43c Standards for particulate matter (PM)
 - e. §60.44c Compliance and performance test methods and procedures for sulfur dioxide
 - f. §60.45c Compliance and performance test methods and procedures for particulate matter
 - g. §60.46c Emission monitoring for sulfur dioxide
 - h. §60.47c Emission monitoring for particulate matter
 - i. §60.48c Reporting and recordkeeping requirements
 2. Subpart GG - Standards of Performance for Stationary Gas Turbines. [40 CFR §§60.330 - §60.335]
 - a. §60.330 Applicability and designation of affected facility
 - b. §60.331 Definitions
 - c. §60.332 Standards for nitrogen oxides
 - d. §60.333 Standards for sulfur dioxides
 - e. §60.334 Monitoring of operations
 - f. §60.335 Test methods and procedures
 3. Subpart IIII – Standards of Performance for Stationary Compressor Ignition Internal Combustion Engines. [40 CFR §§60.4200 - 60.4219]
 - a. §60.4200 Am I subject to this subpart
 - b. §60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?
 - c. §60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?
 - d. §60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?
 - e. §60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - f. §60.4205 What emissions standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - g. §60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

- h. §60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?
 - i. §60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model years?
 - j. §60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
 - k. §60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?
 - l. §60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?
 - m. §60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?
 - n. §60.4213 What test methods or other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?
 - o. §60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
 - p. §60.4217 What engine standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?
 - q. §60.4218 What parts of the General Provisions apply to me?
 - r. §60.4219 What definitions apply to this subpart?
4. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI-ICE). [40 CFR §§60.4230 - 60.4246]
- a. §60.4230 Am I subject to this subpart?
 - b. §60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?
 - c. §60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?
 - d. §60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
 - e. §60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?
 - f. §60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?
 - g. §60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?
 - h. §60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

- i. §60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤ 19 KW (25 HP) or a manufacturer of equipment containing such engines?
 - j. §60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines > 19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?
 - k. §60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines > 19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?
 - l. §60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?
 - m. §60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?
 - n. §60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - o. §60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
 - p. §60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - q. §60.4246 What parts of the General Provisions apply to me?
 - r. §60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?
 - s. § 60.4248 What definitions apply to this subpart?
5. Subpart KKKK - Standards of Performance for Stationary Combustion Turbines.
[40 CFR §§60.4300 - 60.4420]
- a. §60.4300 What is the purpose of this subpart
 - b. §60.4305 Does this subpart apply to my stationary combustion turbine
 - c. §60.4310 What type of operations are exempt from these standards of performance
 - d. §60.4315 What pollutants are regulated by this subpart
 - e. §60.4320 What emissions limits must I meet for nitrogen oxides (NO_x)
 - f. §60.4325 What emissions limits must I meet for NO_x if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?
 - g. §60.4330 What emission limits must I meet for sulfur dioxide (SO₂)
 - h. §60.4333 What are my general requirements for complying with this subpart?

- i. §60.4335 What are my general requirements for complying with this subpart
 - j. §60.4335 How do I demonstrate compliance for NO_x if I use water or steam injection
 - k. §60.4340 How do I demonstrate compliance for NO_x if I do not use water or steam injection
 - l. §60.4345 What are the requirements for the continuous emissions monitoring system equipment, if I choose to use this option?
 - m. §60.4350 How to I use data from the continuous emission monitoring equipment to identify excess emissions?
 - n. §60.4355 How to I establish and document a proper parameter monitoring plan
 - o. §60.4360 How to I determine the total sulfur content of the turbines' combustion fuel?
 - p. §60.4365 How can I be exempt for monitoring the total sulfur content of the fuel?
 - q. §60.4370 How often must I determine the sulfur content of the fuel?
 - r. §60.4375 What reports must I submit?
 - s. §60.4380 How are excess emissions and monitor downtime for NO_x?
 - t. §60.4385 How are excess emissions and monitoring downtime defined for SO₂?
 - u. §60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?
 - v. §60.4395 When must I submit my reports?
 - w. §60.4400 How do I conduct the initial and subsequent performance tests, regarding NO_x?
 - x. §60.4405 How do I perform the initial performance test if I have chosen to install a NO_x-diluent CEMS?
 - y. §60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters?
 - z. §60.4415 How do I conduct the initial and subsequent performance tests for sulfur?
 - aa. §60.4420 What definitions apply to this subpart?
6. Subpart KKKKa - Standards of Performance for Stationary Combustion Turbines.
[40 CFR §§60.4300a - 60.4420a]
- a. § 60.4300a What is the purpose of this subpart?
 - b. § 60.4305a Does this subpart apply to my stationary combustion turbine?
 - c. § 60.4310a What stationary combustion turbines are not subject to this subpart?
 - d. § 60.4315a What pollutants are regulated by this subpart?
 - e. § 60.4320a What NO_x emissions standard must I meet?
 - f. § 60.4325a What emission limit must I meet for NO_x if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

- g. § 60.4330a What SO₂ emissions standard must I meet?
 - h. § 60.4331a What are the requirements for operating a stationary temporary combustion turbine?
 - i. § 60.4333a What are my general requirements for complying with this subpart?
 - j. § 60.4335a How do I demonstrate compliance with my NO_x emissions standard without using a NO_x CEMS if I use water or steam injection?
 - k. § 60.4340a How do I demonstrate compliance with my NO_x emissions standard without using a NO_x CEMS if I do not use water or steam injection?
 - l. § 60.4342a How do I monitor NO_x control operating parameters?
 - m. § 60.4345a How do I demonstrate compliance with my NO_x emissions standard using a NO_x CEMS?
 - n. § 60.4350a How do I use the NO_x CEMS data to determine excess emissions?
 - o. § 60.4360a How do I use fuel sulfur analysis to determine the total sulfur content of the fuel combusted in my stationary combustion turbine?
 - p. § 60.4370a How frequently must I determine the fuel sulfur content?
 - q. § 60.4372a How can I demonstrate compliance with my SO₂ emissions standard using records of the fuel sulfur content?
 - r. § 60.4374a How do I demonstrate compliance with my SO₂ emissions standard and determine excess emissions using a SO₂ CEMS?
 - s. § 60.4375a What reports must I submit?
 - t. § 60.4380a How are NO_x excess emissions and monitor downtime reported?
 - u. § 60.4385a How are SO₂ excess emissions and monitor downtime reported?
 - v. § 60.4390a What records must I maintain?
 - w. § 60.4395a When must I submit my reports?
 - x. § 60.4400a How do I conduct performance tests to demonstrate compliance with my NO_x emissions standard if I do not have a NO_x CEMS?
 - y. § 60.4405a How do I conduct a performance test if I use a NO_x CEMS?
 - z. § 60.4415a How do I conduct performance tests to demonstrate compliance with my SO₂ emissions standard?
 - aa. § 60.4416a What parts of the general provisions apply to my affected EGU?
 - bb. § 60.4417a Who implements and enforces this subpart?
 - cc. § 60.4420a What definitions apply to this subpart?
- O. The permittee shall comply with all applicable requirements set forth in NESHAP 40 CFR Part 63, including but not limited to, the following:
- 1. Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).
[40 CFR §§63.6580 - 63.6675]

- a. § 63.6580 What is the purpose of subpart ZZZZ?
- b. § 63.6585 Am I subject to this subpart?
- c. § 63.6590 What parts of my plant does this subpart cover?
- d. § 63.6595 When do I have to comply with this subpart?
- e. § 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
- f. § 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
- g. § 63.6605 What are my general requirements for complying with this subpart?
- h. § 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
- i. § 63.6615 When must I conduct subsequent performance tests?
- j. § 63.6620 What performance tests and other procedures must I use?
- k. § 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
- l. § 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
- m. § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- n. § 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
- o. § 63.6645 What notifications must I submit and when?
- p. § 63.6650 What reports must I submit and when?
- q. § 63.6655 What records must I keep?
- r. § 63.6660 In what form and how long must I keep my records?
- s. § 63.6665 What parts of the General Provisions apply to me?
- t. § 63.6670 Who implements and enforces this subpart?
- u. § 63.6675 What definitions apply to this subpart?

