

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
EASTERN DIVISION**

UNITED STATES OF AMERICA,

Plaintiff,

v.

GULFPORT ENERGY CORPORATION,

Defendant.

Civil Action No. 2:20-cv-340

**COMPLAINT**

Plaintiff, the United States of America, by the authority of the Attorney General and at the request of the Administrator of the United States Environmental Protection Agency (“EPA”), files this Complaint and alleges as follows:

**NATURE OF ACTION**

1. This is a civil action for injunctive relief and civil penalties for violations of the Clean Air Act (“CAA”), 42 U.S.C. §§ 7401-7671q, at multiple oil and natural gas production facilities within this judicial district that are owned and/or operated by Defendant Gulfport Energy Corporation (“Gulfport”).

2. This action addresses CAA violations at particular Gulfport facilities located in Belmont County, Harrison County, and Monroe County, Ohio, including the facilities known as: the BK Stephens Well Pad, the Boy Scout Well Pad, the Clay Well Pad, the Family Well Pad, the County Line II-Gustina Bear Well Pad, the Hayes Well Pad, the McCort Well Pad, the Milliken Well Pad, the Ryser #1-25H Well Pad, the Sandra Well Pad, the Shugert 12 Well Pad, and the Stutzman Well Pad (collectively referred to herein as the “Subject Facilities”).

3. The Subject Facilities are oil and gas production well pads designed to receive and separate natural gas, oil (often called “condensate”), and oily water (often called “produced water”) from nearby oil and gas production wells owned and/or operated by Gulfport. After being separated, the natural gas is transported from the well pad by a pipeline. The condensate and produced water are accumulated at the well pad in large tanks (often called “storage vessels”) until those liquids are removed and transported from the well pad by tank trucks.

4. This action targets Gulfport’s widespread and repeated violation of CAA requirements that require Gulfport to reduce or limit its emissions of hydrocarbon vapors from storage vessels and associated equipment at the Subject Facilities.

#### **JURISDICTION AND VENUE**

5. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 113(b) of the CAA, 42 U.S.C. § 7413(b).

6. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391 and 1395 and Section 113(b) of the CAA, 42 U.S.C. § 7413(b).

#### **NOTICE**

7. The United States has provided notice of the commencement of this action to the State of Ohio as required by Section 113(b) of the CAA, 42 U.S.C. § 7413(b). Pursuant to Section 113(a) of the CAA, 42 U.S.C. § 7413(a), EPA has notified Gulfport and the State of Ohio of the violations of the Ohio State Implementation Plan alleged in this Complaint – including alleged violations of permits issued under the Ohio State Implementation Plan – more than thirty (30) days prior to the filing of this Complaint.

## **THE DEFENDANT**

8. Gulfport is incorporated in the State of Delaware and does business in the State of Ohio.

9. Gulfport maintains a corporate office located at 67185 Executive Drive, St. Clairsville, Ohio.

10. Gulfport is a “person” within the meaning of Sections 113(b) and 302(e) of the CAA, 42 U.S.C. §§ 7413(b) and 7602(e).

11. Gulfport owns and/or operates each of the Subject Facilities.

## **STATUTORY/REGULATORY BACKGROUND AND GENERAL ALLEGATIONS**

### **The Clean Air Act**

12. Congress enacted the CAA “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” 42 U.S.C. § 7401(b)(1).

13. This action involves three parts of the regulatory scheme established by the CAA and Ohio’s air pollution control laws: (i) EPA New Source Performance Standards that apply to certain oil and natural gas production facilities owned and/or operated by Gulfport; (ii) permits issued under Ohio’s CAA State Implementation Plan for certain oil and natural gas production facilities owned and/or operated by Gulfport; and (iii) the enforcement mechanisms of the CAA. These three parts of the regulatory scheme are discussed in turn, followed by a summary of EPA’s investigation of CAA violations at certain oil and natural gas production facilities owned and/or operated by Gulfport.

### **New Source Performance Standards and NSPS Subpart OOOO**

14. Section 111 of the CAA, 42 U.S.C. § 7411, requires EPA to implement a New Source Performance Standards (“NSPS”) program for the control of air pollutant emissions. NSPS regulations impose nationally uniform emission standards for new or modified stationary sources falling within industrial categories that significantly contribute to air pollution.

15. In 2012, EPA promulgated NSPS regulations for the crude oil and natural gas production, transmission, and distribution industry sector, which were codified at 40 C.F.R. Part 60, Subpart OOOO (“Subpart OOOO”). 77 Fed Reg. 49,542 (Aug. 16, 2012). EPA reconsidered and revised certain provisions of Subpart OOOO in 2013. 78 Fed Reg. 58,416 (Sept. 23, 2013).

16. Subpart OOOO establishes emission standards for the control of volatile organic compounds (“VOC”) and sulfur dioxide emissions from various types of oil and natural gas production equipment constructed, modified, or reconstructed after August 23, 2011, including storage vessels.

17. Under Subpart OOOO, the term “storage vessel” means “a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support.” 40 C.F.R. § 60.5430.

18. Among other things, Subpart OOOO addresses two classes of storage vessels: (i) those that began to be constructed, reconstructed or modified after August 23, 2011, and on or before April 12, 2013 (called “Group 1 storage vessels”); and (ii) those that began to be constructed, reconstructed or modified after April 12, 2013 (called “Group 2 storage vessels”).

*Id.*

19. A Group 1 or Group 2 storage vessel is an affected facility subject to Subpart OOOO requirements if a properly performed emission determination indicates that the storage vessel has the potential for VOC emissions equal to or greater than six (6) tons per year. 40 C.F.R. § 60.5365(e). This Complaint will refer to a storage vessel meeting these criteria as a “Fully Regulated Storage Vessel.”

20. A Fully Regulated Storage Vessel that subsequently has its potential for VOC emissions decrease to less than six (6) tons per year shall remain an affected facility under Subpart OOOO. 40 C.F.R. § 60.5365(e)(2).

21. The potential for VOC emissions from a storage vessel must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline. For Group 1 storage vessels, the applicable emission determination deadline was October 15, 2013. For Group 2 storage vessels, the applicable emission determination deadline was April 15, 2014, or 30 days after startup (whichever was later). 40 C.F.R. §§ 60.5365(e), 60.5410(h)(1).

22. In calculating the potential for VOC emissions from a storage vessel, the emission determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement under Federal, State, local or tribal authority. 40 C.F.R. § 60.5365(e).

23. Subpart OOOO requires the owner/operator of a Fully Regulated Storage Vessel to comply with certain emission control requirements.

a. The owner/operator of a Fully Regulated Storage Vessel must either:

(i) reduce VOC emissions from the storage vessel by 95.0 percent; or (ii) maintain the

uncontrolled actual VOC emissions from the storage vessel at less than four (4) tons per year without considering control. 40 C.F.R. § 60.5395(d)(1)-(2).

b. For a storage vessel subject to the 95.0 percent emission reduction requirement, the required emission reduction must be achieved by control requirements that include equipping the storage vessel with a cover that meets the requirements of 40 C.F.R. § 60.5411(b), connecting the storage vessel to a closed vent system that meets the requirements of 40 C.F.R. § 60.5411(c), and either: (i) routing the storage vessel vapors to a control device (such as an enclosed combustor) that meets certain requirements; or (ii) routing the storage vessel vapors to a process. 40 C.F.R. § 60.5395(e).

24. The cover requirements specified in 40 C.F.R. § 60.5411(b) provide as follows.

a. 40 C.F.R. § 60.5411(b)(1) requires that:

The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel or wet seal fluid degassing system.

b. 40 C.F.R. § 60.5411(b)(2) requires that:

Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:

(i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);

(ii) To inspect or sample the material in the unit;

(iii) To inspect, maintain, repair, or replace equipment located inside the unit; or

(iv) To vent liquids, gases, or fumes from the unit through a closed-vent system designed and operated in accordance with the

requirements of paragraph (a) or (c) of this section to a control device or to a process.

25. The closed vent system requirements specified in 40 C.F.R. § 60.5411(c) provide as follows.

a. 40 C.F.R. § 60.5411(c)(1) requires that:

You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the requirements specified in § 60.5412(c) and (d), or to a process.

b. 40 C.F.R. § 60.5411(c)(2) requires that:

You must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections. Each closed vent system that routes emissions to a process must be operational 95 percent of the year or greater.

26. Subpart OOOO requires the owner/operator of a Fully Regulated Storage Vessel to comply with certain initial compliance demonstration requirements, as well as initial notification and annual reporting requirements.

a. The owner/operator of a Fully Regulated Storage Vessel must make a formal determination of its initial compliance with the standards applicable to the storage vessel. 40 C.F.R. § 60.5410.

b. For a Group 1 storage vessel, the owner/operator was required to demonstrate initial compliance by April 15, 2015. For a Group 2 storage vessel, the owner operator was required to demonstrate initial compliance by April 15, 2014, or within 60 days after startup, whichever was later. 40 C.F.R. § 60.5410(h).

c. The owner/operator of a Fully Regulated Storage Vessel must retain records documenting initial compliance with the standards applicable to the storage vessel. 40 C.F.R. § 60.5410(h)(5).

d. The owner/operator of a Fully Regulated Storage Vessel must submit annual reports containing specified information. 40 C.F.R. § 60.5420. For a Group 1 storage vessel, an initial annual report was due by no later than January 15, 2014, with a notification identifying each Group 1 storage vessel. For a Group 2 storage vessel, an initial annual report was due by no later than July 14, 2014, or 120 days after startup (whichever was later). 40 C.F.R. §§ 60.5395(b)(1), 60.5410, 60.5420(b); 78 Fed. Reg. 58,416 (Sept. 23, 2013).

e. Among other things, each annual report must include: (i) an identification of each Fully Regulated Storage Vessel for which construction, modification, or reconstruction commenced during the reporting period; and (ii) a statement that initial compliance with the applicable VOC emission reduction and control requirements has been achieved for the relevant storage vessel(s). 40 C.F.R. § 60.5420(b)(6)(i), (v).

27. Subpart OOOO requires the owner/operator of a Fully Regulated Storage Vessel to comply with additional monitoring and recordkeeping requirements.

a. If vapors from a Fully Regulated Storage Vessel are routed to a control device or a process, Subpart OOOO requires monthly olfactory, visual, and auditory inspections to identify defects in the storage vessel cover and closed vent system that could result in air emissions. 40 C.F.R. § 60.5416(c)(1)-(2).

b. Subpart OOOO also requires that the owner/operator maintain records of the results of these inspections. 40 C.F.R. §§ 60.5416(c)(1)-(2), 60.5420(c)(6)-(7).



28. For a storage vessel not subject to a legally and practically enforceable limit on its potential for VOC emissions, the Subpart OOOO emission determination may exclude vapor from the storage vessel that is recovered and routed to a process through a vapor recovery unit designed and operated as specified in Subpart OOOO provided that: (i) the storage vessel meets the cover requirements specified in 40 C.F.R. § 60.5411(b); (ii) the storage vessel meets the closed vent system requirements specified in 40 C.F.R. § 60.5411(c); and (iii) the owner or operator of the storage vessel maintains records that document compliance with the cover requirements specified in 40 C.F.R. § 60.5411(b) and the closed vent system requirements specified in 40 C.F.R. § 60.5411(c) for the storage vessel. 40 C.F.R. § 60.5365(e)(3).

29. If all conditions outlined in Paragraph 28 have been met at all relevant times and if a properly performed emission determination demonstrates that a storage vessel has the potential for VOC emissions of less than six (6) tons per year, then this Complaint will refer to the vessel as a “Conditionally Deregulated Storage Vessel.”

30. If the original emission determination for a Conditionally Deregulated Storage Vessel excluded storage vessel vapor that would be recovered and routed to a process through a vapor recovery unit, the owner or operator must make a new emission determination calculating the storage vessel’s potential for VOC emissions within 30 days if: (i) the storage vessel is operated without meeting the cover requirements specified in 40 C.F.R. § 60.5411(b); (ii) the storage vessel is operated without meeting the closed vent system requirements specified in 40 C.F.R. § 60.5411(c); or (iii) the vapor recovery unit is removed. 40 C.F.R. § 60.5365(e)(3)(iv).

**The Ohio State Implementation Plan and Ohio General Permits for  
Oil and Gas Well-Site Production Operations**

31. Section 110 of the CAA, 42 U.S.C. § 7410, requires each state to adopt, and submit to EPA for approval, a State Implementation Plan (“SIP”) that provides for the implementation, maintenance, and enforcement of national ambient air quality standards for particular pollutants, including ground-level ozone. VOC are a principal component of atmospheric reactions that form ground-level ozone, so EPA-approved SIPs and permits issued in accordance with EPA-approved SIPs routinely regulate emissions of VOC as an ozone precursor.

32. EPA has approved various provisions of the Ohio Administrative Code (“Ohio Admin. Code”) as part of the Ohio SIP, including Ohio Admin. Code § 3745-31-29. 78 Fed. Reg. 11,748 (Feb. 20, 2013); 80 Fed. Reg. 36,477 (June 25, 2015); 40 C.F.R. § 52.1870(c). Ohio Admin. Code § 3745-31-29 allows the Ohio Environmental Protection Agency (“Ohio EPA”) to develop model general permits to install and model general permits to operate for certain categories of air emissions sources.

33. On January 31, 2012, Ohio EPA finalized a model general permit to install and operate (“PTIO”) for oil and gas well production operations, called General PTIO 12. In April 2014, Ohio EPA revised that model permit to incorporate Subpart OOOO requirements and to create two different versions of the model permit for facilities that meet different qualifying criteria. Revised General PTIO 12.1 was designed for oil and gas well-site production operations where the flare is limited to a nominal 10 million British Thermal Units per hour (mmBtu/hr) and the natural gas engines are limited to 1,800 total horsepower. General PTIO 12.2 was designed for oil and gas well-site production operations where the flare is limited to a nominal 32 million

British Thermal Units per hour (mmBtu/hr) and the natural gas engines are limited to 1,000 total horsepower.

34. Attached to this Complaint are true and correct copies of Ohio Model General PTIO 12.1 (Attachment 1) and Ohio Model General PTIO 12.2 (Attachment 2), as finalized in April 2014.

35. General PTIO 12.1 and General PTIO 12.2 expressly incorporate relevant requirements of Subpart OOOO, including: (i) the directive that any Fully Regulated Storage Vessel and any Conditionally Deregulated Storage Vessel must meet the cover and closed vent system requirements of Subpart OOOO; (ii) the requirement to conduct monthly inspections – and maintain inspection records – for each cover and each closed vent system used to demonstrate compliance in accordance with Subpart OOOO; and (iii) the requirement to maintain records of compliance with Subpart OOOO cover and closed vent system requirements for any Conditionally Deregulated Storage Vessel. General PTIO 12.1 and 12.2 specify that these incorporated requirements of Subpart OOOO are federally enforceable requirements of any such permit issued by Ohio EPA.

36. A General PTIO 12.1 or General PTIO 12.2 supplements – but does not supplant – the requirements of Subpart OOOO for storage vessels at oil and gas well production facilities.

37. Unless modified to incorporate a facility-specific voluntary limit on allowable emissions, the Terms and Conditions of General PTIO 12.1 and General PTIO 12.2 do not include requirements under a legally and practically enforceable limit on VOC potential to emit. Ohio Admin. Code § 3745-31-05(F) allows Ohio EPA to incorporate a facility-specific voluntary limit on allowable emissions into a PTIO, but a voluntary limit only qualifies as a legally and practically enforceable limit if the facility's PTIO includes appropriate emissions limits,

operational restrictions, and monitoring, recordkeeping, reporting, and testing requirements for the facility-specific voluntary limit.

### **Clean Air Act Enforcement**

38. Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), authorizes EPA to bring a civil action if the Administrator of EPA finds that any person is in violation of any regulation promulgated under Section 111 of the CAA, 42 U.S.C. § 7411, including the regulations contained in Subpart OOOO.

39. Section 113(a)(1) of the CAA, 42 U.S.C. § 7413(a)(1), authorizes EPA to bring a civil action if the Administrator of EPA finds that any person is in violation of any SIP requirements, including limitations and conditions contained in permits issued pursuant to a SIP, such as the limitations and conditions contained in General PTIO 12.1 and General PTIO 12.2 that expressly incorporate relevant requirements of Subpart OOOO.

40. The United States Department of Justice has authority to bring this action on behalf of the Administrator of EPA under 28 U.S.C. §§ 516 and 519 and Section 305(a) of the CAA, 42 U.S.C. § 7605(a).

41. Section 113(b) of the CAA, 42 U.S.C. § 7413(b), authorizes the Court to enjoin a violation of the CAA, to require compliance, to assess a civil penalty, and to award any other appropriate relief for each violation.

42. Section 113(b) of the CAA, 42 U.S.C. § 7413(b), authorizes civil penalties of up to \$25,000 per day for each violation of the CAA.

43. The Federal Civil Penalties Inflation Adjustment Act of 1990, Pub. L. 101–410, Oct. 5, 1990, 104 Stat. 890, as amended, 28 U.S.C. § 2461 note, requires EPA to periodically adjust civil penalties for inflation. On February 13, 2004, December 11, 2008, January 12, 2017, January 10, 2018, February 6, 2019, and February 25, 2019, EPA adopted and revised

regulations entitled “Adjustment of Civil Monetary Penalties for Inflation,” 40 C.F.R. Part 19, to upwardly adjust the maximum civil penalty under CAA Section 113(b). For each violation that occurs between January 13, 2009, and November 2, 2015, inclusive, penalties of up to \$37,500 per day may be assessed. For each violation that occurs after November 2, 2015, penalties of up to \$99,681 per day may be assessed if the assessment is made on or after February 6, 2019.

69 Fed. Reg. 7,121 (Feb. 13, 2004); 73 Fed. Reg. 75,340 (Dec. 11, 2008); 82 Fed. Reg. 3,633 (Jan. 12, 2017); 83 Fed. Reg. 1,190 (Jan. 10, 2018); 84 Fed. Reg. 2,056 (Feb. 6, 2019); 84 Fed. Reg. 5,955 (Feb. 25, 2019).

#### **THE EPA INVESTIGATIONS OF CAA VIOLATIONS BY GULFPORT**

44. In July 2013, EPA conducted an on-site CAA inspection of an oil and gas production facility in Harrison County owned and/or operated by Gulfport, known as the Boy Scout Well Pad.

45. EPA obtained additional information concerning the Boy Scout Well Pad’s CAA compliance status in response to a formal request for information sent to Gulfport under Section 114 of the CAA, 42 U.S.C. § 7414.

46. Based on observations and evidence collected during and after its July 2013 inspection, EPA issued Gulfport a December 2013 Notice of Violation and Finding of Violation under the CAA. Among other things, the December 2013 Notice of Violation and Finding of Violation identified alleged CAA violations at Gulfport’s Boy Scout Well Pad, including violations stemming from uncontrolled VOC emissions from storage tanks at the well pad.

47. In August 2015, EPA conducted additional on-site inspections of multiple oil and gas production facilities in eastern Ohio owned and/or operated by Gulfport, including each of the Subject Facilities.

48. At each of the Subject Facilities, EPA employees observed noncompliance with the Subpart OOOO cover and closed vent system requirements applicable to Fully Regulated Storage Vessels. Among other things, the EPA inspectors identified uncontrolled VOC emissions from storage vessel hatches using both: (i) an olfactory, visual, and auditory inspection; and (ii) an inspection with a forward-looking infrared (“FLIR”) camera.

49. Among their other findings, EPA inspectors identified uncontrolled VOC emissions from covers and/or the closed vent systems for the following Fully Regulated Storage Vessels during their on-site inspections of the Subject Facilities:

- i. BK Stephens Well Pad condensate tanks 3, 4, 5, and 6;
- ii. Boy Scout Well Pad condensate tanks 1, 2, 3, 6, 7, and 8;
- iii. Clay Well Pad condensate tanks 4, 5, 6, 7, and 8;
- iv. Family Well Pad condensate tanks 1 and 3;
- v. County Line II-Gustina Bear Well Pad condensate tanks 1, 2, 3, 4, 5, 6;
- vi. McCort Well Pad condensate tanks 1, 2, 3, and 4, and water tanks 5 and 6;
- vii. Milliken Well Pad condensate tanks 1, 2, 3, 5, and 6;
- viii. Ryser #1-25H Well Pad condensate tanks 1, 2, 3, 4, 5, 6, 7, and 8;
- ix. Shugert Well Pad condensate tank 2;
- x. Stutzman Well Pad water tank 3;
- xi. Hayes Well Pad condensate tank 2; and
- xii. Sandra Well Pad condensate tank 1.

The EPA inspectors also determined that combustion devices at the County Line II-Gustina Bear Well Pad and the Hayes Well Pad were not being operated with a continuous burning pilot flame, as required by Subpart OOOO.

50. EPA obtained additional information and Gulfport's own views concerning the Subject Facilities' CAA compliance status in response to information requests addressed to Gulfport.

a. In an August 2015 written response to EPA, Gulfport indicated that it had "recognized the issue with leaking hatches" on storage vessels during its own inspections with a FLIR camera. According to Gulfport, some emissions were attributable to a type of hatch that allowed vapor pressure relief at unduly low pressure levels. Other emissions were due to clogged piping that "caused back pressure to the tanks resulting in emissions releasing from the hatches."

b. Gulfport did not provide copies of any Subpart OOOO initial notifications for storage vessels at the Subject Facilities in response to an EPA request for that documentation. Instead, Gulfport's August 2015 written response to EPA expressed Gulfport's view that the Subpart OOOO initial notification requirements did not apply to any of those storage vessels because "[w]e have [General PTIO] 12.1 and 12.2 permits and have accepted a voluntary limit to restrict the potential VOC emission from each storage vessel to less than 6 tons per year."

c. Gulfport did not provide copies of any records of Subpart OOOO storage vessel inspections at the Subject Facilities in response to an EPA request for all records of inspections conducted pursuant to 40 C.F.R. §§ 60.5411 and 60.5416. Instead, Gulfport's October 2016 written response to EPA expressed Gulfport's view that "[t]here are no required inspections pursuant to 40 C.F.R. §60.5411 and §60.5416 for any of the well pad facilities."

d. Gulfport did not provide copies of any Subpart OOOO annual reports for storage vessels at the Subject Facilities in response to an EPA request for that

documentation. Instead, Gulfport's October 2016 response to EPA only included copies of annual reports for gas well completions, which did not include information about storage vessels at the Subject Facilities, as prescribed by 40 C.F.R. § 60.5420(b)(6).

e. Gulfport's October 2016 response to EPA indicated that "[a] design analysis of the Tank Vapor Capture System and Control Device has not been conducted for any well pad facilities."

f. Gulfport's October 2016 response to EPA reiterated Gulfport's view that all storage vessels at the Subject Facilities are "not subject to OOOO," either because: (i) the well pad had been issued a General PTIO "12.1 or 12.2 permit with practically enforceable limits;" or (ii) the well pad "utilized a [vapor recovery unit] (if needed) and routed vapor to a process."

51. Based on observations and evidence collected during and after its August 2015 inspections, EPA issued Gulfport a December 2016 Finding of Violation under the CAA. Among other things, it identified alleged violations of NSPS Subpart OOOO requirements at each of the Subject Facilities, including violations stemming from uncontrolled VOC emissions from Fully Regulated Storage Vessels at each of the Subject Facilities.

52. In a March 2017 written response to EPA's Finding of Violation, Gulfport asserted that none of the storage vessels at the Subject Facilities are subject to Subpart OOOO requirements because "Gulfport elected to opt out of Subpart OOOO through the Ohio [General PTIO] 12/1/12.2 permits by accepting to voluntarily limit and restrict the potential VOC emissions from each storage vessel to less than 6 tons per year per 40 CFR 60.5365(e)."

53. On information and belief, Gulfport made no Subpart OOOO emission determination for any of the storage vessels at the Subject Facilities by the applicable emission determination deadline.



54. On information and belief, Gulfport made no Subpart OOOO emission determination for storage vessels at the Subject Facilities after Gulfport removed a vapor recovery unit.

55. On information and belief, Gulfport made no Subpart OOOO emission determination for storage vessels at the Subject Facilities after the storage vessels were operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c).

56. On information and belief, until at least October 2016, Gulfport had not submitted Subpart OOOO initial notifications for any of the storage vessels at the Subject Facilities.

57. On information and belief, until at least October 2016, Gulfport had not submitted Subpart OOOO annual reports for any of the storage vessels at the Subject Facilities.

58. On information and belief, until at least October 2016, Gulfport had not performed any Subpart OOOO inspections of any of the storage vessel covers or storage vessel closed vent systems at the Subject Facilities.

59. On information and belief, until at least October 2016, Gulfport was not maintaining required records regarding Subpart OOOO compliance for any of the storage vessels at the Subject Facilities, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c).

60. Gulfport has failed to comply with Subpart OOOO emission control requirements applicable to storage vessels at the Subject Facilities, including the requirements that:

- (i) the cover and all openings on the cover form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel;
- (ii) each cover opening shall be secured in a closed, sealed position whenever material is in the unit on which the cover is installed;
- (iii) Gulfport design the closed vent system to route all gases, vapors, and fumes emitted from

the material in the storage vessel to a control device that meets the requirements specified by Subpart OOOO, or to a process; and (iv) Gulfport design and operate a closed vent system with no detectable emissions.

### **GULFPORT'S OIL AND GAS PRODUCTION WELL PADS**

61. When Ohio EPA issues General PTIOs for oil and gas well production operations, each oil and gas production well pad is assigned a unique Facility ID and a unique PTIO Number. In addition, each permitted air pollutant emission unit or collection of emissions units receives an Emission Unit ID assigned by the Facility's PTIO. These unique identifiers are cited in the following discussion of the twelve Subject Facilities owned and/or operated by Gulfport.

#### **The BK Stephens Well Pad**

62. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the BK Stephens Well Pad, located at or near 75501 Tyson Road, Cadiz, Ohio.

63. On information and belief, construction of the oil and gas production-related facilities and equipment at the BK Stephens Well Pad began before April 12, 2013 and ended after April 12, 2013.

a. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least six (6) condensate storage vessels and at least two (2) produced water storage vessels.

b. On information and belief, each condensate and produced water storage vessel located at this well pad is a Group 1 storage vessel because its construction began after August 23, 2011 but before April 13, 2013.

c. Alternatively, each condensate and produced water storage vessel located at this well pad is a Group 2 storage vessel because its construction began after April 12, 2013.

64. On information and belief, production startup at the BK Stephens Well Pad occurred in April 2013.

65. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the BK Stephens Well Pad at times between April 2013 and December 2014.

66. On information and belief, vapors have not been routed through a vapor recovery unit at the BK Stephens Well Pad since at least December 2014.

67. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the BK Stephens Well Pad.

68. On or about April 1, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the BK Stephens Well Pad. Gulfport's application said that "General Permit 12 is being requested."

69. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the BK Stephens Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

70. On or about April 24, 2013, Ohio EPA issued Gulfport PTIO P0113569 for the BK Stephens Well Pad. That well pad was assigned Facility ID 0634005043.

71. In the permit, the PTIO is described as “a general permit for the Oil and Gas Well-Site Production Operations (GP 12.1) located in Harrison County, Ohio for Gulfport Energy- BK Stephens.”

72. The PTIO for the BK Stephens Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

73. On or about November 21, 2014 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0113569 for the BK Stephens Well Pad.

74. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the BK Stephens Well Pad as: (i) 19.0900 tons per year VOC for one condensate tank; and (ii) 114.540 tons per year VOC for six condensate tanks.

75. Ohio EPA issued an administrative modification of the PTIO for the BK Stephens Well Pad on or about December 16, 2014. The modified PTIO was assigned Permit Number P0118088.

76. In the revised permit, the modified PTIO is described as an “Administrative modification to update general permit for the Oil and Gas Well-Site Production Operations with a large Flare (GP 12.2) located in Harrison County, Ohio for the Gulfport Energy - BK Stephens Production Facility.”

77. The modified PTIO for the BK Stephens Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

78. The modified PTIO for the BK Stephens Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

79. Each condensate storage vessel at the BK Stephens Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

80. Each condensate storage vessel at the BK Stephens Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The Boy Scout Well Pad**

81. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Boy Scout Well Pad, located at or near 79900 Adams Road, Tippecanoe, Ohio.

82. On information and belief, construction of the oil and gas production-related facilities and equipment at the Boy Scout Well Pad – including each condensate and produced water storage vessel located at that well pad – began after August 23, 2011 but before April 13, 2013. Each storage vessel at this well pad is therefore a Group 1 storage vessel.

83. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least eight (8) condensate storage vessels and at least four (4) produced water storage vessels.

84. On information and belief, production startup at the Boy Scout Well Pad occurred in November 2012.

85. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Boy Scout Well Pad at times since July 2013.

86. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Boy Scout Well Pad.

87. On or about March 28, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Boy Scout Well Pad. Gulfport's application said that "General Permit 12 is being requested."

88. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Boy Scout Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

89. On or about April 17, 2013, Ohio EPA issued Gulfport PTIO P0113532 for the Boy Scout Well Pad. That well pad was assigned Facility ID 0634005048.