Recordkeeping

- P. The permittee shall maintain a record of any malfunction that prevents semi-annual testing of NO_x and CO emissions and notify AQD within 30 days of the end of the semi-annual period of the malfunction that prevented testing. [OAC 252:100-43]
- Q. The permittee shall keep records of the actual hours of operation, in accordance with the methods in Part 2, Section IV.C for any engine or other combustion equipment for which actual hours of operation, instead of continuous operation, are used to calculate emissions. [OAC 252:100-43]

- R. The permittee shall keep records that document each engine's maximum horsepower at International Organization for Standardization (ISO) or manufacturer's standard conditions and maximum RPM, and any de-rating factors used to determine a site-rated maximum horsepower (e.g., site ambient conditions, jacket water temperature, compression load limitations, speed limitations of engine or driven equipment, etc.). [OAC 252:100-43]
- S. The permittee shall maintain records of actual emissions or maximum projected actual emissions calculations for all combustion equipment. [OAC 252:100-43]

SECTION V. GLYCOL DEHYDRATION UNIT PROCESS VENT

The following specific conditions apply to emissions from glycol dehydration unit process vents.

Emission Calculations

- A. The permittee shall calculate actual emissions or the maximum projected actual emissions of VOC and HAP from glycol dehydration process vents to demonstrate compliance with Part 2, Section I.A of this permit. Estimates of emissions of VOC and HAP from any rich glycol flash tank vents or glycol regenerator still vents shall be calculated using either the GRI-GLYCalc program (Version 4.0 or later), a process simulator program, or the Atmospheric Rich/Lean (ARL) Method. [OAC 252:100-7 & 100-43]
1. If the unit is equipped with a condenser, the condenser temperature in the calculation of emissions shall be 100°F or higher.
 2. The emissions should be based on the potential to emit by assuming continuous operation, the dry gas flow rate, an extended wet gas analysis, the normal process operating temperature and pressure, the expected removal efficiency of any control device, and the maximum pump rate of the lean glycol circulation pump.
 3. The dry gas flow rate shall be based on one of the following:
 - a. The maximum design dry gas rate for the dehydrator unit; or
 - b. The maximum facility dry gas rate based on an inherent process limitation such as compressor horsepower or capacity limitations; or
 - c. The maximum facility dry gas rate based on an inherent limit on gas production; or
 - d. The maximum calendar year average dry gas rate for the last 2 years plus a 20% safety factor.
 4. Specific requirements for control devices and allowed control efficiencies are found in Appendix A of this Permit. [OAC 252:100-43]
- B. For facilities that have total potential HAP emissions from all dehydrator units, individual or combined, above 80% of major source levels, based on the extended wet gas analysis used in the application for an NOI to Construct, an application for an Authorization to Operate, or an NOM, the permittee shall sample and perform an extended wet gas analysis

at least once each year for calculating compliance with the permit HAP limits per the procedures in Subsection A of this Section. [OAC 252:100-43]

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- C. If a control device is used to reduce emissions, the permittee shall comply with the requirements specified in Appendix A of this Permit. [OAC 252:100-43]

Federal Regulations

- D. The permittee shall comply with all applicable requirements set forth in NESHAP 40 CFR Part 63, including but not limited to, the following:
1. Subpart HH - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. [40 CFR §§63.760 - 63.775]
 - a. §63.760 Applicability and designation of affected source
 - b. §63.761 Definitions
 - c. §63.764 General standards
 - d. §63.765 Glycol dehydration unit process vents standards
 - e. §63.771 Control equipment requirements
 - f. §63.772 Test methods, compliance procedures, and compliance demonstrations
 - g. §63.773 Inspection and monitoring requirements
 - h. §63.774 Recordkeeping requirements
 - i. §63.775 Reporting requirements
 - j. §63.776 Implementation and enforcement
 - k. §63.777 Alternate means of emission limitation

Recordkeeping

- E. The permittee shall keep records demonstrating the method and data used for determining the maximum wet gas rate used to calculate the actual emissions or the maximum projected actual emissions from a glycol dehydrator per Part 2, Section V.A.; records of any required extended wet gas analysis; and records of the GRI-GLYCalc printout or other emission calculation methods, including the requirements of Appendix A. [OAC 252:100-43]

SECTION VI. AMINE UNITS

The following specific conditions apply to emissions from amine units and regenerator still vents.

Emission Calculations

- A. The permittee shall calculate actual emissions or the maximum projected actual emissions of VOC and HAPS from rich amine flash tank and regenerator still vents to demonstrate compliance with Part 2, Section I.A of this permit. The emissions should be based on the

potential to emit by assuming continuous operation, the gas flow rate, an extended gas analysis or natural gas liquid analysis, the normal process operating temperatures and pressures, and the maximum pump rate of the lean amine circulation pump.

1. The gas flow rate shall be based on one of the following:
 - a. The maximum design gas rate for the amine unit; or
 - b. The maximum facility gas rate based on an inherent process limitation such as compressor horsepower or capacity limitations; or
 - c. The maximum facility gas rate based on an inherent limit on gas production; or
 - d. The maximum average gas rate for the last 2 years plus a 20% safety factor.
2. Specific requirements for control devices and allowed control efficiencies are found in Appendix A of this Permit. [OAC 252:100-43]

Testing Requirements

- B. The permittee shall conduct testing, using acceptable methods, of the amine unit inlet natural gas H₂S concentration at least quarterly to ensure the H₂S concentration is 4 ppmv or less.

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- C. Emissions from the rich amine flash tank shall be routed to a thermal device with a combustion efficiency of 95%, to the facility inlet, or to the fuel gas system. Emissions from the amine unit regenerator still vent are to be routed to a thermal device with a combustion efficiency of 95%. [OAC 252:100-31-26(1)(A)]
- D. The owner or operator shall install, maintain, and operate an alarm system that will signal a malfunction for all thermal devices used to control H₂S emissions from petroleum and natural gas processing facilities. [OAC 252:100-31-26(1)(B)]
- E. If a control device is used to reduce emissions, the permittee shall comply with the requirements specified in Appendix A of this Permit. [OAC 252:100-43]

Federal Regulations

- F. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including but not limited to, the following:
 1. Subpart LLL – Standards of Performance for SO₂ Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. [40 CFR §§60.640 - 60.648]

- a. §60.640 Applicability and designation of affected facilities
 - b. §60.641 Definitions
 - c. §60.642 Standards for sulfur dioxide
 - d. §60.644 Test methods and procedures
 - e. §60.646 Monitoring of emissions and operations
 - f. §60.647 Recordkeeping and reporting requirements
 - g. §60.648 Optional procedure for measuring hydrogen sulfide in acid gas – Tutwiler Procedure
2. Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015.
[40 CFR §§60.5360 - 60.5430]
- a. §60.5360 What is the purpose of this subpart?
 - b. §60.5365 Am I subject to this subpart?
 - c. §60.5370 When must I comply with this subpart?
 - d. §60.5405 What standards apply to sweetening units at onshore natural gas processing plants?
 - e. §60.5406 What test methods and procedures must I use for my sweetening units affected facilities at onshore natural gas processing plants
 - f. §60.5407 What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?
 - g. § 60.5408 What is an optional procedure for measuring hydrogen sulfide in acid gas-Tutwiler Procedure?
 - h. §60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
 - i. §60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?
 - j. §60.5420 What are my notification, reporting and recordkeeping requirements?
 - k. §60.5423 What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?
 - l. §60.5425 What part of the General Provisions apply to me?
 - m. §60.5430 What definitions apply to this subpart

3. Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022.