90. In the permit, the PTIO is described as "a general permit for the Oil and Gas Well-Site Production Operations (GP 12.1) located in Harrison County, Ohio for Gulfport Energy-Boy Scout Well Pad site."

91. The PTIO for the Boy Scout Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

92. On or about January 7, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0113532 for the Boy Scout Well Pad.

93. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Boy Scott Well Pad as: (i) 39.5970 tons per year VOC for one condensate tank; and (ii) 316.776 tons per year VOC for eight condensate tanks.

94. Ohio EPA issued an administrative modification of the PTIO for the Boy Scout Well Pad on or about January 16, 2015. The modified PTIO was assigned Permit Number P0118285.

95. In the revised permit, the modified PTIO is described as an “administrative permit modification to general permit (P0113532 issued 4/17/13) for the Oil and Gas Well-Site Production Operations with a large Flare (GP 12.2) located in Harrison County, Ohio for Gulfport Energy – Boy Scout production facility.”

96. The modified PTIO for the Boy Scout Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

97. The modified PTIO for the Boy Scout Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

98. Each condensate storage vessel at the Boy Scout Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

99. Each condensate storage vessel at the Boy Scout Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

#### **The Clay Well Pad**

100. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Clay Well Pad, located at or near 31501 Morrison Road, Freeport, Ohio.

101. On information and belief, construction of the oil and gas production-related facilities and equipment at the Clay Well Pad began before April 12, 2013 and ended after April 12, 2013.

a. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least six (6) condensate storage vessels and at least two (2) produced water storage vessels.

b. On information and belief, each condensate and produced water storage vessel located at this well pad is a Group 1 storage vessel because its construction began after August 23, 2011 but before April 13, 2013.

c. Alternatively, each condensate and produced water storage vessel located at this well pad is a Group 2 storage vessel because its construction began after April 12, 2013.

102. On information and belief, production startup at the Clay Well Pad occurred in May 2013.

103. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Clay Well Pad at times between May 2013 and December 2014.

104. On information and belief, vapors have not been routed through a vapor recovery unit at the Clay Well Pad since at least December 2014.

105. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Clay Well Pad.

106. On or about April 17, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Clay Well Pad. Gulfport's application said that "General Permit 12 is being requested."



107. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Clay Well Pad, the application form asked: “As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?” Gulfport’s answer to that PTIO application question was: “No.”

108. On or about April 26, 2013, Ohio EPA issued Gulfport PTIO P0113948 for the Clay Well Pad. That well pad was assigned Facility ID 0634005045.

109. In the permit, the PTIO is described as “a general permit for the Oil and Gas Well-Site Production Operations (GP 12.1) located in Harrison County, Ohio for Gulfport Energy- Clay Well Pad.”

110. The PTIO for the Clay Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

111. On or about January 14, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0113948 for the Clay Well Pad.

112. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Clay Well Pad as: (i) 19.8700 tons per year VOC for one condensate tank; and (ii) 119.220 tons per year VOC for six condensate tanks.

113. Ohio EPA issued an administrative modification of the PTIO for the Clay Well Pad on or about February 17, 2015. The modified PTIO was assigned Permit Number P0118323.

114. In the revised permit, the modified PTIO is described as an “administrative permit modification to general permit (P0113948 issued 4/26/13) for the Oil and Gas Well-Site

Production Operations with a large flare (GP 12.2) located in Harrison County, Ohio for Gulfport Energy’s [sic] CLAY production facility.”

115. The modified PTIO for the Clay Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

116. The modified PTIO for the Clay Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

117. Each condensate storage vessel at the Clay Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

118. Each condensate storage vessel at the Clay Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The Family Well Pad**

119. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Family Well Pad, located at or near 65350 Wilson Road, Barnesville, Ohio.

120. On information and belief, construction of the oil and gas production-related facilities and equipment at the Family Well Pad – including each condensate and produced water storage vessel located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

121. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least three (3) condensate storage vessels and at least two (2) produced water storage vessels

122. On information and belief, production startup at the Family Well Pad occurred in December 2013.

123. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Family Well Pad at times between December 2013 and January 2015.

124. On information and belief, vapors have not been routed through a vapor recovery unit at the Family Well Pad since at least January 2015.

125. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Family Well Pad.

126. On or about January 30, 2014, Gulfport submitted an initial PTIO application to Ohio EPA for the Family Well Pad. Gulfport's application said that "General Permit 12 is being requested."

127. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Family Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

128. On or about February 18, 2014, Ohio EPA issued Gulfport PTIO P0116199 for the Family Well Pad. That well pad was assigned Facility ID 0607015005.

129. In the permit, the PTIO is described as "a general permit for the Oil and Gas Well-Site Production Operations (GP 12) located in Belmont County, Ohio for Gulfport Energy - Family Pad."

130. The PTIO for the Family Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

131. On or about January 21, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0116199 for the Family Well Pad.

132. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Family Well Pad as: (i) 8.462 tons per year VOC for one condensate tank; and (ii) 25.386 tons per year VOC for three condensate tanks.

133. Ohio EPA issued an administrative modification of the PTIO for the Family Well Pad on or about March 3, 2015. The modified PTIO was assigned Permit Number P0118351.

134. In the revised permit, the modified PTIO is described as an “administrative permit modification to general permit (P0116199 issued 2/18/14) for the Oil and Gas Well-Site Production Operations with a large flare (GP 12.2) located in Belmont County, Ohio for Gulfport Energy – Family production facility.”

135. The modified PTIO for the Family Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

136. The modified PTIO for the Family Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

137. Each condensate storage vessel at the Family Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

138. Each condensate storage vessel at the Family Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The County Line II-Gustina Bear Well Pad**

139. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the County Line II-Gustina Bear Well Pad, located at or near 34011 Cadiz-Piedmont Road, Flushing, Ohio.

140. On information and belief, construction of the oil and gas production-related facilities and equipment at the County Line II-Gustina Bear Well Pad – including each condensate and produced water storage vessel located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

141. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least six (6) condensate storage vessels and at least three (3) produced water storage vessels.

142. On information and belief, production startup at the County Line II-Gustina Bear Well Pad occurred in March 2014.

143. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the County Line II-Gustina Bear Well Pad at times since March 2014.

144. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the County Line II-Gustina Bear Well Pad.

145. On or about February 19, 2014, Gulfport submitted an initial PTIO application to Ohio EPA for the County Line II-Gustina Bear Well Pad. Gulfport's application said it was an "Application for [a] GP-12 Permit."

146. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the County Line II-Gustina Bear Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary

restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?” Gulfport’s answer to that PTIO application question was: “No.”

147. On or about March 11, 2014, Ohio EPA issued Gulfport PTIO P0116325 for the County Line II-Gustina Bear Well Pad. That well pad was assigned Facility ID 0634005070.

148. In the permit, the PTIO is described as “a general permit for the Oil and Gas Well-Site Production Operations (GP 12) located in Harrison County, Ohio for Gulfport Energy – County Line II- Gustina Bear Pad.”

149. The PTIO for the County Line II-Gustina Bear Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

150. On or about January 13, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0116325 for the County Line II-Gustina Bear Well Pad.

151. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the County Line II-Gustina Bear Well Pad as: (i) 89.4380 tons per year VOC for one condensate tank; and (ii) 536.628 tons per year VOC for six condensate tanks.

152. Ohio EPA issued an administrative modification of the PTIO for the County Line II-Gustina Bear Well Pad on or about January 30, 2015. The modified PTIO was assigned Permit Number P0118309.

153. In the revised permit, the modified PTIO is described as an “Administrative Modification” for “a general permit for the Oil and Gas Well-Site Production Operations with a Large Flare (GP 12.2) located in Harrison County, Ohio for Gulfport - Countyline 2 - Gustina Bear Production Facility.”

154. The modified PTIO for the County Line II-Gustina Bear Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

155. The modified PTIO for the County Line II-Gustina Bear Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

156. Each condensate storage vessel at the County Line II-Gustina Bear Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

157. Each condensate storage vessel at the County Line II-Gustina Bear Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

#### **The McCort Well Pad**

158. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the McCort Well Pad, located at or near 65800 Mt. Olivett Road, Barnesville, Ohio.

159. On information and belief, construction of the oil and gas production-related facilities and equipment at the McCort Well Pad – including each condensate and produced water storage vessel located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

160. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least four (4) condensate storage vessels and at least two (2) produced water storage vessels.

161. On information and belief, production startup at the McCort Well Pad occurred in June 2013.

162. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the McCort Well Pad at times between June 2013 and December 2014.

163. On information and belief, vapors have not been routed through a vapor recovery unit at the McCort Well Pad since at least December 2014.

164. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the McCort Well Pad.

165. On or about May 28, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the McCort Well Pad. Gulfport's application said that "General Permit 12 is being requested."

166. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the McCort Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

167. On or about June 6, 2013, Ohio EPA issued Gulfport PTIO P0114745 for the McCort Well Pad. That well pad was assigned Facility ID 0607015004.

168. In the permit, the PTIO is described as "a general permit for the Oil and Gas Well-Site Production Operations (GP 12) located in Harrison County, Ohio for Gulfport Energy-McCort Well Pad."

169. The PTIO for the McCort Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.



170. On or about March 10, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0114745 for the McCort Well Pad.

171. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the McCort Well Pad as: (i) 7.329 tons per year VOC for one condensate tank; (ii) 29.316 tons per year VOC for four condensate tanks; (iii) 5.9306 tons per year VOC for one produced water tank; and (iv) 11.861 tons per year VOC for two produced water tanks.

172. Ohio EPA issued an administrative modification of the PTIO for the McCort Well Pad on or about March 20, 2015. The modified PTIO was assigned Permit Number P0118599.

173. In the revised permit, the modified PTIO is described as an “administrative permit modification to general permit (P0114745 issued 6/6/13) for the Oil and Gas Well-Site Production Operations with a large flare (GP 12.2) located in Belmont County, Ohio for Gulfport Energy - McCort production facility.”

174. The modified PTIO for the McCort Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

175. The modified PTIO for the McCort Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

176. Each condensate storage vessel at the McCort Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

177. Each condensate storage vessel at the McCort Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

#### **The Milliken Well Pad**

178. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Milliken Well Pad, located at or near 31255 Cadiz-Piedmont Road, Freeport, Ohio.

179. On information and belief, construction of the oil and gas production-related facilities and equipment at the Milliken Well Pad – including the condensate and produced water storage vessels located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

180. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least six (6) condensate storage vessels and at least two (2) produced water storage vessels.

181. On information and belief, production startup at the Milliken Well Pad occurred in October 2013.

182. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Milliken Well Pad at times between October 2013 and March 2015.

183. On information and belief, vapors have not been routed through a vapor recovery unit at the Milliken Well Pad since at least March 2015.

184. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Milliken Well Pad.

185. On or about September 24, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Milliken Well Pad. Gulfport's application said that "General Permit 12 is being requested."

186. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Milliken Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

187. On or about September 26, 2013, Ohio EPA issued Gulfport PTIO P0115468 for the Milliken Well Pad. That well pad was assigned Facility ID 0634005072.

188. In the permit, the PTIO is described as "a general permit for the Oil and Gas Well-Site Production Operations (GP 12) located in Harrison County, Ohio for Gulfport Energy - Milliken Pad."

189. The PTIO for the Milliken Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

190. On or about December 12, 2014 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0115468 for the Milliken Well Pad.

191. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Milliken Well Pad as: (i) 61.2650 tons per year VOC for one condensate tank; and (ii) 367.590 tons per year VOC for six condensate tanks.

192. Ohio EPA issued an administrative modification of the PTIO for the Milliken Well Pad on or about January 8, 2015. The modified PTIO was assigned Permit Number P0118176.

193. In the revised permit, the modified PTIO is described as an “[a]dministrative permit modification for the Oil and Gas Well-Site Production Operations located in Harrison County, Ohio for Gulfport Energy - Milliken production facility to change to general permit with a large flare (GP 12.2).”

194. The modified PTIO for the Milliken Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

195. The modified PTIO for the Milliken Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

196. Each condensate storage vessel at the Milliken Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

197. Each condensate storage vessel at the Milliken Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

#### **The Ryser #1-25H Well Pad**

198. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Ryser #1-25H Well Pad, located at or near 77100 Scott Hill Road, Flushing, Ohio.

199. On information and belief, construction of the oil and gas production-related facilities and equipment at the Ryser #1-25H Well Pad – including each condensate and

produced water storage vessel located at that well pad – began after August 23, 2011 but before April 13, 2013. Each storage vessel at this well pad is therefore a Group 1 storage vessel.

200. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least eight (8) condensate storage vessels and at least four (4) produced water storage vessels.

201. On information and belief, production startup at the Ryser #1-25H Well Pad occurred in April 2013.

202. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Ryser #1-25H Well Pad at times between April 2013 and March 2015.

203. On information and belief, vapors have not been routed through a vapor recovery unit at the Ryser #1-25H Well Pad since at least March 2015.

204. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Ryser #1-25H Well Pad.

205. On or about March 29, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Ryser #1-25H Well Pad. Gulfport's application said that "General Permit 12 is being requested."

206. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Ryser #1-25H Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

207. On or about April 25, 2013, Ohio EPA issued Gulfport PTIO P0113536 for the Ryser #1-25H Well Pad. That well pad was assigned Facility ID 0634005049.

208. In the permit, the PTIO is described as “a general permit for the Oil and Gas Well-Site Production Operations (GP 12.1) located in Harrison County, Ohio for Gulfport Energy- Ryser #1-25H Well Pad.”

209. The PTIO for the Ryser #1-25H Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

210. On or about January 13, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0113536 for the Ryser #1-25H Well Pad.

211. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Ryser #1-25H Well Pad as: (i) 19.8700 tons per year VOC for one condensate tank; and (ii) 158.960 tons per year VOC for eight condensate tanks.

212. Ohio EPA issued an administrative modification of the PTIO for the Ryser #1-25H Well Pad on or about February 5, 2015. The modified PTIO was assigned Permit Number P0118310.

213. In the revised permit, the modified PTIO is described as an “[a]dministrative modification to general permit (P0113536 issued 4/25/13) for the Oil and Gas Well-Site Production Operations with large flare (GP12.2) located in Harrison County, Ohio for Gulfport Energy Ryser #1-25H production facility.”

214. The modified PTIO for the Ryser #1-25H Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

215. The modified PTIO for the Ryser #1-25H Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

216. Each condensate storage vessel at the Ryser #1-25H Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

217. Each condensate storage vessel at the Ryser #1-25H Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The Shugert 12 Well Pad**

218. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Shugert 12 Well Pad, located at or near 65800 Mt. Olivett Road, Barnesville, Ohio.

219. On information and belief, construction of the oil and gas production-related facilities and equipment at the Shugert 12 Well Pad began before April 12, 2013 and ended after April 12, 2013.

a. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least three (3) condensate storage vessels and at least three (3) produced water storage vessels.

b. On information and belief, each condensate and produced water storage vessel located at this well pad is a Group 1 storage vessel because its construction began after August 23, 2011 but before April 13, 2013.

c. Alternatively, each condensate and produced water storage vessel located at this well pad is a Group 2 storage vessel because its construction began after April 12, 2013.

220. On information and belief, production startup at the Shugert 12 Well Pad occurred in April 2013.

221. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Shugert 12 Well Pad at times since April 2013.

222. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Shugert 12 Well Pad.

223. On or about April 1, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Shugert 12 Well Pad. Gulfport's application said that "General Permit 12 is being requested."

224. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Shugert 12 Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

225. On or about April 25, 2013, Ohio EPA issued Gulfport PTIO P0113572 for the Shugert 12 Well Pad. That well pad was assigned Facility ID 0607015003.

226. In the permit, the PTIO is described as "a general permit for the Oil and Gas Well-Site Production Operations (GP 12.1) located in Belmont County, Ohio for Gulfport Energy- Shugert 12 Well Pad."

227. The PTIO for the Shugert 12 Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

228. On or about December 12, 2014 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0113572 for the Shugert 12 Well Pad.



229. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Shugert 12 Well Pad as: (i) 51.3660 tons per year VOC for one condensate tank; and (ii) 154.098 tons per year VOC for three condensate tanks.

230. Ohio EPA issued an administrative modification of the PTIO for the Shugert 12 Well Pad on or about January 13, 2015. The modified PTIO was assigned Permit Number P0118177.

231. In the revised permit, the modified PTIO is described as an “[a]dministrative permit modification to general permit (P0113572 issued 4/25/13) for the Oil and Gas Well-Site Production Operations with a large flare (GP12.2) located in Belmont County, Ohio for Gulfport Energy - Shugert 12 production facility.”

232. The modified PTIO for the Shugert 12 Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

233. The modified PTIO for the Shugert 12 Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

234. Each condensate storage vessel at the Shugert 12 Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

235. Each condensate storage vessel at the Shugert 12 Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The Stutzman Well Pad**

236. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Stutzman Well Pad, located at or near 35395 Rock River Road, Jerusalem, Ohio.

237. On information and belief, construction of the oil and gas production-related facilities and equipment at the Stutzman Well Pad began before April 12, 2013 and ended after April 12, 2013.

a. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least two (2) condensate storage vessels and at least two (2) produced water storage vessels.

b. On information and belief, each condensate and produced water storage vessel located at this well pad is a Group 1 storage vessel because its construction began after August 23, 2011 but before April 13, 2013.

c. Alternatively, each condensate and produced water storage vessel located at this well pad is a Group 2 storage vessel because its construction began after April 12, 2013.

238. On information and belief, production startup at the Stutzman Well Pad occurred in June 2013.

239. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Stutzman Well Pad.

240. On or about May 28, 2013, Gulfport submitted an initial PTIO application to Ohio EPA for the Stutzman Well Pad. Gulfport's application said that "General Permit 12 is being requested."

241. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Stutzman Well Pad, the application form asked: “As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?” Gulfport’s answer to that PTIO application question was: “No.”

242. On or about June 6, 2013, Ohio EPA issued Gulfport PTIO P0114744 for the Stutzman Well Pad. That well pad was assigned Facility ID 0656055001.

243. In the permit, the PTIO is described as “a general permit for the Oil and Gas Well-Site Production Operations (GP 12) located in Monroe County, Ohio for Gulfport Energy-Stutzman Well Pad.”

244. The PTIO for the Stutzman Well Pad adopted all Terms and Conditions of General PTIO 12.1, without any alterations.

245. On or about March 10, 2015 – after Ohio EPA finalized General PTIO 12.2 – Gulfport requested an administrative permit modification to PTIO P0114744 for the Stutzman Well Pad.

246. As part of its request for an administrative modification of its PTIO, Gulfport calculated the uncontrolled potential emissions at the Stutzman Well Pad as: (i) 3.5773 tons per year VOC for one produced water tank; and (ii) 7.155 tons per year VOC for two produced water tanks.

247. Ohio EPA issued an administrative modification of the PTIO for the Stutzman Well Pad on or about March 20, 2015. The modified PTIO was assigned Permit Number P0118600.

248. In the revised permit, the modified PTIO is described as an “[a]dministrative permit modification to general permit (P0114744 issued 6/6/13) for the Oil and Gas Well-Site Production Operations with a large flare (GP 12.2) located in Monroe County, Ohio for Gulfport Energy - Stutzman production facility.”

249. The modified PTIO for the Stutzman Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

250. The modified PTIO for the Stutzman Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

251. Each produced water storage vessel at the Stutzman Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

252. Each produced water storage vessel at the Stutzman Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

### **The Hayes Well Pad**

253. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Hayes Well Pad, located on Mt. Olivett Road, Barnesville, Ohio.

254. On information and belief, construction of the oil and gas production-related facilities and equipment at the Hayes Well Pad – including the condensate and produced water storage vessels located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

255. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least three (3) condensate storage vessels and at least three (3) produced water storage vessels.

256. On information and belief, production startup at the Hayes Well Pad occurred in September 2014.

257. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Hayes Well Pad.

258. On or about July 17, 2014, Gulfport submitted an initial PTIO application to Ohio EPA for the Hayes Well Pad. Gulfport's application said that "General Permit 12.2 is being requested."

259. As part of its PTIO application, Gulfport calculated the maximum emissions before controls from the Hayes Well Pad storage tanks and truck loading as 12.4 pounds per hour VOC, which translates to 54.312 tons per year VOC.

260. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Hayes Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

261. On or about August 19, 2014, Ohio EPA issued Gulfport PTIO P0117311 for the Hayes Well Pad. That well pad was assigned Facility ID 0607015009.

262. In the permit, the PTIO is described as an "a general permit for the Oil and Gas Well-Site Production Operations with a Large Flare (GP 12.2) located in Belmont County, Ohio for the Hayes Production Facility."

263. The PTIO for the Hayes Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

264. The PTIO for the Hayes Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

265. Each condensate storage vessel at the Hayes Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

266. Each condensate storage vessel at the Hayes Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

#### **The Sandra Well Pad**

267. Gulfport owns and operates oil and gas production-related facilities and equipment at a site known as the Sandra Well Pad, located on McMillan Road, Bethesda, Ohio.

268. On information and belief, construction of the oil and gas production-related facilities and equipment at the Sandra Well Pad – including the condensate and produced water storage vessels located at that well pad – began after April 12, 2013. Each storage vessel at this well pad is therefore a Group 2 storage vessel.

269. On information and belief, the oil and gas production-related facilities and equipment installed at this well pad included at least three (3) condensate storage vessels and at least three (3) produced water storage vessels.

270. On information and belief, production startup at the Sandra Well Pad occurred in August 2014.

271. On information and belief, vapors from certain sources were routed through a vapor recovery unit at the Sandra Well Pad at times between August 2014 and January 2015.

272. On information and belief, vapors have not been routed through a vapor recovery unit at the Sandra Well Pad since at least January 2015.

273. On information and belief, vapors from storage vessels have never been recovered and routed to a process through a vapor recovery unit at the Sandra Well Pad.

274. On or about August 12, 2014, Gulfport submitted an initial PTIO application to Ohio EPA for the Sandra Well Pad. Gulfport's application said that "[a] GP12.2 is being requested."

275. As part of its PTIO application for the Sandra Well Pad, Gulfport calculated the maximum emissions before controls from the Sandra Well Pad storage tanks and truck loading as 8.45 pounds per hour VOC, which translates to 37.011 tons per year VOC.

276. In the portion of the PTIO application addressing emissions from flash vessel/storage tanks and truck loading at the Sandra Well Pad, the application form asked: "As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?" Gulfport's answer to that PTIO application question was: "No."

277. On or about August 29, 2014, Ohio EPA issued Gulfport PTIO P0117451 for the Sandra Well Pad. That well pad was assigned Facility ID 0607045002.

278. In the permit, the PTIO is described as an "a general permit for the Oil and Gas Well-Site Production Operations (GP 12.2) located in Belmont County, Ohio for Gulfport Energy- Sandra."

279. The PTIO for the Sandra Well Pad adopted all Terms and Conditions of General PTIO 12.2, without any alterations.

280. The PTIO for the Sandra Well Pad includes no federally enforceable or legally and practically enforceable voluntary limits to restrict the potential VOC emissions from each storage vessel to less than six (6) tons per year.

281. Each condensate storage vessel at the Sandra Well Pad had the potential for VOC emissions equal to or greater than six (6) tons per year as determined in accordance with Subpart OOOO.

282. Each condensate storage vessel at the Sandra Well Pad is a Fully Regulated Storage Vessel that is subject to relevant Subpart OOOO regulatory requirements, including requirements summarized above.

## **CLAIMS FOR RELIEF**

### **Claim 1**

#### **Subpart OOOO and PTIO Violations at the BK Stephens Well Pad**

283. Paragraphs 1 through 282 are incorporated herein by reference.

284. Gulfport failed to make a Subpart OOOO emission determination for each storage vessel at the BK Stephens Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

285. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the BK Stephens Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111,



42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

286. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the BK Stephens Well Pad after the storage vessel was operated without meeting:

(i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a

Conditionally Deregulated Storage Vessel at the time, then this violated requirements of:

(i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

287. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the BK Stephens Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

288. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the BK Stephens Well Pad. Gulfport has thereby violated requirements of:

(i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

289. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the BK Stephens Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

290. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the BK Stephens Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements

specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

291. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the BK Stephens Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

292. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 2**  
**Subpart OOOO and PTIO Violations at the Boy Scout Well Pad**

293. Paragraphs 1 through 282 are incorporated herein by reference.

294. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Boy Scout Well Pad by the applicable emission determination deadline. Gulfport

has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

295. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Boy Scout Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

296. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Boy Scout Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

297. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Boy Scout Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

298. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Boy Scout Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

299. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Boy Scout Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements

specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

300. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Boy Scout Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

301. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 3**  
**Subpart OOOO and PTIO Violations at the Clay Well Pad**

302. Paragraphs 1 through 282 are incorporated herein by reference.

303. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Clay Well Pad by the applicable emission determination deadline. Gulfport has

thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

304. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Clay Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

305. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Clay Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

306. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Clay Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

307. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Clay Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

308. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the

Clay Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

309. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Clay Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

310. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Clay Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

311. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 4**  
**Subpart OOOO and PTIO Violations at the Family Well Pad**

312. Paragraphs 1 through 282 are incorporated herein by reference.

313. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Family Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

314. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Family Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

315. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Family Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

316. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Family Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

317. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Family Well Pad. Gulfport has thereby violated requirements of:

(i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

318. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Family Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

319. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Family Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

320. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Family Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c),



60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

321. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 5**

**Subpart OOOO and PTIO Violations at the County Line II-Gustina Bear Well Pad**

322. Paragraphs 1 through 282 are incorporated herein by reference.

323. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the County Line II-Gustina Bear Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

324. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the County Line II-Gustina Bear Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

325. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the County Line II-Gustina Bear Well Pad. Gulfport thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

326. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the County Line II-Gustina Bear Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

327. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the County Line II-Gustina Bear Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

328. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the County Line II-Gustina Bear Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

329. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the County Line II-Gustina Bear Well Pad, including cover and closed vent system design and operation

requirements and combustion control device operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5412(d) and/or 60.5413(e), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

330. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 6**  
**Subpart OOOO and PTIO Violations at the McCort Well Pad**

331. Paragraphs 1 through 282 are incorporated herein by reference.

332. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the McCort Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

333. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the McCort Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

334. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the McCort Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system

requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of:

(i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

335. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel and each produced water storage vessel at the McCort Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

336. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel and each produced water storage vessel at the McCort Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

337. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover, each condensate storage vessel closed vent system, each produced water storage vessel cover, and each produced water storage vessel closed vent system at the McCort Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

338. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel and each produced water storage vessel at the McCort Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated

requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

339. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels and the produced water storage vessels at the McCort Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

340. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 7**  
**Subpart OOOO and PTIO Violations at the Milliken Well Pad**

341. Paragraphs 1 through 282 are incorporated herein by reference.

342. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Milliken Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

343. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Milliken Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

344. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Milliken Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

345. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Milliken Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

346. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Milliken Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

347. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Milliken Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c)

and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

348. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Milliken Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

349. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Milliken Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

350. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 8**

**Subpart OOOO and PTIO Violations at the Ryser #1-25H Well Pad**

351. Paragraphs 1 through 282 are incorporated herein by reference.

352. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Ryser #1-25H Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

353. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Ryser #1-25H Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

354. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Ryser #1-25H Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

355. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Ryser #1-25H Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.



356. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Ryser #1-25H Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

357. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Ryser #1-25H Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

358. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Ryser #1-25H Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

359. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Ryser #1-25H Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c),

60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

360. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 9**  
**Subpart OOOO and PTIO Violations at the Shugert 12 Well Pad**

361. Paragraphs 1 through 282 are incorporated herein by reference.

362. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Shugert 12 Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

363. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Shugert 12 Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

364. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Shugert 12 Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

365. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Shugert 12 Well Pad. Gulfport has thereby violated requirements of:

(i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

366. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Shugert 12 Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

367. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Shugert 12 Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

368. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Shugert 12 Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c),

60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

369. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 10**  
**Subpart OOOO and PTIO Violations at the Stutzman Well Pad**

370. Paragraphs 1 through 282 are incorporated herein by reference.

371. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Stutzman Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

372. Gulfport did not make a Subpart OOOO initial notification for each produced water storage vessel at the Stutzman Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

373. Gulfport has not submitted Subpart OOOO annual reports for each produced water storage vessel at the Stutzman Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

374. Gulfport has not performed periodic Subpart OOOO inspections of each produced water storage vessel cover and each produced water storage vessel closed vent system at the Stutzman Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c)

and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

375. Gulfport has not maintained required records regarding Subpart OOOO compliance for each produced water storage vessel at the Stutzman Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

376. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the produced water storage vessels at the Stutzman Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

377. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

### **Claim 11**

#### **Subpart OOOO and PTIO Violations at the Hayes Well Pad**

378. Paragraphs 1 through 282 are incorporated herein by reference.

379. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Hayes Well Pad by the applicable emission determination deadline. Gulfport has

thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

380. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Hayes Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

381. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Hayes Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

382. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Hayes Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

383. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Hayes Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

384. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Hayes Well Pad, including cover and closed vent system design and operation requirements and combustion

control device operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5412(d) and/or 60.5413(e), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

385. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).