[40 CFR §§60.5360a - 60.5439a]

- a. § 60.5360a What is the purpose of this subpart?
- b. § 60.5365a Am I subject to this subpart?
- c. § 60.5370a When must I comply with this subpart?
- d. § 60.5405a What standards apply to sweetening unit affected facilities?
- e. § 60.5406a What test methods and procedures must I use for my sweetening unit affected facilities?
- f. § 60.5407a What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities?
- g. § 60.5408a What is an optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure?
- h. § 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
- i. § 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
- j. § 60.5420a What are my notification, reporting, and recordkeeping requirements?
- k. § 60.5423a What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities?
- l. § 60.5425a What parts of the General Provisions apply to me?
- m. § 60.5430a What definitions apply to this subpart?

4. Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022.

[40 CFR §§60.5360b - 60.5439b]

- a. § 60.5360b What is the purpose of this subpart?
- b. § 60.5365b Am I subject to this subpart?
- c. § 60.5370b When must I comply with this subpart?
- d. § 60.5405b What standards apply to sweetening unit affected facilities?
- e. § 60.5406b What test methods and procedures must I use for my sweetening unit affected facilities?

- f. § 60.5407b What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities?
 - g. § 60.5408b What is an optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure?
 - h. § 60.5410b How do I demonstrate initial compliance with the standards for each of my affected facilities?
 - i. § 60.5415b How do I demonstrate continuous compliance with the standards for each of my affected facilities?
 - j. § 60.5420b What are my notification, reporting, and recordkeeping requirements?
 - k. § 60.5423b What are my additional recordkeeping and reporting requirements for sweetening unit affected facilities?
 - l. § 60.5425b What parts of the General Provisions apply to me?
 - m. § 60.5430b What definitions apply to this subpart?
- G. NSPS Subpart OOOOb has been amended since promulgation and remains subject to further federal action. If federal legislation, rulemaking, or a court ruling invalidates all or part of Subpart OOOOb, the invalidated portions will no longer be applicable through this permit. Where a specific requirement is removed, waived, or otherwise explicitly rendered unnecessary in 40 CFR Part 60, Subpart OOOOb, that requirement is also waived or rendered unnecessary in this permit. If the emission limits underlying the legally and practically enforceable limits of Part 2, Section II.D are revised, those limits default to the minimum established in the revised rule. Further, in order to maintain consistency with EPA policy, ODEQ is staying enforcement of this subpart until a final decision is made at the federal level.

Recordkeeping

- H. The permittee shall keep records demonstrating the method and data used for determining the maximum wet gas rate used to calculate the actual emissions or the maximum projected actual emissions from an amine unit per Part 2, Section VI.A.; records of any required extended gas analysis; and records of the AMINE-Calc Program printout or other emission calculation methods including the requirements of Appendix A of this Permit.
- [OAC 252:100-31]

SECTION VII. FUGITIVE EMISSION SOURCES

The following specific conditions apply to fugitive VOC emission sources.

Emission Calculations

- A. For any facility that has a total petroleum storage capacity exceeding 300,000 barrels or meets the affected facility definition of NSPS Subparts K or Ka (including existing tanks), the permittee shall calculate actual emissions or the maximum projected actual emissions of VOC from fugitive emission sources to demonstrate compliance with Part 2, Section 1.A of this permit. Emissions of VOCs from fugitive sources shall be calculated using the factors in Table 2-4 (Oil and Gas Production Operations) of EPA's 1995 Protocol for

Equipment Leak Emission Estimates (EPA-453/R-95-017) or other methods approved by DEQ. [OAC 252:100-43]

Federal Regulations

- B. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including but not limited to, the following:
1. Subpart KKK - Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. [40 CFR §§60.630 – 60.636]
 - a. §60.630 Applicability and designation of affected facilities
 - b. §60.631 Definitions
 - c. §60.632 Standards
 - d. §60.633 Exceptions
 - e. §60.634 Alternate means of emission limitations
 - f. §60.635 Recordkeeping requirements
 - g. §60.636 Reporting requirements
 2. Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015. [40 CFR §§60.5360 - 60.5430]
 - a. §60.5360 What is the purpose of this subpart?
 - b. §60.5365 Am I subject to this subpart?
 - c. §60.5370 When must I comply with this subpart?
 - d. §60.5400 What equipment leak standards apply to affected facilities at onshore gas processing plants?
 - e. §60.5401 What are the exceptions to the equipment leak standards for affected facilities at onshore gas processing plants?
 - f. §60.5402 What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?
 - g. §60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
 - h. §60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?

- i. §60.5420 What are my notification, reporting and recordkeeping requirements?
 - j. §60.5421 What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
 - k. §60.5422 What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?
 - l. §60.5425 What part of the General Provisions apply to me?
 - m. §60.5430 What definitions apply to this subpart?
3. Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022.
[40 CFR §§60.5360a - 60.5439a]
- a. §60.5360a What is the purpose of this subpart
 - b. §60.5365a Am I subject to this subpart
 - c. §60.5370a When must I comply with this subpart
 - d. § 60.5397a What fugitive emissions GHG and VOC standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station?
 - e. § 60.5398a What are the alternative means of emission limitations for GHG and VOC from well completions, reciprocating compressors, the collection of fugitive emissions components at a well site and the collection of fugitive emissions components at a compressor station?
 - f. § 60.5399a What alternative fugitive emissions standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station: Equivalency with state, local, and tribal programs?
 - g. § 60.5400a What equipment leak GHG and VOC standards apply to affected facilities at an onshore natural gas processing plant?
 - h. § 60.5401a What are the exceptions to the equipment leak GHG and VOC standards for affected facilities at onshore natural gas processing plants?
 - i. § 60.5402a What are the alternative means of emission limitations for GHG and VOC equipment leaks from onshore natural gas processing plants?
 - j. §60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?

- k. §60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
 - l. §60.5420a What are my notification, reporting, and recordkeeping requirements?
 - m. §60.5421a What are my additional recordkeeping requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
 - n. §60.5422a What are my additional reporting requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
 - o. §60.5425a What part of the General Provisions apply to me?
 - p. §60.5430a What definitions apply to this subpart?
4. Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022. [40 CFR §§60.5360b - 60.5439b]
- a. § 60.5360b What is the purpose of this subpart?
 - b. § 60.5365b Am I subject to this subpart?
 - c. § 60.5370b When must I comply with this subpart?
 - d. § 60.5397b What GHG and VOC standards apply to fugitive emissions components affected facilities?
 - e. § 60.5398b What alternative GHG and VOC standards apply to fugitive emissions components affected facilities and what inspection and monitoring requirements apply to covers and closed vent systems when using an alternative technology?
 - f. § 60.5399b What are the alternative means of emission limitations for GHG and VOC emissions from well completions, liquids unloading operations, centrifugal compressors, reciprocating compressors, fugitive emissions components, and process unit equipment affected facilities; and what are the alternative fugitive emissions standards based on State, local, and Tribal programs?
 - g. § 60.5400b What GHG and VOC standards apply to process unit equipment affected facilities?
 - h. § 60.5401b What are the alternative GHG and VOC standards for process unit equipment affected facilities?
 - i. § 60.5402b What are the exceptions to the GHG and VOC standards for process unit equipment affected facilities?
 - j. § 60.5403b What test methods and procedures must I use for my process unit equipment affected facilities?
 - k. § 60.5410b How do I demonstrate initial compliance with the standards for each of my affected facilities?