**Claim 12**  
**Subpart OOOO and PTIO Violations at the Sandra Well Pad**

386. Paragraphs 1 through 282 are incorporated herein by reference.

387. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Sandra Well Pad by the applicable emission determination deadline. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5365(e) and CAA Section 111, 42 U.S.C. § 7411.

388. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Sandra Well Pad after Gulfport removed the vapor recovery unit serving that well pad. If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

389. Gulfport did not make a Subpart OOOO emission determination for each storage vessel at the Sandra Well Pad after the storage vessel was operated without meeting: (i) the cover requirements specified in 40 C.F.R. § 60.5411(b); and/or (ii) the closed vent system

requirements specified in 40 C.F.R. § 60.5411(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of:

(i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

390. Gulfport did not make a Subpart OOOO initial notification for each condensate storage vessel at the Sandra Well Pad. Gulfport has thereby violated requirements of 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411.

391. Gulfport has not submitted Subpart OOOO annual reports for each condensate storage vessel at the Sandra Well Pad. Gulfport has thereby violated requirements of:

(i) 40 C.F.R. § 60.5420(b)(6) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

392. Gulfport has not performed periodic Subpart OOOO inspections of each condensate storage vessel cover and each condensate storage vessel closed vent system at the Sandra Well Pad. Gulfport has thereby violated requirements of: (i) 40 C.F.R. § 60.5416(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410

393. Gulfport has not maintained required records regarding Subpart OOOO compliance for each condensate storage vessel at the Sandra Well Pad, including records documenting compliance with the cover requirements and closed vent system requirements specified in 40 C.F.R. § 60.5411(b)-(c). If the storage vessel qualified as a Conditionally Deregulated Storage Vessel at the time, then this violated requirements of: (i) 40 C.F.R. § 60.5365(e)(3) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410. If the storage vessel qualified as a Fully Regulated Storage Vessel at the time, then this violated requirements of:



(i) 40 C.F.R. §§ 60.5410(h) and 60.5420(c) and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

394. Gulfport has not maintained continuous compliance with the Subpart OOOO emission control requirements applicable to the condensate storage vessels at the Sandra Well Pad, including cover and closed vent system design and operation requirements. Gulfport has thereby violated requirements of: (i) 40 C.F.R. §§ 60.5395(b) and (e), 60.5411(b) and (c), 60.5415(e), and CAA Section 111, 42 U.S.C. § 7411; and (ii) the Terms and Conditions of Gulfport's PTIO for the well pad and CAA Section 110, 42 U.S.C. § 7410.

395. Gulfport's violations of the Clean Air Act, as set forth in this Claim, make Gulfport subject to injunctive relief and civil penalties of up to the inflation-adjusted statutory maximum amounts referenced in Paragraph 43, per day per violation, pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b).


#### **PRAYER FOR RELIEF**

Wherefore, the United States requests that this Court:

- i. Enjoin Gulfport from further violations of the CAA and order Gulfport to take all steps necessary to achieve compliance with the CAA;
- ii. Assess civil penalties against Gulfport of up to \$37,500 per day for each violation until November 2, 2015, and up to \$99,681 per day for each violation after November 2, 2015;
- iii. Award the United States its costs in this action;
- iv. Award any other appropriate relief in accordance with CAA Section 113(b), 42 U.S.C. § 7413(b); and
- v. Grant such other relief as the Court deems just and proper.

Signature Page for Complaint in *United States v. Gulfport Energy Corporation* (S.D. Ohio)

FOR THE UNITED STATES OF AMERICA:



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JEFFREY BOSSERT CLARK  
Assistant Attorney General  
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Signature Page for Complaint in *United States v. Gulfport Energy Corporation* (S.D. Ohio)

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**Attachment 1: Ohio Model General PTIO 12.1**

Permit Number: [Permit Number]  
Facility Name: [Facility Name]  
Facility ID: [Facility ID]  
Working Copy of a Permit in Progress

## GENERAL PERMIT 12.1 TEMPLATE

High Volume Horizontal Hydraulic Fracturing, OIL AND GAS WELL SITE PRODUCTION OPERATIONS

### B. Facility-Wide Terms and Conditions

The following are the terms and conditions for a General PTIO to be issued to a non-Title V facility

Permit Number: [Permit Number]

Facility Name: [Facility Name]

Facility ID: [Facility ID]

**Working Copy of a Permit in Progress**

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) B.6. and B.8.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) B.9. and B.10.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines; and Part 63 Subpart HH, the National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities . At this time, the Ohio EPA is not accepting delegation for area sources subject to the Maximum Achievable Control Technology NESHAP (MACT) rules. The requirements of these rules, that are applicable to the area source(s) for hazardous air pollutants (HAP) identified in this permit, shall be enforceable by U.S. EPA. The complete requirements of this rule (including the Part 63 General Provisions) may be accessed via the Internet from the Electronic code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the appropriate Ohio EPA District Office or Local Air Agency.
3. Multiple emissions units contained in this permit must comply with various federal New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards. The complete NSPS and MACT requirements may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District Office or local air agency. The permittee must comply with the applicable requirements of 40 CFR Part 60 Subparts OOOO, JJJJ, and IIII and 40 CFR Part 63 Subparts HH and ZZZZ as they apply to the emissions source.
4. Air contaminant sources that qualify as de minimis under OAC rule 3745-15-05, or are exempt under OAC rule 3745-31-03(A)(1) or (4) are not subject to emission standards established within this permit. Although this permit does not apply to de minimis or exempt sources, emissions from de minimis or exempt sources must be included in the total potential to emit (PTE) calculations for this permit. PTE calculations should include sources such as:
  - a) qualifying non-road engines (exempt per 3745-31-03(A)(1)(pp)),
  - b) emergency diesel generator(s) (exempt per 3745-31-03(A)(1)(nn)),
  - c) micro turbines less than 200 kW (de minimis per OAC rule 3745-15-05), and
  - d) natural gas-fired heaters/boilers of various types that are less than 10 MMBtu/hr heat input (exempt per 3745-31-03(A)(1)(a)).
5. Emissions units permitted under a previously issued PTI/PTIO as portable sources shall be subject to the requirements of this General Permit during the time they are located at this site, provided that the emission unit(s) meets the qualifying criteria.

Permit Number: [Permit Number]

Facility Name: [Facility Name]

Facility ID: [Facility ID]

**Working Copy of a Permit in Progress**

6. The requirements of this permit do not supersede any Ohio Department of Natural Resources requirements.
7. It is the permittee's responsibility to determine if any air pollution emitting equipment not covered by this permit needs a separate air permit.
8. Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), is not necessary if/when the maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, is less than 1.0 ton per year (or are subject to a standard under 40 CFR Part 63). OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.
9. The permittee remains subject to all applicable federal law and regulations and all applicable provisions of the Ohio State Implementation Plan as approved by the Administrator of the U.S. EPA. The provisions of the Ohio State Implementation Plan are independently enforceable by the U.S. EPA.
10. If the determination that the facility is not a major source is based on actual emissions of 5 tons per year or more of any single HAP or 12.5 tons per year or more of a combination of HAP, the permittee shall update the facility's major source determination within 1 year of the prior determination and each year thereafter, using gas composition data measured during the preceding 12 months of operation. Only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for major source determination at the production field facility (facility located prior to the point of custody transfer).  
[40 CFR 63.760(c)] and [40 CFR 63.761]
11. Emission units and any required control and monitoring equipment shall be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions.  
[40 CFR 63.764(j)], [40 CFR 60.4243(b)], and [40 CFR 60.4211(g)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

## **C. Emissions Unit Terms and Conditions**



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**1. Emissions Unit: Dehydration System, P001**

**Operations, Property and/or Equipment Description:**

P001	Up to two glycol dehydration unit(s) (includes contact tower or absorption column and glycol dehydration unit reboiler) and gas-condensate-glycol (GCG) separator (flash separator), which may be vented to a condenser or BTEX (benzene, toluene, ethyl benzene, xylene) elimination system with condenser, and/or flare (less than 10 MMBtu/hr) or a facility-wide flare (see P004).
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. 1.b)(1)d.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

b. 1.b)(1)e. and 1.b)(1)f.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	For Total Organic Compounds (TOC), total hazardous air pollutants (total HAP), or benzene, compliance with the applicable control requirements of 40 CFR Part 63, Subpart HH.  Emissions from a flare used to control emissions from the glycol dehydration unit shall not exceed:  0.25 ton Nitrogen Oxides (NOx) per month averaged over a 12-month rolling period;  0.23 ton VOC per month averaged over a 12-month rolling period; and

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.15 ton Sulfur dioxide (SO <sub>2</sub> ) per month averaged over a 12-month rolling period.  See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b.
c.	ORC 3704.03(T)	Carbon Monoxide (CO) emissions from a flare used as a control device for the dehydrator shall not exceed 1.35 tons CO per month averaged over a 12-month rolling period.
d.	OAC rule 3745-31-05(E)	See b)(2)b.
e.	Part 63, Subpart HH, National Emission Standards for hazardous air pollutants (NESHAP) from Oil and Natural Gas Production Facilities	Compliance with the applicable portions of 40 CFR Part 63, Subpart HH. Any final amendments to this rule will supersede any previous Subpart HH requirement(s) in this permit.
f.	40 CFR 63.11(b)(4)	No visible emissions except for 5 minutes during any 2 consecutive hours.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then BAT no longer applies.
- b. These rules apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
- i. This permit takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
- (a) Emissions of Volatile Organic Compounds (VOC) (excludes methane and ethane) shall not exceed 5.0 tons/year;
- (b) Use of a dehydration system flash separator that captures flash vapors; and

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

(c) Use of a flare and/or a BTEX Elimination System with condenser on the dehydration still vent(s) as needed to comply with the 5.0 ton VOC/year emission limit.

ii. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> and SO<sub>2</sub> emissions from this air contaminant source since the potential to emit for NO<sub>x</sub> and SO<sub>2</sub> are less than ten tons per year.

c) Operational Restrictions

(1) If this facility does not qualify for the dehydrator exemption found in 40 CFR Part 63.764(e), then this facility must comply with all applicable operational restrictions and control requirements found in 40 CFR Part 63, Subpart HH, including the requirements for a flare.

(2) If this facility does qualify for the dehydrator exemption found in 40 CFR Part 63.764(e), then:

a. If a flare is used to control emissions from the dehydrator:

i. The flare shall be operated with a flame present at all times when gases are vented to it.

ii. An automatic flame ignition system shall be installed.

iii. If the permittee is using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then an alarm shall sound.

iv. If the permittee is using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.

v. Any flare, auto ignition system, and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

b. If a condenser (or BTEX elimination system) is used to control emissions from the dehydrator:

i. The condenser shall be operated at all times when gases are vented to it.

ii. The condenser must be equipped with a continuous temperature monitoring device that continuously monitors and records the dehydration still vent temperature.

iii. The condenser, temperature monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput or a record of the maximum potential annual throughput rate attainable, based on the physical and operational design of the unit, in accordance with 40 CFR 63.760(a).
- (2) Where a flare is used to control the dehydration still vent, the permittee must:
  - a. continuously monitor the presence of the flame;
  - b. record all periods during which the automatic flare ignition system (pilot flame or electronic arc ignition system) or thermocouple was not working; and
  - c. record all periods during which there was gas being vented to the flare but the flare was not lit.
- (3) Where a condenser (or BTEX elimination system) is used to control the dehydration still vent, the permittee must:
  - a. continuously monitor and record the vapor outlet temperature of the condenser; and
  - b. record all periods of time when the condenser is not operating correctly to control the emissions from the dehydration still vent.
- (4) For each triethylene glycol (TEG) dehydration unit, the permittee shall document the method of compliance as follows:
  - a. if the permittee is using the exemption for the annual average flow rate of natural gas to the TEG dehydration unit, the permittee shall either install and operate a monitoring instrument to directly measure and record the natural gas flow rate to the glycol dehydration unit or demonstrate to the Director's satisfaction that the actual annual average natural gas flow rate to the dehydration unit is less than 85,000 scm/day, in accordance with 40 CFR 63.772(b)(1); or
  - b. if the permittee is using the exemption for the actual average benzene emissions from the TEG dehydration unit, the permittee shall keep the record of the determination (including the test methods and data used to support it) using either the GRI-GLYCalc™ model or by directly measuring benzene using the appropriate methods identified in 40 CFR 63.772(a)(1), in accordance with 40 CFR 63.772(b)(2); or
  - c. if the permittee does not meet one of the exemptions identified in 40 CFR 63.764(e) and is not located in a Urbanized Area (UA) plus offset and Urban Cluster (UC) boundary (as defined in 40 CFR 63.761), the permittee may (instead of meeting the control requirements) keep the record of the calculation for the optimal circulation rate (or alternate circulation rate as allowed using GRI-GLYCalc™ model) and records documenting this circulation rate is not exceeded in accordance with 40 CFR 63.764(d)(2); or

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- d. if the permittee does not meet one of the exemptions identified in 40 CFR 63.764(e) and is located in a Urban Area (UA) plus offset and Urban Cluster (UC) boundary (as defined in 40 CFR 63.761), the permittee shall comply with the control requirements specified in 40 CFR 63.765 and the monitoring and recordkeeping requirements identified in 40 CFR 63.764(d)(1) to demonstrate compliance.

e) Reporting Requirements.

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. the annual facility natural gas or hydrocarbon liquid throughput for the year of the report, in accordance with 40 CFR 63.760(a);
  - b. identification of the kind of liquid glycol used in the dehydrator during the year of the report, e.g., ethylene glycol, diethylene glycol, or triethylene glycol\*;
  - c. if the permittee is using triethylene glycol and meeting the exemption for the flow rate of natural gas to the TEG dehydration unit, the actual annual average natural gas flow rate to the TEG dehydration unit; and either the calculations and/or method of measurement of this flow rate or a statement that this flowrate was based on the maximum design capacity of the unit;
  - d. if the permittee is using triethylene glycol and meeting the exemption for benzene emissions, the actual annual average emissions of benzene from the TEG dehydration unit; and if these emissions were determined using the GRI-GLYCalc™ model, the method used to determine the benzene concentration entered into the model, and/or identification of the method used for direct measurement;
  - e. if the permittee is using triethylene glycol and the area source is not located in an UA plus offset and UC boundary and does not meet one of the exemptions identified in 40 CFR 63.764(e), the calculation for the optimal circulation rate and the method of measurement for the gas flowrate (MMscf/day) and inlet/outlet water content (lbs/MMscf), and a statement as to whether or not the optimal circulation rate was exceeded, to include the date, duration, and the non-compliant circulation rate measured;
  - f. if the permittee is using triethylene glycol and the area source is located in an UA plus offset and UC boundary and does not meet one of the exemptions identified in 40 CFR 63.764(e), the method of control that was used to demonstrate

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

compliance, the results of the compliance demonstration, and a statement as to whether or not the selected compliance option was met;

- g. where a flare is used to control the dehydration still vent, all periods of time during which the automatic flare ignition system was not functioning properly or the flare was not maintained as required in this permit, to include the date, time, and duration of each such period of time;
- h. where a condenser (or BTEX elimination system) is used to control the dehydration still vent, all periods of time when the continuous temperature monitoring device for the condenser vapor outlet temperature is not working or is not continuously recording the vapor outlet temperature when process gas is being vented to the condenser; and
- i. where the triethylene glycol dehydrator does not meet one of the exemptions in 40 CFR 63.764(e) or is not demonstrating compliance by documenting and maintaining the optimum glycol circulation rate as required in 40 CFR 63.764(d)(2), the flare or condenser used to demonstrate compliance shall meet all of the requirements of Part 63 Subpart HH.

\* if not using triethylene glycol, the information in “c” through “i” is not required

[40 CFR 63.764(d) and (e)], [40 CFR 63.765], and [40 CFR 63.772(a) and(b)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emissions Limitation:

For total TOC, total HAP, or benzene, compliance with the applicable control requirements of 40 CFR Part 63, Subpart HH.

Applicable Compliance Method:

The permittee may determine the annual total TOC (excludes methane and ethane), total HAP, or benzene emissions using the appropriate methods identified in 40 CFR 63.772 and/or GRI-GLYCalc™ model, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit(s) and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1);

Potential TOC, total HAP, and/or benzene emissions estimates shall be based on the maximum glycol circulation rate(s), in gallons per minute (gpm); the worst case pollutant concentrations from representative extended gas analyses of the inlet wet gas; and the maximum natural gas flow rate, as determined by 40 CFR 63.772(b)(1)(i); or for a new unit, potential emissions shall be estimated in accordance with 40 CFR 63.760(a) and increased by a factor of 1.2. The permittee may also determine the estimated annual

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

VOC emission through direct measurement using Method M25A or Method 18, both from Appendix A of Part 60.

[40 CFR 63.765(b)(1) and/or (c)(3)], [40 CFR 63.771(c) and (d)], [40 CFR 63.772], [40 CFR 63.773(d)], and [OAC rule 3745-31-05(E)]

(2) Emission Limitation from a flare used to control the dehydrator:

1.35 tons of CO per month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for CO is based on using the AP-42 emission factor of 0.37 lb CO/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for Flare Operations" and using the estimated burner rating of 10.0 MMBtu/hr. Estimated CO emissions shall be determined by the following calculations:

$$0.37 \text{ lb CO/MMBtu} \times 10.0 \text{ MMBtu/hr} = 3.7 \text{ lbs CO/hr}$$

$$3.7 \text{ lbs CO/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 16.2 \text{ tons CO/year}$$

$$16.2 \text{ tons CO} \div 12 \text{ months} = 1.35 \text{ tons CO/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(3) Emission Limitation from a flare used to control the dehydrator:

0.23 ton of VOC per month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for VOC is based on using the AP-42 emissions factor of 0.14 lb of hydrocarbon/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1 "Emission Factors for Flare Operations" excluding emissions of methane (55% per Table 13.5-2 "Hydrocarbon Composition of Flare Emissions") and using the estimated burner rating of 10 MMBtu/hr. Estimated VOC emissions shall be determined by the following calculation:

$$0.14 \text{ lb VOC/MMBtu} \times 45\% \times 10.0 \text{ MMBtu/hr} = 0.63 \text{ lb VOC/hr}$$

$$0.63 \text{ lb VOC/hr} \times 8760 \text{ hr/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 2.8 \text{ tons VOC/year}$$

$$2.8 \text{ tons VOC} \div 12 \text{ months} = 0.23 \text{ ton VOC/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(4) Emission Limitation from a flare used to control the dehydrator:

0.25 ton of NOx per month averaged over a 12-month rolling period

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

The emissions limitation for NO<sub>x</sub> is based on using the AP-42 emission factor of 0.068 lb NO<sub>x</sub>/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for Flare Operations" and using the estimated burner rating of 10 MMBtu/hr. Estimated NO<sub>x</sub> emissions shall be determined by the following calculation:

$$0.068 \text{ lb NO}_x/\text{MMBtu} \times 10.0 \text{ MMBtu/hr} = 0.68 \text{ lb NO}_x/\text{hr}$$

$$0.68 \text{ lb NO}_x/\text{hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 3.0 \text{ tons NO}_x/\text{year}$$

$$3.0 \text{ tons NO}_x \div 12 \text{ months} = 0.25 \text{ ton NO}_x/\text{month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(5) Emission Limitation from a flare used to control the dehydrator:

0.15 ton of SO<sub>2</sub> per month averaged over a 12-month rolling period

Applicable Compliance Method:

The SO<sub>2</sub> emissions limitation is based on a fuel gas with a maximum H<sub>2</sub>S content of 250 ppmv for sour gas.

Compliance with the ton per year SO<sub>2</sub> emissions limitation shall be determined by the following calculations:

$$10 \text{ MMBtu/hr} \times 1 \text{ scf}/1020 \text{ Btu} \times 1 \text{ lb-mole}/379.5 \text{ scf} \times 250 \text{ ppm H}_2\text{S} \times 64 \text{ lb SO}_2/\text{lb-mole} = 0.41 \text{ lb SO}_2/\text{hr}$$

$$0.41 \text{ lb SO}_2/\text{hr} \times 8760 \text{ hrs/year} \times 1 \text{ ton}/2000 \text{ lbs} = 1.8 \text{ tons SO}_2/\text{year}$$

$$1.8 \text{ tons SO}_2 \div 12 \text{ months} = 0.15 \text{ ton SO}_2/\text{month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(6) Emission Limitation:

Where the flare is used to demonstrate compliance with Part 63, Subpart HH, there shall be no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 63.11(b)(4)]

g) Miscellaneous Requirements



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

(1) None

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**2. Emissions Units: Spark Ignition Internal Combustion Engines, P002**

**Operations, Property and/or Equipment Description:**

P002	<p>One or multiple stationary natural gas-fired spark ignition (SI) internal combustion engines (ICE) with a combined total horsepower (HP) of no more than 1,800 HP for the site.*</p> <p>Includes 2007 and later model year engines manufactured after the applicable effective date identified in 40 CFR 60.4230(a)(3); and engines manufactured before the effective date of the NSPS, where compliance with the Part 60 Subpart JJJJ emissions standards for the same size engine can be met by retrofitting the engine with a control device and demonstrated through stack testing.</p>
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\* In order to maintain the carbon monoxide (CO) emissions below major source thresholds and nitrogen oxides (NOx) emissions below state significant impact levels, where the sum of the total horsepower (HP) of the spark ignition (SI) engines exceeds 1,300 HP, the SI engines rated at or over 100 HP may be required to meet more stringent standards for CO and NOx than is applicable to the engine.

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (a) None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (a) 2.b)(1)a.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart JJJJ	Engines shall either be certified to the applicable Part 60 Subpart JJJJ emission standards and/or the exhaust emissions shall not exceed the

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	<p>In accordance with 40 CFR 60.4230, the engines in this emissions group are subject to the New Source Performance Standards (NSPS) for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE).</p> <p>40 CFR 60.4233(e)</p> <p>40 CFR 60.4231(a), (d), and (e)-mfg.</p> <p>Table 1 to Part 60, Subpart JJJJ</p>	<p>following emission limitations:</p> <p>the applicable emission standards for nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) as identified in Table 1 to Part 60, Subpart JJJJ; or</p> <p>for engines less than or equal to 25 HP, the applicable standards from 40 CFR Part 90 or Part 1054; or</p> <p>for engines greater than 25 HP and less than 100 HP, the applicable standards from Part 1048.</p> <p>Where the total summation of the SI ICE HP is equal to or less than 1,300 HP, the natural gas engine emissions together shall not exceed the worst-case emission standards for engines of 100 HP or greater from Table 1 to the subpart<sup>1</sup>:</p> <p>2.0 grams of NOx per horsepower hour (2.0 g NOx/HP-hr);</p> <p>4.0 grams of CO per horsepower hour (4.0 g CO/HP-hr); and</p> <p>1.0 gram of VOC per horsepower hour (1.0 g VOC/HP-hr);</p> <p>In order to maintain CO emissions below major source thresholds and NOx emissions below state significant impact levels, where the total summation of the SI ICE HP is greater than 1,300 HP, the natural gas engine emissions together shall not exceed the following:</p> <p>1.45 grams of NOx per horsepower hour (1.45 g NOx/HP-hr);</p> <p>3.0 grams of CO per horsepower hour (3.0 g CO/HP-hr); and</p> <p>1.0 gram of VOC per horsepower hour (1.0 g VOC/HP-hr).</p> <p>See b)(2)c., d. and e.</p>
<p>b.</p>	<p>OAC rule 3745-17-11(B)(5) ORC 3704.03(T)</p>	<p>Particulate Emissions (PE) shall not exceed 0.310 lb/MMBtu for stationary small internal combustion engines rated less than or equal to 600 HP and 0.062 lb/MMBtu for stationary large</p>

<sup>1</sup> Note: Each engine shall be required to meet the applicable emission standards under 40 CFR Part 60, Subpart JJJJ, based on the manufacture date and size engine, or where required, shall meet the Subpart JJJJ Table 1 standards or the limits identified in this permit by retrofitting pre-NSPS engines with a control device.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

		internal combustion engines rated over 600 HP.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
d.	OAC rule 3745-18-06(G)	Pursuant to OAC rule 3745-18-06(A), this stationary internal combustion engine is exempt from the sulfur dioxide (SO <sub>2</sub> ) emission limitation specified by this rule during any calendar day in which natural gas is the only fuel burned.
e.	ORC 3704.03(T)	Compliance with the applicable g/HP-hr limits from 40 CFR Part 60, Subpart JJJJ for NO <sub>x</sub> , CO and VOC.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)a.
g.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
h.	40 CFR Part 60 Subpart JJJJ 40 CFR 60.4233 and OAC 3745-31-05(F)	All SI ICE shall meet all applicable NSPS requirements where the model year is subject to these emission standards and all older model year engines shall be fitted with a control device (where required) and shall be demonstrated to meet the NSPS emission standards as applicable to 2007 and later model year engines of the same size/power.
i.	OAC 3745-31-05(F)	5.75 lbs NO <sub>x</sub> /hr from all SI engines combined.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1,

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

2006 version of OAC rule 3745-31-05 these emission limitations/control measures no longer apply.

- b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO<sub>2</sub> emissions from this air contaminant source since the potentials to emit for SO<sub>2</sub> are less than ten tons per year.

- c. The stationary spark ignition (SI) internal combustion engine(s) (ICE) are subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart JJJJ, standards of performance for stationary SI ICE.

[40 CFR 60.4230(a)]

- d. The owner/operator of all SI ICE shall demonstrate compliance with the emissions standards identified in 40 CFR 60.4233 of Part 60, Subpart JJJJ in accordance with 40 CFR 60.4243(b).

[40 CFR 60.4233] and [40 CFR 60.4243(b)]

- e. The gram per horsepower-hour emissions limitations are based on the emission standards from Table 1 of NSPS JJJJ for natural gas-fired engines. In order to maintain the carbon monoxide (CO) emissions below major source thresholds and nitrogen oxide (NO<sub>x</sub>) emissions below state significant impact levels, where the sum of the total horsepower (HP) of the spark ignition (SI) engines exceeds 1,300 HP, the SI engines rated at or over 100 HP shall meet the CO and NO<sub>x</sub> limits identified in the Testing Section of this permit. However, each engine installed at the natural gas production site and subject to a more stringent standard, based on the model year and engine's size, must be demonstrated to comply with the applicable emissions standard established in 40 CFR 60.4233.

c) Operational Restrictions

- (1) The stationary SI ICE shall be installed, operated, and maintained according to the manufacturer's recommendations or in accordance with the operator's Operation and Maintenance (O&M) Plan and in a manner consistent with good air pollution control practice for minimizing emissions. The permittee shall operate and maintain the stationary SI ICE to achieve the emission standards identified in 40 CFR 60.4233 over the entire life of the engine(s). The air-to-fuel ratio controllers shall be set by the operator according to the manufacturer's operations manual, to ensure proper operation of the engines and their control device (catalytic converter) and to minimize emissions.

[40 CFR 60.4234], [40 CFR 60.4243(b)], and [40 CFR 60.4243(g)]

d) Monitoring and/or Recordkeeping Requirements

- (1) The following records shall be maintained for each spark ignition engine operating at the well site:
  - a. all notifications submitted to comply with and all documentation supporting compliance with Part 60 Subpart JJJJ;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- b. all notifications submitted to comply with and all documentation supporting compliance with Part 63 Subpart ZZZZ;
- c. records of all maintenance conducted on the engines;
- d. for certified engines less than or equal to 100 HP, the certification from the manufacturer, documenting that the engine(s) meet(s) the emission standards identified in 40 CFR 60.4231 or for uncertified engines, the testing results from the initial and subsequent performance tests, as applicable, conducted to meet the requirements of 40 CFR 60.4243(b)(2)(i) or (ii); and
- e. the information identified in 40 CFR Parts 90, 1048, 1054, and/or 1060 that is required to be provided by the manufacturer to the operator/owner, as applicable to the model year and horsepower of the engines.

The permittee or owner/operator (if leased) of the engines shall keep the above records and a maintenance plan for the engines, and shall maintain documentation that the engine is maintained and operated according the manufacturer's emission-related instructions.

[40 CFR 60.4245(a)] and [40 CFR 60.4243(a) and (b)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. each SI engine located (and operated) at the production site during the year, identified by the model year, horse power, and the date of manufacturer of each engine;
  - b. a statement as to whether each engine was purchased certified by the manufacturer, in accordance with the Subpart JJJJ, i.e., the manufacturer has provided a warranty for the emissions when the engine was first sold;
  - c. a statement as to whether each engine was operated and maintained in accordance with the manufacturers emission-related instructions;
  - d. the date each uncertified SI engine was tested for compliance with the applicable emission standards identified in Part 60 Subpart JJJJ; and
  - e. identification of each engine that did not meet the applicable emission standards identified in 40 CFR 60.4233 and/or this permit, the number of hours each such

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

engine was in operation while not in compliance, the pollutant limitation(s) that were exceeded, and information on the date and resolution of compliance.

- (3) For each natural gas SI ICE not certified to the applicable emission standards identified in 40 CFR Part 60 Subpart JJJJ, and subject to the performance testing requirements of 40 CFR 60.4243(b)(2), the permittee shall submit a copy of the results of each performance test conducted to demonstrate compliance within 60 days after the test has been completed.