- l. § 60.5415b How do I demonstrate continuous compliance with the standards for each of my affected facilities?
 - m. § 60.5416b What are the initial and continuous cover and closed vent system inspection and monitoring requirements?
 - n. § 60.5420b What are my notification, reporting, and recordkeeping requirements?
 - o. § 60.5421b What are my additional recordkeeping requirements for process unit equipment affected facilities?
 - p. § 60.5422b What are my additional reporting requirements for process unit equipment affected facilities?
 - q. § 60.5424b What are my additional recordkeeping and reporting requirements if I comply with the alternative GHG and VOC standards for fugitive emissions components affected facilities and covers and closed vent systems?
 - r. § 60.5425b What parts of the General Provisions apply to me?
 - s. § 60.5430b What definitions apply to this subpart?
- C. NSPS Subpart OOOOb has been amended since promulgation and remains subject to further federal action. If federal legislation, rulemaking, or a court ruling invalidates all or part of Subpart OOOOb, the invalidated portions will no longer be applicable through this permit. Where a specific requirement is removed, waived, or otherwise explicitly rendered unnecessary in 40 CFR Part 60, Subpart OOOOb, that requirement is also waived or rendered unnecessary in this permit. If the emission limits underlying the legally and practically enforceable limits of Part 2, Section II.D are revised, those limits default to the minimum established in the revised rule. Further, in order to maintain consistency with EPA policy, ODEQ is staying enforcement of this subpart until a final decision is made at the federal level.
- D. The permittee shall comply with all applicable requirements set forth in NESHAP 40 CFR Part 63, including but not limited to, the following:
- 1. Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. [40 CFR §§63.11080 - 63.11100]
 - a. § 63.11081 Am I subject to the requirements in this subpart?
 - b. § 63.11082 What parts of my affected source does this subpart cover?
 - c. § 63.11083 When do I have to comply with this subpart?
 - d. The emission limitations and management practices of § 63.11086, § 63.11087, § 63.11088, and § 63.11089.
 - e. § 63.11092 What testing and monitoring requirements must I meet?
 - f. § 63.11093 What notifications must I submit and when?
 - g. § 63.11094 What are my recordkeeping requirements?
 - h. § 63.11095 What are my reporting requirements?
 - i. § 63.11098 What parts of the General Provisions apply to me?
 - j. § 63.11100 What definitions apply to this subpart?

Recordkeeping

- E. The permittee shall maintain an approximate inventory record of fugitive emission sources at the facility. The record shall include the material handled for each fugitive source group, along with the following data sets for each fugitive component type: service (gas, heavy oil, light oil, and water/oil), component count, emission factor, and VOC content in weight percent. [OAC 252:100-43]
- F. If required, the permittee shall maintain records of actual emissions or maximum projected actual emissions calculations for all fugitive emission sources. [OAC 252:100-43]

SECTION VIII. OTHER PROCESS EQUIPMENT

The following specific conditions apply to other process equipment not previously listed.

Emission Calculations

- A. To demonstrate compliance with Part 2, Section I of this permit, the permittee shall calculate actual emissions or the maximum projected actual emissions of VOC and HAP from all process equipment. The permittee shall calculate emissions of VOC and HAP based on actual or projected actual throughputs, the maximum allowed control efficiency in Appendix A of the GP-OGF, and AQD approved software programs or mass balance equations. Flash emission calculations shall follow the procedures presented in the AQD guidance documents, "VOC Emissions/Flashing Losses from Hydrocarbon Storage Tanks" and "Representative Sampling Guidance." [OAC 252:100-43]

Federal Regulations

- B. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including but not limited to, the following:
1. Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015.
[40 CFR §§60.5360 - 60.5430]
 - a. §60.5360 What is the purpose of this subpart?
 - b. §60.5365 Am I subject to this subpart?
 - c. §60.5370 When must I comply with this subpart?
 - d. §60.5375 What standards apply to gas well affected facilities?
 - e. §60.5380 What standards apply to centrifugal compressor affected facilities?
 - f. §60.5385 What standards apply to reciprocating compressor affected facilities?
 - g. §60.5390 What standards apply to pneumatic controller affected facilities?

- h. §60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?
 - i. §60.5411 What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing materials from storage vessels, reciprocating compressors and centrifugal compressor wet seal degassing systems?
 - j. §60.5412 What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my storage vessel or centrifugal compressor affected facility?
 - k. §60.5413 What are the performance testing procedures for control devices used to demonstrate compliance at my storage vessel or centrifugal compressor affected facility?
 - l. §60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?
 - m. §60.5416 What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my storage vessel, centrifugal compressor and reciprocating compressor affected facilities?
 - n. §60.5417 What are the continuous control device monitoring requirements for my storage vessel or centrifugal compressor affected facility?
 - o. §60.5420 What are my notification, reporting, and recordkeeping requirements?
 - p. §60.5425 What part of the General Provisions apply to me?
 - q. §60.5430 What definitions apply to this subpart?
2. Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022.
- [40 CFR §§60.5360a - 60.5439a]
- a. § 60.5360a What is the purpose of this subpart?
 - b. § 60.5365a Am I subject to this subpart?
 - c. § 60.5370a When must I comply with this subpart?
 - d. § 60.5371a What standards apply to super-emitter events?
 - e. § 60.5375a What GHG and VOC standards apply to well affected facilities?
 - f. § 60.5380a What GHG and VOC standards apply to centrifugal compressor affected facilities?
 - g. § 60.5385a What GHG and VOC standards apply to reciprocating compressor affected facilities?

- h. § 60.5390a What GHG and VOC standards apply to pneumatic controller affected facilities?
 - i. § 60.5393a What GHG and VOC standards apply to pneumatic pump affected facilities?
 - j. § 60.5410a How do I demonstrate initial compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, collection of fugitive emissions components at a compressor station, and equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
 - k. § 60.5411a What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing emissions from centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels?
 - l. § 60.5412a What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my centrifugal compressor, and storage vessel affected facilities?
 - m. § 60.5413a What are the performance testing procedures for control devices used to demonstrate compliance at my centrifugal compressor and storage vessel affected facilities?
 - n. § 60.5415a How do I demonstrate continuous compliance with the standards for my well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, collection of fugitive emissions components at a well site, and collection of fugitive emissions components at a compressor station affected facilities, equipment leaks at onshore natural gas processing plants and sweetening unit affected facilities?
 - o. § 60.5416a What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my centrifugal compressor, reciprocating compressor, pneumatic pump, and storage vessel affected facilities?
 - p. § 60.5417a What are the continuous control device monitoring requirements for my centrifugal compressor and storage vessel affected facilities?
 - q. § 60.5420a What are my notification, reporting, and recordkeeping requirements?
 - r. § 60.5425a What parts of the General Provisions apply to me?
 - s. § 60.5430a What definitions apply to this subpart?
3. Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022. [40 CFR §§60.5360b - 60.5439b]
- a. § 60.5360b What is the purpose of this subpart?
 - b. § 60.5365b Am I subject to this subpart?

- c. § 60.5370b When must I comply with this subpart?
- d. § 60.5371b What GHG and VOC standards apply to super-emitter events?
- e. § 60.5375b What GHG and VOC standards apply to well completions at well affected facilities?
- f. § 60.5376b What GHG and VOC standards apply to gas well liquids unloading operations at well affected facilities?
- g. § 60.5377b What GHG and VOC standards apply to associated gas wells at well affected facilities?
- h. § 60.5380b What GHG and VOC standards apply to centrifugal compressor affected facilities?
- i. § 60.5385b What GHG and VOC standards apply to reciprocating compressor affected facilities?
- j. § 60.5386b What test methods and procedures must I use for my centrifugal compressor and reciprocating compressor affected facilities?
- k. § 60.5390b What GHG and VOC standards apply to process controller affected facilities?
- l. § 60.5393b What GHG and VOC standards apply to pump affected facilities?
- m. § 60.5410b How do I demonstrate initial compliance with the standards for each of my affected facilities?
- n. § 60.5411b What additional requirements must I meet to determine initial compliance for my covers and closed vent systems?
- o. § 60.5412b What additional requirements must I meet for determining initial compliance of my control devices?
- p. § 60.5413b What are the performance testing procedures for control devices?
- q. § 60.5415b How do I demonstrate continuous compliance with the standards for each of my affected facilities?
- r. § 60.5416b What are the initial and continuous cover and closed vent system inspection and monitoring requirements?
- s. § 60.5417b What are the continuous monitoring requirements for my control devices?
- t. § 60.5420b What are my notification, reporting, and recordkeeping requirements?
- u. § 60.5424b What are my additional recordkeeping and reporting requirements if I comply with the alternative GHG and VOC standards for fugitive emissions components affected facilities and covers and closed vent systems?
- v. § 60.5425b What parts of the General Provisions apply to me?
- w. § 60.5430b What definitions apply to this subpart?