[40 CFR 60.4245(d)]

f) **Testing Requirements**

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods.

- (1) The SI engines shall meet the applicable emissions standards identified in 40 CFR 60.4233 and/or the applicable emission limits required in this permit. Engines greater than 100 HP shall not exceed the emission standards identified in Table 1 to Subpart JJJJ and engines less than 100 HP shall not exceed the applicable standards identified in 40 CFR 60.4231, as required per 40 CFR 60.4233, all as applicable to each engine's horsepower and model year. In order to maintain the facility below major source thresholds and significant impact levels, older engines that were manufactured before the effective date of the NSPS shall be retrofitted with controls that can demonstrate the emission limits established in this permit are met.

- (2) For each natural gas engine purchased without an EPA certificate of conformity (most engines >25 HP), the permittee shall conduct or have conducted an initial performance test to demonstrate compliance with the NSPS standards for NOx, CO, and VOC; and for each engine greater than 500 HP, subsequent performance tests shall be conducted every 8,760 hours or 3 years, whichever comes first.

[40 CFR 60.4243(b)(2)]

- (3) Emission Limitation:

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[OAC rule 3745-17-07(A)(1)]

- (4) Emissions Limitations:

Particulate Emissions (PE) shall not exceed 0.310 lb/MMBtu for small engines ≤ 600 HP; and 0.062 lb/MMBtu for large engines > 600 HP

Applicable Compliance Method:

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[OAC 3745-17-11(B)(5)]

(5) Emissions Limitations:

2.0 grams NO<sub>x</sub> /HP-hr for engines ≥ 100 HP; or

1.45 grams NO<sub>x</sub> /HP-hr for engines ≥ 100 HP where the total engine power is greater than 1,300 HP; and/or

the combination of SI engines shall be calculated to not exceed 5.75 lbs NO<sub>x</sub>/hour, based on the summation of the emission stack test results and/or the pound per hour emissions calculated from the emission rate certified by the manufacturer.

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr NO<sub>x</sub> standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year NO<sub>x</sub> emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ. The combination of SI engines together shall be calculated to not exceed 5.75 lbs NO<sub>x</sub>/hour, based on the summation of the emission stack test results and/or the pound per hour NO<sub>x</sub> emissions calculated from the emission rate certified by the manufacturer.

Where the sum of the total HP of the facility SI ICE is no greater than 1,300 HP, the following calculations establish the pound per hour emissions of NO<sub>x</sub> from the spark ignition engines covered in this permit:

$$2.0 \text{ g NO}_x/\text{HP-hr} \times 1,300 \text{ HP} \times 1\text{lb}/454 \text{ g} = 5.73 \text{ lbs NO}_x/\text{hr}$$

Where the sum of the total HP of the SI ICE exceeds 1,300 HP, an average NO<sub>x</sub> limit between 2.0 grams/HP-hr and 1.45 grams/HP-hr shall be required in order to meet the 5.75 lbs/hour NO<sub>x</sub> limitation established in this permit. The average emissions of NO<sub>x</sub> (in grams/HP-hr) shall be calculated as follows:

$$\text{Average g NO}_x/\text{HP-hr} = \frac{\sum_{n=1}^n [\text{g/HP-hr} \times \text{HP}]}{\text{total HP}}$$

Where:

g/HP-hr = the standard to which each natural gas engine is certified

HP = the horsepower of each individual natural gas engine

total HP = the total horsepower or summation of the horsepower of each natural gas engine



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

n = number of natural gas engines at the well site

The following calculations establish the maximum pound per hour emissions of NOx from the spark ignition engines covered in this permit where the summation of the horsepower exceeds 1,300 HP, and where the average emissions of NOx is maintained at or below 1.45 grams/HP-hr:

$$1.45 \text{ g NOx/HP-hr} \times 1,800 \text{ HP} \times 1\text{lb}/454 \text{ g} = 5.75 \text{ lbs NOx/hr}$$

When required, the permittee shall demonstrate compliance with the NOx limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

(6) Emissions Limitations:

4.0 grams CO/HP-hr for engines  $\geq$  100 HP; or

3.0 grams CO/HP-hr for engines  $\geq$  100 HP where the total engine power is greater than 1,300 HP; and/or

the combination of SI engines shall be calculated to not exceed 11.9 lbs CO/hour, based on the summation of the emission stack test results and/or the pound per hour CO emissions calculated from the emission rate certified by the manufacturer.

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr CO standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year CO emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ. The combination of SI engines together shall be calculated to not exceed 11.9 lbs CO/hour, based on the summation of the emission stack test results and/or the pound per hour CO emissions calculated from the emission rate certified by the manufacturer.

Where the sum of the total HP of the facility SI ICE is no greater than 1,300 HP, the following calculations establish the pound per hour emissions of CO from the spark ignition engines covered in this permit:

$$4.0 \text{ g CO/HP-hr} \times 1,300 \text{ HP} \times 1\text{lb}/454 \text{ g} = 11.5 \text{ lbs CO/hr}$$

Where the sum of the total HP of the SI ICE exceeds 1,300 HP, an average CO limit between 4.0 grams/HP-hr and 3.0 grams/HP-hr shall be required in order to meet the 11.9 lbs/hour CO limitation established in this permit. The average emissions of CO (in grams/HP-hr) shall be calculated as follows:

n

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

$$\text{Average g CO/HP-hr} = \sum_{n=1} [\text{g/HP-hr} \times \text{HP}] / \text{total HP}$$

Where:

g/HP-hr = the standard to which each natural gas engine is certified

HP = the horsepower of each individual natural gas engine

total HP = the total horsepower or summation of the horsepower of each natural gas engine

n = number of natural gas engines at the well site

The following calculations establish the maximum pound per hour emissions of CO from the spark ignition engines covered in this permit where the summation of the horsepower exceeds 1,300 HP, and where the average emissions of CO is maintained at or below 3.0 grams/HP-hr:

$$3.0 \text{ g CO/HP-hr} \times 1,800 \text{ HP} \times 1\text{lb}/454 \text{ g} = 11.9 \text{ lbs CO/hr.}$$

When required, the permittee shall demonstrate compliance with the CO limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

(7) Emissions Limitations:

1.0 gram VOC/HP-hr for engines  $\geq$  100 HP

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr VOC standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year VOC emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ.

The following calculations establish the pound per hour emissions of VOC from the spark ignition engines covered in this permit:

$$1.0 \text{ g VOC/HP-hr} \times 1,800 \text{ HP} \times 1\text{lb}/454 \text{ g} = 4.0 \text{ lbs VOC/hr}$$

When required, the permittee shall demonstrate compliance with the VOC limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

g) Miscellaneous Requirements

(1) Replacement of or Installation of Additional Engines

The permittee may install additional stationary engines or replace existing engines at any time during the life of this permit as long as the following are met:

- a. at any given time, the total horsepower of all natural gas engines in service at the site is no more than 1,800 HP;
- b. all natural gas engines in service at the site meet the applicable NSPS emission standards as identified in the NSPS and this permit, and all applicable State or Federal rules;
- c. the permittee maintains a list of all stationary natural gas engines used at the site; and
- d. the permittee continues to meet the qualifying criteria associated with the natural gas engines for this general permit.

(2) Stack Height of Stationary Natural Gas Engines

- a. Any engine with greater or equal to 250 HP shall be equipped with an exhaust stack that is at least 20' above ground level.
- b. Any engine with less than 250 HP shall be equipped with an exhaust stack that is at least 12' above ground level.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**3. Emissions Unit: Compression Ignition Engines, P003**

**Operations, Property and/or Equipment Description:**

P003	One or multiple stationary diesel-fired compression ignition (CI) (diesel) internal combustion engines (ICE) with a combined total horsepower (HP) of no more than 250 HP for the site <sup>2</sup> , and that are either certified to meet the Tier 3 emission standards (from 40 CFR 60.89.112 Table 1) for diesel engines or retrofitted with a control device that demonstrates each engine meets the Tier 3 standards.
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) 3.b)(1)a.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart IIII 40 CFR 60.4204(b) 40 CFR 60.4201(a) Table 1 to 40 CFR 89.112, Tier 3	The exhaust emissions from any compression ignition (CI) internal combustion engine (ICE) shall not exceed the appropriate Tier 3 emission standards identified in Table 1 to 40 CFR 89.112. The emission limitations are based on the following worst-case Tier 3 emission standards for engines greater than or equal to 50 HP:

<sup>2</sup> This emissions unit includes stationary diesel engines used for production. It does not include various portable engines that are temporarily used on the site nor does it include engines that are exempt from permitting. For instance, any engines qualifying for the non-road exemption found in Ohio Administrative Code (OAC) paragraph 3745-31-03(A)(1)(pp) would not be covered by this permit.

<sup>2</sup> Note: The worst case emission standards for diesel-fired engines less than 300 HP were used to establish the emissions limitation. However, each engine shall be required to meet the applicable Tier 3 emission standards (or Tier 2 standards for engines <50 HP) from Table 1 of 40 CFR 89.112.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.40 gram PM/kW-hr; 4.7 grams NOx + NMHC/kW-hr; and 5.0 grams CO/kW-hr. See b)(2)c.
b.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this engine shall not exceed 15 ppm or 0.0015% sulfur by weight. See b)(2)c., c)(2), d)(1), and e)(2).
c.	40 CFR 89.113	Engine(s) subject to Part 60, Subpart IIII shall be certified by the manufacturer to the following opacity standards: 20% opacity during the acceleration mode; 15% opacity during the lugging mode; and 50% opacity during the peaks in either the acceleration or lugging modes.
d.	OAC rule 3745-18-06	The SO <sub>2</sub> limitation established per this rule is less stringent than the limitation established in 40 CFR 80.510(b).
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this engine shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Compliance with the applicable gram/kW-hr limits found in 40 CFR Part 60, Subpart IIII for PM, NOx + NMHC, and CO. See b)(2)a.
g.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
h.	OAC rule 3745-17-11(B)(5)	The emission limitation specified by this rule is less stringent than the emission limitation established for PM pursuant to 40 CFR Part 60, Subpart IIII.
i.	40 CFR Part 60 Subpart IIII 40 CFR 60.4202	All CI ICE shall meet all applicable NSPS requirements where the model year is subject to these standards and older engines shall be fitted

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		with a control device that demonstrates the Tier 3 standards are met.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emission limitations/control measures no longer apply.

b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, NOx, CO, and VOC emissions from this air contaminant source since the uncontrolled potential to emit for PM, NOx, CO, and VOC are less than ten tons per year.

c. The stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.

[40 CFR 60.4200(a)]

d. The stationary CI ICE has been or shall be purchased certified by the manufacturer to emission standards as stringent as those identified in 40 CFR 60.4201(a) and found in Tier 3 of 40 CFR 89.112, Table 1, for engines greater than or equal to 50 horsepower (37 kilowatt) and less than or equal to 250 horsepower (186 kilowatt), and to the opacity standards found in 40 CFR 89.113.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4203], and [40 CFR 60.4211(c)]

e. The quality of the diesel fuel burned in this engine shall meet the following specifications on an “as received” basis:

i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015 pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent; and
- iii. a heating value greater than 135,000 Btu/gallon.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

c) Operational Restrictions

- (1) The stationary CI ICE shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions over the entire life of the engine; and the permittee shall only change those emission-related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE and Part 1068, the General Compliance Provisions for Engine Programs. The permittee shall operate and maintain the stationary CI ICE to achieve the Tier 3 emission standards in Table 1 to 40 CFR 89.112, as required per 40 CFR 60.4204.

[40 CFR 60.4206] and [40 CFR 60.4211(a)]

- (2) Diesel fuel burned in the CI, ICE shall not exceed the standards for sulfur as specified by 40 CFR 80.510(b), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

[40 CFR 60.4209(b)]

- (4) The summation of engine power from all the diesel engines installed at the production facility site (following well completion) shall not exceed 250 HP.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each shipment of oil received for burning in this engine, the permittee shall maintain records of the total quantity of the diesel oil received and the oil supplier's (or permittee's) analyses for sulfur content, in parts per million (40 CFR 80.510) or percent by weight. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR 80.580, using the appropriate ASTM methods. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

[for 40 CFR 60.4207(b)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (2) The permittee shall maintain the manufacturer's certification or compliant test data for non-certified engines, to the applicable Tier 3 emission standards in Table 1 of 40 CFR 89.112 at a central location for all facility ICE and it shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the identification number of the certificate. The permittee or owner/operator (if leased) of the engines shall keep a maintenance plan and records of the maintenance conducted on each engine, to include documentation that the engine is maintained and operated according to the manufacturer's emission-related instructions.

[40 CFR 60.4211]

- (3) The permittee shall maintain a record of the diesel fuel burned in each ICE during each calendar year. The diesel fuel usage shall be calculated using the best method available to estimate the annual fuel consumption of each engine, which might include, but are not be limited to: a flow meter installed on the engine, records of the volume of diesel fuel oil received with each delivery, the fuel oil levels recorded from the diesel storage tank, and/or the recorded or estimated hours of operation along with the manufacturer's documentation of the estimated fuel flow rate.

- (4) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall keep records of the date, time, and any corrective action(s) taken in response to the notification from the backpressure monitor, that the high backpressure limit of the engine has been approached or exceeded.

[40 CFR 60.4214(c)]

- (5) The permittee shall maintain a record of visible emission checks for the stack of diesel engines. The record shall be documented during maintenance operations.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. each CI engine located (and operated) at the production site during the year, to include the year of manufacture and/or year rebuilt, the horse power;
  - b. a statement as to whether each engine was purchased certified by the manufacturer, in accordance with the Subpart IIII, i.e., the manufacturer has provided a warranty for the emissions when the engine was first sold;



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. a statement as to whether each engine was operated and maintained in accordance with the manufacturers emission-related instructions;
- d. the date each uncertified SI engine was tested for compliance with the Tier 3 emission standards from 40 CFR 89.112;
- e. identification of any uncertified engine that did not meet the applicable Tier 3 emission standards, to include the horse power and year of manufacture and/or year rebuilt; and
- f. any period of time that the quality of oil burned in each engine did not meet the requirements established in 40 CFR 80.510(b), based upon the required fuel records, to include the amount burned, the engine combusting it, the date(s), and the date the non-compliant fuel was purchased\*.

\* if the fuel oil is purchased before 10/1/10, the amendments of 1/30/13 allow the fuel to be used until depleted

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall include in the PER any records of the date, time, and any corrective action(s) taken in response to the notification from the monitor that the backpressure has been approached or exceeded.