C. NSPS Subpart OOOOb has been amended since promulgation and remains subject to further federal action. If federal legislation, rulemaking, or a court ruling invalidates all or part of Subpart OOOOb, the invalidated portions will no longer be applicable through this permit. Where a specific requirement is removed, waived, or otherwise explicitly rendered

unnecessary in 40 CFR Part 60, Subpart OOOOb, that requirement is also waived or rendered unnecessary in this permit. If the emission limits underlying the legally and practically enforceable limits of Part 2, Section II.D are revised, those limits default to the minimum established in the revised rule. Further, in order to maintain consistency with EPA policy, ODEQ is staying enforcement of this subpart until a final decision is made at the federal level.

Recordkeeping

- D. The permittee shall maintain records of throughput and actual emissions, or alternative throughput and maximum projected actual emissions calculations in accordance with Appendix E, for each process equipment. [OAC 252:100-43]

SECTION IX. MSS

The following specific conditions apply to all MSS activities.

Emission Calculations

- A. Fugitive MSS are required to be included for any facility with equipment that meets the definition of affected facility in NSPS Subparts K or Ka (including existing tanks). For these facilities, the permittee shall calculate actual emissions or the maximum projected actual emissions of VOC from fugitive emission sources to demonstrate compliance with Part 2, Section 1.A of this permit. MSS emissions shall be calculated using best available calculation methodologies. These emissions include but are not limited to:
1. Blowdowns and other venting activities (such as emissions related to pigging) can be calculated using mass balance equations (e.g., volume of gas vented, the number of events, and percent VOC).
 2. Tank roof landing losses can be calculated using AP-42 Section 7.1.

General Requirements

- B. The permittee shall establish and implement a maintenance plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance and shall operate in accordance with the procedures set forth in the maintenance plan.
- C. The permittee shall install, maintain, and operate each affected emission unit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions of regulated air pollutants and considering the manufacturer's recommended operating procedures at all times, including periods of startup, shutdown, and maintenance. AQD will determine whether the permittee is using acceptable operating and maintenance procedures based on information available which may include, but is not limited to: monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the permitted source.

Federal Regulations

- D. The permittee shall comply with all applicable requirements set forth in NSPS 40 CFR Part 60, including, but not limited to, the following:
1. Subpart Kc - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023.
[40 CFR §§60.110c - 60.117c]
 - a. § 60.110c Applicability and designation of affected facility.
 - b. § 60.111c Definitions.
 - c. § 60.112c Standard for volatile organic compounds (VOC).
 - d. § 60.113c Testing, monitoring, and inspection procedures.
 - e. § 60.114c Alternative means of emission limitation.
 - f. § 60.115c Recordkeeping requirements.
 - g. § 60.116c Reporting requirements.
 - h. § 60.117c Delegation of authority.

Recordkeeping

- E. The permittee shall keep records of MSS emitting activity data necessary to calculate actual emissions or maximum projected actual emissions and documentation of all periods of control device downtime.

PART 3 – STANDARD CONDITIONS**SECTION I. DUTY TO COMPLY**

The permittee shall comply with all conditions of this permit and any Authorizations issued hereunder. This permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. Any permit non-compliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, for revocation of the approval to operate under the terms of this general permit, or for denial of an application to operate under the terms of this general permit.

[27A O.S. §2-5-112, OAC 252:100-7-15 and 7-18]

SECTION II. FACILITY MODIFICATIONS AND MODIFICATION OF AUTHORIZATIONS UNDER THE TERMS OF THE GENERAL PERMIT

- A. An Authorization shall be corrected if any applicable emission limitation or standard is found to be absent or is found to be in error. Correction of an Authorization shall not change the Effective Date of the Authorization.
- B. The permittee shall obtain a major source permit for any modification that would cause an existing facility to no longer be classified as a minor facility.
- C. The permittee shall obtain a minor source construction permit for any modification described under Part 1, Section III.C of this permit. All other facility modifications may be constructed without a new Authorization, or without a construction permit, provided the applicant submits a notice of modification (NOM) when required. An NOM is required to be submitted to AQD within 15 days following startup. For changes made prior to issuance of an authorization to operate, that require enforceable limits to avoid an otherwise applicable standard, the applicant shall submit a NOM.
- D. The permittee shall apply for a new Authorization to Operate within 180 days of commencing operation of any modified facility authorized under a minor source construction permit or an Authorization to Construct issued under this permit.
[OAC 252:100-7-18(a)]
- E. An Authorization to Construct issued under this permit will terminate and become null and void if the construction is not commenced within 18 months of the issuance date, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-7-15(f)]

SECTION III. REPORTING OF DEVIATIONS FROM PERMIT TERMS

In the event of any release which results in excess emissions, the permittee shall comply with the provisions of OAC 252:100-9. [OAC 252:100-9]

SECTION IV. MONITORING, TESTING, RECORDKEEPING & REPORTING

- A. The permittee shall keep an electronic or hard copy of the Authorization to Operate, with all Notice of Modifications included, either on-site, at a nearby manned facility, or at the nearest field office. The permittee shall keep records as specified in this permit and any Authorization issued under this permit, including all Notice of Modifications. These records, including monitoring data and support information, shall be retained either on-site, at a nearby manned facility, or at the nearest field office for a period of at least five years unless a longer period is specified by an applicable rule or statute. Support information includes all original recordings for continuous monitoring instrumentation and copies of all reports required by this permit or the Authorization. Records may be maintained in paper, electronic, or computerized form. [OAC 252:100-5-2.1(c) & 100-43]
- B. Any owner or operator subject to provisions of NSPS shall provide written notification as follows. However, a Notice of Modification that is timely submitted (within 15 days of startup) shall suffice. [40 CFR §60.7]
1. A notification of the date of when construction of an affected facility will be commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 2. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
 3. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days, or as soon as practicable, before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.
- C. All testing must be conducted by methods approved by the Executive Director under the direction of qualified personnel. All tests shall be made and the results calculated in accordance with test procedures described or referenced in the permit and approved by Air Quality. [OAC 252:100-43]
- D. The permittee shall document that all testing is conducted using methods specified in 40 CFR Parts 51 (SIP), 60 (NSPS), 61 (NESHAP), and 63 (MACT), as applicable, or as otherwise specified in this permit or in an Authorization. A copy of these records shall be retained with the facility's testing records. [OAC 252:100-43]
- E. If the permittee monitors any pollutant more frequently than required by this permit, the results of this monitoring shall be included in the calculations used for determining

compliance with the conditions of this permit. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [OAC 252:100-43-6]

- F. The permittee shall submit to AQD a copy of all reports submitted to EPA as required by 40 CFR Parts 60, 61, and 63 for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-2]
- G. Equipment that is subject to calendar year monitoring, recordkeeping, or reporting requirements (except for engine testing requirements in Part 2, Section IV.E.) under the General Permit and gain coverage after July 1st may demonstrate compliance in the following calendar year.

SECTION V. NEW APPLICABLE REQUIREMENTS

The permittee shall comply with any new state, NSPS, or NESHAP regulation that becomes applicable during the life of this permit. [OAC 252:100-2]

SECTION VI. ANNUAL EMISSIONS INVENTORY AND FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory, to include MSS and fugitive emissions, and shall pay annual fees based on emission inventories or allowable emissions. [OAC 252:100-5]

SECTION VII. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

SECTION VIII. PROPERTY RIGHTS

- A. This permit does not convey any property rights of any sort or any exclusive privilege.
- B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued.

SECTION IX. DUTY TO PROVIDE INFORMATION

- A. The permittee shall furnish to the DEQ upon receipt of a written request and within sixty (60) days of the request, unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, or

revoking and reissuing or terminating the permit or to determine compliance with the permit or the Authorization. [27A O.S. § 2-5-105(17)]

- B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(17). Two copies of the application shall be submitted, one including clearly labeled confidential information, and the other a redacted version.
- C. The transferor shall notify the AQD of the sale or transfer of ownership of this facility in writing not later than 30 days following the change in ownership.
[27A O.S. § 2-5-112(G) & OAC 252:100-7-2(f)]

SECTION X. DUTY TO SUPPLEMENT

The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in any information submittal, shall promptly submit such supplementary facts or corrected information. [OAC 252:100-7-2(c)(3)]

SECTION XI. REOPENING, MODIFICATION, AND REVOCATION

- A. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit or an Authorization modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any permit condition. [27A O.S. § 2-5-112(B)]
- B. The permitting authority will reopen and revise or revoke this permit as necessary to remedy deficiencies if the DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to ensure compliance with the applicable air pollution rules. [27A O.S. § 2-5-112(B)]
- C. Upon issuance of the 2022 GP-OGF, the terms and conditions of the 2022 GP-OGF, including any revisions, supersede all previous versions of the GP-OGF. All facilities constructed or operating under the previous GP-OGF will be subject to and must comply with the 2022 GP-OGF, including all revisions, within 24 months of July 1, 2022.
[27A O.S. §2-5-112(B)]
 - 1. During the 24-month transition period, any facility constructing or operating under the previous GP-OGF and existing Authorization must comply with the standards set forth therein.
 - 2. During the 24-month transition period, the NOM for the previous GP-OGF may be used for those facilities wanting to maintain coverage under the previous GP-OGF. Using the NOM from the 2022 GP-OGF automatically subjects the facility to the 2022 GP-OGF upon submittal.

3. For facilities that have conditions in their current authorization that conflict with the requirements of the 2022 GP-OGF, these facilities must obtain an individual minor source construction permit and then incorporate these conditions into a subsequently issued Authorization to Operate.
 4. All facilities will automatically be authorized as Class II facilities at the end of the transition period unless coverage as a Class I facility is requested.
- D. Upon issuance of any modification or revision of the 2022 GP-OGF, any facility constructed or operating under the 2022 GP-OGF is subject to and must comply with the modified or revised version of the 2022 GP-OGF.

SECTION XII. INSPECTION AND ENTRY

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the DEQ to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section). [27A O.S. § 2-5-105]

- A. Enter upon the permittee's premises during reasonable/normal working hours where a source is located or emission-related activity is conducted, or where records must be kept under the conditions of the permit or the Authorization;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit or the Authorization;
- C. Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit or the Authorization; and
- D. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or the Authorization.

SECTION XIII. GENERAL PROVISIONS UNDER NSPS AND NESHAPS

The permittee shall comply with all applicable requirements of the corresponding General Provisions, as set forth in 40 CFR Part 60 Subpart A, 40 CFR Part 61 Subpart A, and 40 CFR Part 63 Subpart A, for all equipment constructed or operated under this permit subject to NSPS or NESHAP. [OAC 252:100-2]

SECTION XIV. UPDATE OF AUTHORIZATION TO OPERATE

AQD reserves the right to require a facility to apply for an updated Authorization to Operate in order to clarify the Authorization based on a substantial number of Notices of Modification.

APPENDIX A – CONSTRUCTION, OPERATION, MAINTENANCE, AND MONITORING REQUIREMENTS FOR CONTROL DEVICES

A. Non-Selective Catalytic Reduction (NSCR)

Maximum Allowed Control Efficiency	Requirements
Manufacture guarantee as provided in the application	• Must be maintained and operated as specified by the manufactured or design specifications. • Be constructed with an Air-to-Fuel Ratio Controller (AFRC) that operates on exhaust oxygen sensor control. • Use a portable analyzer to monitor NO_x and CO emissions in the exhaust stream of the control device.¹ ▪ The portable analyzer shall be operated in accordance with the requirements of the latest AQD “Portable Analyzer Guidance” document or an equivalent method approved by the AQD. ▪ Testing shall be performed semi-annually.

¹ - Periodic testing requirements are not needed for emergency use engines.

B. Oxidation Catalyst

Maximum Allowed Control Efficiency	Requirements
Manufacture guarantee as provided in the application	• Meet requirements listed above for NSCR except for AFRC.
Formaldehyde reduction ≤ CO reduction	

C. Glycol Dehydration Units

Maximum Allowed Control Efficiency	Requirements
Control Device: Condenser Only (Still Vent)	
$\leq 90\%$ for VOC's and HAP's	- Must be maintained and operated as specified by the manufactured or design specifications. - Unit must be equipped with a flash tank. Note: Not followed by further control such as reboilers, flares or in-stack ignitor. Greater than 90% reduction may be applied if meeting the device requirements for the additional controls.
Control Device: Recycle or Recompression of Flash Tank Gases	
$\leq 100\%$ for VOC's and HAP's	- Have the flash tank stream pre-mixed with the primary fuel gas and used to fuel the device; or - Routed to the facility inlet.
Control Device: Combustion device such as reboiler or heater (Still Vent)	
$\leq 50\%$ for VOC's and HAP's	Have still vent stream delivered to the flame zone/firebox.
$\leq 95\%$ for VOC's and HAP's	- Have still vent stream delivered to the flame zone/firebox when firing; and - Delivered to an in-stack ignitor when the firebox is not firing. - The in-stack ignitor shall be properly maintained at all times and visually inspected once per calendar year. If the inspection is technically infeasible during a calendar year, the inspection must be completed during the next scheduled glycol dehydration unit shutdown.
Control Device: Condenser plus combustion device such as reboiler or heater (Still Vent)	
$\leq 95\%$ for VOC's and HAP's	- Must meet requirements to claim 90% efficiency as described above for a condenser only (i.e., equipped with a flash tank); and - Have still vent stream delivered to the flame zone/firebox.
$\leq 98\%$ for VOC's and HAP's	- Must meet requirements to claim 90% efficiency as described above for a condenser only (i.e., equipped with flash tank); and - Have still vent stream delivered to the flame zone/firebox; and - Utilize an in-stack ignitor which is maintained and operated per manufacturer's specifications. OR - Utilize a flare or an enclosed combustion device which is maintained and operated per manufacturer's specifications; and - Flares and enclosed combustion devices must meet requirements described in Section F.

D. Amine Units

Maximum Allowed Control Efficiency	Requirements
Control Device: Recycle or Recompression of Flash Tank Gases	
$\leq 100\%$ for VOC's and HAP's	- Have the flash tank stream routed to the fuel gas system and used as fuel; OR - Have the flash tank stream routed to the facility inlet.
Control Device: Combustion device such as reboiler or heater (Still Vent)	
$\leq 50\%$ for VOC's and HAP's	Have still vent stream delivered to the flame zone/firebox.
Control Device: Flare (Still Vent)	
$\leq 98\%$ for VOC's and HAP's	- Utilize a flare or an enclosed combustion device which is maintained and operated per manufacturer's specifications; and - Flares and enclosed combustion devices must meet requirements described in Section F.

E. Vapor collection for loading

Maximum Allowed Control Efficiency	Requirements
Vapor Collection Systems (Collection Efficiency)	
$\leq 70\%$ for VOC's and HAP's	- The tank trucks shall be bottom loaded with hatches closed (vapor tight) and the storage tank hatches and atmospheric vents shall be closed (vapor tight). - A vapor collection line shall be connected from the tank truck to the vapor collection system and shall route all vapors generated during loading to the vapor collection system. - All loading and vapor lines shall be equipped with fittings that make vapor-tight connections and which must be closed when disconnected or which close automatically when disconnected. - A means shall be provided to prevent VOC drainage from the loading device when it is removed from any tank truck or trailer, or to accomplish complete drainage before removal. - Vapor collection system shall be routed to either a vapor balancing or vapor control.
Vapor Balancing (Control Efficiency)	
100% for VOC's and HAP's of vapors collected ($\leq 70\%$)	- In addition to the requirements above, the tanks shall be equipped with a vapor pressure-vacuum vent valve that maintains a positive pressure setting during tank truck loading operations. - Loading loss emissions routed to the storage tanks ($\leq 70\%$) shall be added to the storage tank emissions. In lieu of adding loading loss emissions to storage tanks, working loss emissions from the storage tanks being unloaded shall be calculated using a turnover factor (K_N) of 1.
Vapor Combustion (Control Efficiency)	
$\leq 98\%$ for VOC's and HAP's of vapors collected ($\leq 70\%$)	- Meet requirements of vapor collection system; and - Control percentage only applies to vapors collected ($\leq 70\%$) in vapor collection system; and - The vapor collection system shall route all vapors to a flare or enclosed combustion device. Flares and enclosed combustion devices must meet requirements described in Section F.
Vapor Recovery (Control Efficiency)	
100% for VOC's and HAP's of vapors collected ($\leq 70\%$)	- Control percentage only applies to vapors collected in vapor balancing; and - Routed to the process stream or sales line.

F. Flares or enclosed combustion devices not subject to Section G below.

Maximum Allowed Combustion Efficiency	Requirements
$\leq 98\%$ for VOC's, HAP's, and H ₂ S	• Flares must meet 40 CFR §60.18 requirements for minimum heating value and maximum flare tip velocities. • A flare or enclosed combustion device used to demonstrate compliance with 40 CFR Part 60, Subpart Kc shall meet the requirements of 40 CFR 60.112c(d)(5) in lieu of the 40 CFR 60.18 requirements. • Flares and enclosed combustion devices must be operated with a flame present at all times by having a continuous pilot flame or an automatic ignition system. ▪ Presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame; and ▪ Records of the pilot flame(s) outages and/or downtime shall be maintained. • Pilot flame monitors and/or automatic ignition systems must be installed, operated, and calibrated in accordance with manufacturer's specifications.

- G. Requirements for nonassisted flares or enclosed combustion devices for compliance with LPE under Part 2 Section II D.

Maximum Allowed Combustion Efficiency	Requirements
$\leq 98\%$ for VOC's and Methane	• 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). • 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. • 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. • Perform an initial, and at least once during every six month period 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. {If this requirement is removed, waived, or otherwise explicitly rendered unnecessary in 40 CFR Part 60, Subpart OOOOb, this requirement shall also be waived or otherwise rendered unnecessary.} • For a flare, perform an initial, and at least once during every six month period 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. • For an enclosed combustion device, perform an initial, and at least once during every six month period 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.

APPENDIX B - DEMONSTRATION OF MAXIMUM H₂S CONCENTRATION IN CRUDE OILS

For the general permit, a facility must demonstrate that the maximum H₂S concentration of any category of crude oil stored at the facility is no more than 6 ppmw. To do this, each category of crude oil handled at a facility shall be characterized by name using the standard terminology used in the petroleum industry to describe crude oils from specific locales and having similar characteristics, such as (but not limited to) “US-West Texas Sour,” “US-Oklahoma Sour,” “US-Mid Continent,” “Kirkuk,” “Hawkins,” etc. A permit applicant may demonstrate the maximum expected H₂S concentration in each category of crude oil stored at the facility by one of three methods, subject to approval of AQD:

- A. Certification by a responsible official in the permit application that only “sweet” crude oil is stored at the facility or that the maximum H₂S concentration of any “sour” crude oil stored at the facility is no more than 6 ppmw. “Sweet” crude oil is defined as having a total sulfur content of less than 0.5 wt%.
- B. Documentation from a Crude Oil Assay Library or assays from the crude oil producer, seller, or buyer, that demonstrate that only “sweet” crude oil is stored at the facility or that the maximum H₂S concentration of any “sour” crude oil stored at the facility is no more than 6 ppmw.
- C. Sampling by the applicant for H₂S concentration. Test methods may include UOP 163-89, ASTM D 5705 (the so-called “can test”), liquid phase H₂S analyzers, or lab certified liquid phase methods. For an initial compliance demonstration, one sample is required for each category of sour crude oil that requires sampling for compliance documentation, i.e., not demonstrated by A or B above. If the initial sample shows an H₂S concentration of 3 ppmw or less, then no more sampling is required for that category of sour crude oil. Otherwise, that category of crude oil must be sampled again, once each week for four weeks, and an average of the four samples calculated. If the average H₂S concentration is no more than 6 ppmw, compliance for that category of sour crude oil is demonstrated. This sampling procedure must be repeated in the future for any new category of sour crude oil stored at the facility that requires sampling for compliance with the 6 ppmw H₂S limit.

APPENDIX C - DEFINITIONS

The following definitions apply to this memorandum and general permit. All defined terms are written with initial capital letters in the memorandum and permit.

“Affected Facility” as defined in 40 CFR §60.2 of the General Provisions means with reference to a stationary source, any apparatus to which a standard is applicable. Each NSPS standard defines the affected facility.

“Affected Source” as defined in 40 CFR §63.2 of the General Provisions means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to Section 112 of the Clean Air Act. Each MACT standard defines the affected source.

“Appendix H Activities” means certain equipment or activities on the De Minimis Facilities list under OAC 252:100 Appendix H which warrant inclusion in the facility’s emissions calculations if located at a permitted facility. AQD evaluated the De Minimis Facilities list and determined the equipment or activities that need to be included for oil and natural gas facilities (Part 2 Section I, E).

“Certified Engine” means any engine that has been certified by the EPA to meet emissions standards for the purposes of meeting an NSPS or NESHAP.

“Class I” means a facility that has an enforceable limit less than 80% of major source levels for each regulated air pollutant.

“Class II” means a facility that has an enforceable limit of less than 100% of major source levels for each regulated air pollutant and is not a Class I facility.

“Controlled Engine” means an engine, with or without an Air to Fuel Ratio Controller, that uses catalytic or oxidation catalyst control.

“Engine” means any reciprocating internal combustion engine or any gas-fired turbine.

“Emergency Use Engine” means any engine that drives an emergency power generator, peaking power generator, firewater pump, or other emergency use equipment, and operates no more than 500 hours per year.

“Extended Gas Analysis” means an extended analysis (using GPA 2286 or similar approved methods) that provides speciated data for HAP components benzene, toluene, ethylbenzene, xylenes, and n-hexane.

“Fugitive Emissions” means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening, as defined in OAC 252:100-1-3. For this purpose, "stack" has the meaning given in OAC 252:100-1-3 and includes any chimney, flue, duct, conduit, exhaust, pipe, vent or opening, excluding flares, designed or specifically intended to

conduct emissions to the atmosphere. Emissions are classified release by release and not by item of equipment.

“Maintenance, Startup, and Shutdown (MSS)” include air emissions resulting from the maintenance, startup, or shutdown of equipment or facilities at a site and may include activities such as routine maintenance and other activities such as equipment blowdowns, pipeline pigging, or tank de-gassing.

[Note: MSS emissions are part of normal operation of a source and should be accounted for in planning, design, and implementation of operating procedures for process and control equipment. As such, MSS emissions should be included in Potential to Emit (PTE) calculations and are subject to applicable permitting requirements. Facility shall estimate MSS emissions to the extent that they are predictable and quantifiable.]

“Maintenance” means the planned routine repair and upkeep of equipment.

“Malfunction” means a sudden and unavoidable breakdown of process or control equipment.

“Maximum Rated Horsepower” means an engine’s maximum horsepower at ISO or manufacturer’s standard conditions and maximum RPM, or an engine’s maximum horsepower at engine site conditions and maximum RPM.

“Notice of Modification (NOM)” means a written notice informing AQD of: (1) any modification or change of operations at the facility that would construct a piece of equipment or a process that is subject to NSPS or NESHAP, or that would modify or reconstruct a piece of equipment or a process such that it becomes subject to NSPS or NESHAP; (2) any modification that would change its facility classification (either from a Class I facility to a Class II facility or a Class II facility to a Class I facility); (3) any modification to add or replace a storage tank with a capacity of 400 gallons or more storing VOC, a VOC Loading Operation, any combustion equipment, any amine unit, or any dehydration unit; (4) any modification to change emissions factors relied on in an application or a previous NOM; (5) any modification to add or remove a federally enforceable limit (FEL) and/or legally and practically enforceable (LPE) limit (e.g., less than 6 TPY of VOC limit per storage tank, less than 6 TPY of VOC and less than 20 TPY of methane per tank battery); and/or (6) sources that become subject to NSPS Subpart Kc through a change in the method of operation as defined under §60.110c(e)(1). Such notice shall contain all information required in the NOM form. Any emissions limits requested in an NOM become enforceable upon submittal.

“Shutdown” means, generally, the cessation of operation of a source for any reason.

“Startup” means, generally, the setting in operation of a source for any reason.

“Synthetic Minor Facility” means a facility that has the potential to emit over major source levels of any regulated air pollutant but with controlled actual emissions below major source levels.

“Tank Battery” means a group of all storage vessels that are manifolded together for liquid transfer.

“Uncontrolled Engine” means an engine, with or without an Air to Fuel Ratio Controller, that has no catalytic or oxidation catalyst control.

“VOC Loading Operation” means loading liquid VOC into a tank truck or trailer for transportation offsite or unloading of liquid VOC from a tank truck or trailer to a storage tank onsite. A VOC Loading Operation does not have the physical equipment (loading arm and pump) to conduct the type of loading regulated by OAC 252:100-37-16 and 100-39-41 for VOC loading facilities, even though it may or may not use tank trucks or trailers that meet the requirements for delivery vessels in OAC:252-100-39-41(d).

APPENDIX D - SUMMARY OF GP-OGF ENGINE EMISSIONS TEST REQUIREMENTS

Engine Classification	One Time Initial Emissions Test?	Semi-Annual Emissions Tests?
All Emergency Use Engines	No	No
Uncontrolled Engines Under 250-hp	No	No
Uncontrolled Engines Over 250-hp At a Class I Facility	Yes	No
Uncontrolled Engines Over 250-hp At a Class II Facility	Yes	Yes ¹
Controlled Engines Under 250-hp	No	No
Controlled Engines Over 250-hp	Yes	Yes

¹ - The frequency of semi-annual testing may be reduced to annual testing according to Part 2, Section IV.F.

APPENDIX E – ALTERNATIVE COMPLIANCE METHOD REQUIREMENTS

The following records shall be maintained in support of the Alternative Compliance Method for demonstrating compliance with the emission CAP. As indicated in Part 2, Section I.B. of the GP-OGF.

BASE SET OF EMISSION CALCULATIONS

The base set of emission calculations is the maximum projected actual emissions for the entire facility as represented in the application on DEQ FORM #100-306-E which demonstrates compliance with the GP-OGF CAP including HAP and H₂S emissions. The base set of emission calculations shall be maintained on-site or available electronically. The maximum projected actual emission calculations for each unit shall contain the following for each type of emissions unit at the facility:

Emissions Unit Type and Pollutants	Emissions Data Requirements
Storage Tanks (Part 2 Section II.A.) VOC & HAP	Storage tank size, contents, projected actual annual throughput, control type and efficiency ¹ , AP-42 emission calculations and/or process simulator input and output files. Any process stream data and operating parameters (temp & press) used in the calculations.
VOC Loading Operations (Part 2 Section III.A.) VOC & HAP	Loading operation projected actual annual throughput, control type and efficiency ¹ , AP-42 emission calculations and/or process simulator input and output files.
Combustion Equipment (Part 2, Section IV.A.) NO _x , CO, VOC, & Formaldehyde (engines)	
Engines	Engine make and model, fuel, rated horsepower, short-term limits, emission factors and source(s), control type and efficiency ¹ , projected actual annual operating hours.
Combustion Equipment (Process Heaters & Steam Generating Units)	Description, maximum fired-duty (MMBTU/hr), emission factors and source, and operating hours.
Flares & Enclosed Combustion Devices	Description, heat input and basis (sources controlled), emission factors and source, and operating hours.
Glycol Dehydration Units (Part 2, Section V.A.) Still Vent and Flash Tank VOC & HAP	Type of glycol dehydration unit (e.g., TEG or EG), and dry gas flow rate as determined using methods in Part 2, Section V.A.3., glycol pump maximum capacity, extended wet gas analysis, normal process operating temperature(s) and pressure(s), control device type(s) and efficiencies ¹ , GRI-GLYCalc program (Version 4.0 or later), a process simulator program, or the

Emissions Unit Type and Pollutants	Emissions Data Requirements
	Atmospheric Rich/Lean (ARL) Method input and output reports.
Amine Units (Part 2, Section VI.A.) Still Vent and Flash Tank VOC & HAP SO ₂ is not specifically listed in the GP-OGF except in (Part 1, Section I.).	Type of amine unit (e.g., MDEA or MEA & mass balance, natural gas, or NGL), and gas or NGL flow rate as determined using methods in Part 2, Section VI.A.1., amine pump maximum capacity, extended gas analysis or NGL analysis, normal process operating temperature(s) and pressure(s), control device type(s) and efficiencies ¹ , AMINECalc program or a process simulator program, input and output reports.
Fugitives (Part 2, Section VII.A.) VOC [limited to facilities w storage capacities > 300,000 barrels or with units meeting the affected facility definition of NSPS Subparts K or Ka]	Fugitive equipment component counts, VOC content of material handled, control efficiency ¹ , and emission factors and source.
Other Process Equipment (Part 2, Section VIII.A.) VOC & HAP Reciprocating compressors Centrifugal compressors Pneumatic controllers Pneumatic pumps	Standard software input and output file and/or mass balances
MSS – Blowdowns	Maximum projected actual annual blowdown amount and VOC content
MSS – Other	As applicable, engineering calculations, software input and output files, emission factors and source, mass balance

¹ - As applicable.

ALTERNATIVE MONITORING & RECORDKEEPING REQUIREMENTS

The following summary of operational monitoring and recordkeeping only addresses on-going requirements for the alternative demonstration of compliance with the CAP. The facility is still required to comply with all other monitoring and recordkeeping indicated in the GP-OGF except for monthly calculations of emissions.

Storage Tanks:

Parameter	Records
Throughput, gallon/yr	Monthly and 12-month rolling totals
Tank Contents	Type of material stored
Control Device Monitoring	Appendix A

Loading Operations:

Parameter	Records
Throughput, gallon/yr	Monthly and 12-month rolling totals
Control Device Monitoring	Appendix A

Combustion EquipmentEngines:

Parameter	Records
Hours of operations, if = 8,760 hours per year	No records of operational hours required
Hours of operation, if < 8,760 hours per year	Hours of operation, monthly and 12-month rolling total
Control Device monitoring	Appendix A

Combustion Equipment (Process Heaters & Steam Generating Units):

Parameter	Records
Hours of operations, if = 8,760 hours per year	No records of operational hours required
Hours of operation, if < 8,760 hours per year	Hours of operation, monthly and 12-month rolling total

Flares & Enclosed Combustion Devices:

Since the basis for the emissions for these control devices are the emissions from the other units keeping records of hours and throughputs for those units will ensure compliance with the maximum projected actual emissions for the control devices.

Parameter	Records
Control Device monitoring	Appendix A

Glycol Dehydrators:

Parameter	Records
Dry Gas Flow Rate , MMSCF/day	Monthly average and 12-month rolling average
Control Device monitoring	Appendix A

Amine Units:

Parameter	Records
Gas or Liquid process rate, MMSCF/day or gallon/day	Monthly average and 12-month rolling average
Control Device monitoring	Appendix A

Fugitives:

Parameter	Records
Equipment component	Facility-wide component count
Any applicable monitoring	

Other Process Equipment

Parameter	Records
As applicable, gas release MMSCF, throughput gallon/yr, etc.	Monthly and 12-month rolling total

Includes: reciprocating compressors, centrifugal compressors, pneumatic controllers, and pneumatic pumps.

MSS - Blowdowns:

Parameter	Records
Gas release, MMSCF	Monthly and 12-month rolling total

MSS - Other:

Parameter	Records
As applicable, gas release MMSCF, throughput gallon/yr, etc.	Monthly and 12-month rolling total