[for 40 CFR 60.4214(c)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emission Limitation:

Manufacturer's certification requirements related to opacity include:

20% opacity during the acceleration mode;

15% opacity during the lugging mode; and

50% opacity during the peaks in either the acceleration or lugging modes.

Applicable Compliance Method:

The CI ICE subject to the standards in 40 CFR Part 60, Subpart IIII shall be purchased certified by the manufacturer to the opacity standards of 40 CFR 89.113.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], and [40 CFR 89.113]

(2) Emission Limitation:

Visible particulate emissions from the exhaust stack serving this engine shall not exceed 20 %opacity, as a six-minute average, except as specified by rule.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

Visible emission checks shall be conducted following the completion of maintenance operations. Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[OAC rule 3745-17-07(A)(1)]

(3) Emission Limitation:

0.40 gram PM/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

(4) Emissions Limitations:

4.7 grams NO<sub>x</sub> + NMHC/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

For the purpose of reporting emissions, where the limitation is for NO<sub>x</sub> + NMHC, the NO<sub>x</sub> and VOC limitations shall be calculated using a ratio of 74.6% NO<sub>x</sub> to 25.4% VOC:\*

4.7 g NO<sub>x</sub>+NMHC/kW-hr x 74.6% NO<sub>x</sub>\* = 3.5 grams NO<sub>x</sub>/kW-hr.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

(5) Emissions Limitations:

5.0 grams CO/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)] and [40 CFR 60.4212(a) and (c)]

(6) Emissions Limitations:

4.7 grams NO<sub>x</sub> + NMHC/kW-hr

Applicable Compliance Method:

Compliance with the emission limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limitation is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

For the purpose of reporting emissions, where the limitation is for NO<sub>x</sub> + NMHC, the NO<sub>x</sub> and VOC limitations shall be calculated using a ratio of 74.6% NO<sub>x</sub> to 25.4% VOC\*:

$$4.7 \text{ g NO}_x\text{+NMHC/kW-hr} \times 25.4\% \text{ NMHC}^* = 1.19 \text{ gram VOC/kW-hr.}$$

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

\*This ratio is based upon the linear relationship of NO<sub>x</sub> to NMHC from Table 1 of Subpart III, Table 1 from 40 CFR 89.112, to Tables 4, 5, and 6 from 40 CFR 1039.102.

(7) Emissions Limitation:

Sulfur content 15 ppm or  $\leq$  0.0015% by weight sulfur

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the standards in 40 CFR 80.510(b), this calculates to approximately 0.0015 lb SO<sub>2</sub>/MMBtu.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (8) If it is determined by Ohio EPA that a compliance demonstration is required through performance testing, i.e., the engine is not certified or not operated in accordance with the manufacturer's emission-related instructions, it shall be conducted using one of the following test methods or procedures:

- a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR Part 1065; or
- b. in accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR Part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the "not to exceed" (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:

$$\text{NTE requirement for each pollutant} = 1.25 \times \text{STD}$$

Where:

STD = The standard specified for the pollutant in 40 CFR 89.112.

[40 CFR 60.4212(a) and (c)]

g) **Miscellaneous Requirements**

(1) **Replacement of or Installation of Additional Engines**

- a. The permittee may install additional stationary compression ignition engines or replace existing stationary compression ignition engines at any time during the life of this permit as long as the following are met:
  - i. at any given time, the total horsepower of all stationary compression ignition engines in service at the site is no more than 250 HP;
  - ii. all stationary compression ignition engines in service at the site meet all applicable NSPS emission standards identified in the NSPS and this permit, and all applicable State or Federal rules;
  - iii. the permittee maintains a list of all stationary compression ignition engines used at the site; and

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- iv. the permittee continues to meet the qualifying criteria associated with the stationary compression ignition engines for this general permit.
- (2) Stack Height of Stationary Compression Ignition Engines
- a. Each stationary compression ignition engine shall be equipped with an exhaust stack that is at least 12' above ground level.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**4. Emissions Unit: Enclosed or Open Flare/Combustion Device, P004**

**Operations, Property and/or Equipment Description:**

P004	Enclosed or Open Flare(s)/Combustion Device(s) with a maximum combined capacity heat input of no more than 250 MMBtu/hr and operated at no more than 10 MMBtu per hour combined heat input from all the sources vented to the combustion device(s), except during an emergency <sup>3</sup>
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- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions in this permit are federally enforceable, with the exception of those listed below, which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions in this permit are enforceable under state law only, with the exception of those listed below, which are federally enforceable.
    - a. 4.b)(1)d. and 4.b)(1)e.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	For VOC and where applicable, compliance with the applicable control requirements of 40 CFR Part 60, Subpart OOOO, by having a designed minimum control efficiency of 95% for an enclosed flare/combustor.  Carbon monoxide (CO) emissions shall not exceed 1.35 tons per month averaged over a 12-month rolling period.
b.	OAC rule 3745-31-05(A)(3), as	Nitrogen Oxide (NOx) emissions shall not

<sup>3</sup> This emissions unit applies when a facility chooses to use a flare/combustion device to control VOCs emitted from the entire facility (including, but not limited to, flash vessel/storage tanks, truck loading for water and/or petroleum liquids, and the dehydrator). If a separate flare is used to control dehydrator emissions, then the flare requirements found in the dehydrator emissions unit terms govern the dehydrator flare.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	effective 11/30/01	<p>exceed 0.25 ton per month averaged over a 12-month rolling period.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.15 ton per month averaged over a 12-month rolling period.</p> <p>See b)(2)a.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
d.	<p>Part 63, Subpart HH, National Emission Standards for hazardous air pollutants (NESHAP) from Oil and Natural Gas Production Facilities</p> <p>Control/operational requirements applicable to area source TEG dehydration units not meeting one of the exemptions found in 40 CFR 63.764(e).</p>	<p>For a triethylene glycol dehydration unit subject to the standards, compliance with the applicable portions of 40 CFR Part 63, Subpart HH. Design and operate the enclosed flare/combustion device in accordance with the requirements of 40 CFR 63.771(d)(1), i.e., reduce the mass content of either TOC or total HAP, in the gases vented to it (from the closed vent system), by 95% by weight or greater; or reduce the concentration of TOC or total HAP to less than or equal to 20 ppm by volume on a dry basis corrected to 3% oxygen, in accordance with 40 CFR 63.772(e); or design the open flare in accordance with 40 CFR 63.11(b).</p>
e.	<p>Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution</p> <p>Control requirements applicable to each storage vessel constructed, modified, or reconstructed after 8/23/11 with potential VOC emissions equal to or greater than 6 tons/year.</p>	<p>For a storage vessels subject to the standards, compliance with the applicable portions of 40 CFR Part 60, Subpart OOOO. By the applicable compliance date, design and operate an enclosed combustion device in accordance with the requirements of 40 CFR 60.5412(d)(1) to reduce the mass content of VOC by 95% by weight or greater; or install a combustion control device that's model has been tested by the manufacturer in accordance with 40 CFR 60.5413(d); or install an open flare designed in accordance with 40 CFR 60.18(b).</p>
f.	40 CFR 60.5412(d)(1)(iii)	<p>If required to install controls in accordance with 40 C FR 60.5393, an enclosed combustion device must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.</p>

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR 60.5413(e)(3)	If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emissions limitations/control measures no longer apply.
- b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.  
  
The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NO<sub>x</sub>, and SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potential to emit for PE, NO<sub>x</sub>, and SO<sub>2</sub> are less than ten tons per year.
- c. Pit flaring is prohibited.

c) Operational Restrictions

- (1) The flare or combustion device shall be operated with a flame present at all times when gases are vented to it.
- (2) An automatic flame ignition system shall be installed to meet one of the following requirements:
  - a. If using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare’s pilot light burner. If the pilot flame goes out and does not relight, then an alarm shall sound; or



**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- b. If using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.
- (3) The flare, its auto ignition system, and its recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
  - (4) If the dehydrator does not qualify for one of the exemptions found in 40 CFR Part 63.764(e) or if it has been determined that any storage vessel emits 6 tons or more of VOC per year, the enclosed flare/combustion device must be designed and operated to reduce VOC, TOC, or total HAP, as applicable, by 95% by weight; or the concentration of TOC or Total HAP, as applicable, to 20 ppm by volume on a dry basis and corrected to 3% oxygen, in accordance with the applicable rule; or the open flare shall be designed and operated in accordance with 40 CFR 63.11(b) or 40 CFR 60.18(b).
  - (5) This flare/combustion device shall operate at no more than 10 MMBtu/hr heat input at all times except:
    - a. when a malfunction occurs, e.g., when excess gas must be safely disposed of by venting it to the flare/combustion device; or
    - b. for repair pressure blow-downs; or
    - c. when another well is being drilled or fractured and the gas must be safely disposed of by venting it to the flare/combustion device.
- d) Monitoring and/or Recordkeeping Requirements
- (1) If the permittee is using the flare/combustion device to demonstrate compliance with 40 CFR 63.771(d) for the TEG dehydrator or to demonstrate compliance with 40 CFR 60.5412(d) for each storage vessel calculated to have VOC emission equal to or exceeding 6 tons per year, the permittee shall maintain the appropriate records to demonstrate that the enclosed flare/combustion device is designed and operated to reduce VOC, TOC, or total HAP by 95% by weight; or the concentration of TOC or Total HAP to 20 ppm by volume on a dry basis and corrected to 3% oxygen, all in accordance with the applicable rules; or shall maintain the records required to demonstrate that the open flare is designed and operated in accordance with 40 CFR 63.11(b) or 40 CFR 60.18(b), as applicable per federal rules.
  - (2) The permittee shall:
    - a. continuously monitor the presence of the flame;
    - b. record all periods during which the automatic flare ignition system (pilot flame or electronic arc ignition system) or thermocouple was not working and gas was being vented to the flare/combustion device; and
    - c. record all periods of time during which gas was being vented to the flare/combustion device and there was no flame

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (3) The permittee shall maintain a record of all periods of time (date and number of hours) during which the flare/combustion device is burning collected gases at a heat input greater than 10 MMBtu per hour, along with a description of the emergency and/or the reason the heat input was greater than 10 MMBtu/hr.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) If the permittee is using an enclosed flare/combustion device to demonstrate compliance with 40 CFR 63.771(d) for the TEG dehydrator or to demonstrate compliance with 40 CFR 60.5412(d)(1) for each storage vessel calculated to have VOC emission equal to or exceeding 6 tons per year, the permittee shall submit the results of the compliance demonstration, conducted in accordance with the applicable subpart, in the PER.
- (3) If the permittee is using an open flare to demonstrate compliance, the permittee shall submit all visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance or reporting period, as applicable by rule.
- (4) The permittee shall identify in the PER:
  - a. all periods of time when the pilot flame or electronic arc ignition system is not working when process gas is being vented to it, including the date, time, and duration of each such period; and
  - b. all periods of time during which the flare/combustion device was operated at greater than 10 MMBtu per hour heat input rate, including the date, time, and duration of each such period, and a description of the reason why the heat input exceeded 10 MMBtu per hour.

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- (1) Emission Limitation:

1.35 tons CO/month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for CO is based on using the AP-42 emission factor of 0.37 lb CO/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Flare Operations” and using the normal operation rate of 10 MMBtu/hr. Estimated CO emissions shall be determined by the following calculations:

$$0.37 \text{ lb CO/MMBtu} \times 10 \text{ MMBtu/hr} = 3.7 \text{ lbs CO /hr}$$

$$3.7 \text{ lbs CO/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 16.2 \text{ tons CO/year}$$

$$16.2 \text{ tons CO} \div 12 \text{ months} = 1.35 \text{ tons CO/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(2) Emission Limitation:

For VOC and where applicable, compliance with the applicable control requirements of 40 CFR Part 60, Subpart OOOO, by having a designed minimum control efficiency of 95% for an enclosed flare/combustor.

Applicable Compliance Method:

See the compliance method described in the flash vessel/storage vessel(s) emissions unit (T001).

(3) Emission Limitation:

$$0.25 \text{ ton NOx/month averaged over a 12-month rolling period}$$

Applicable Compliance Method:

The emissions limitation for NOx is based on using the AP-42 emission factor of 0.068 lb NOx/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, “Emission Factors for Flare Operations” and using the normal operation rate of 10 MMBtu/hr. Estimated NOx emissions shall be determined by the following calculation:

$$0.068 \text{ lb NOx/MMBtu} \times 10 \text{ MMBtu/hr} = 0.68 \text{ lb NOx /hr}$$

$$0.68 \text{ lb NOx/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 3.0 \text{ tons NOx/year}$$

$$3.0 \text{ tons NOx} \div 12 \text{ months} = 0.25 \text{ ton NOx/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(4) Emission Limitations:

$$0.15 \text{ ton SO}_2\text{/month averaged over a 12-month rolling period}$$

Applicable Compliance Method:

The SO<sub>2</sub> emissions limitation is based on a fuel gas with a maximum H<sub>2</sub>S content of 250 ppmv for sour gas.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Compliance with the ton per year SO<sub>2</sub> emissions limitation shall be determined by the following calculations:

$$10 \text{ MMBtu/hr} \times 1 \text{ scf/1020 Btu} \times 1 \text{ lb-mole/379.5 scf} \times 250 \text{ ppm H}_2\text{S} \times 64 \text{ lb SO}_2/\text{lb-mole} \\ = 0.41 \text{ lbs SO}_2/\text{hr}$$

$$0.41 \text{ lb SO}_2/\text{hr} \times 8760 \text{ hrs/year} \times 1 \text{ ton/2000 lbs} = 1.8 \text{ tons SO}_2/\text{year}$$

$$1.8 \text{ tons SO}_2 \div 12 \text{ months} = 0.15 \text{ ton SO}_2/\text{month} \text{ averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(5) Visible Emissions Limitation for an enclosed combustion control device used to demonstrate compliance with Part 60 Subpart OOOO:

An enclosed combustion device used to demonstrate compliance must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.

[40 CFR 60.5412(d)(1)(iii)]

OR

If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

[40 CFR 60.5413(e)(3)]

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 60.5412(d)(1)(iii)] [40 CFR 60.5413(e)(3)] and [40 CFR 60.5413(a)(1)]

g) **Miscellaneous Requirements**

- (1) Any final amendments to Part 63 Subpart HH and/or Part 60 Subpart OOOO will supersede any previous Subpart HH or Subpart OOOO requirement(s) in this permit.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**5. Emissions Unit Group: Equipment/Pipeline Leaks, F001**

EU ID	Operations, Property and/or Equipment Description
F001	Ancillary equipment <sup>4</sup> and Associated equipment: compressors, pumps, piping, pneumatic controllers, inlet separators, gas-water/condensate/oil separators, etc.  Equipment/pipeline leaks from valves, flanges, pressure relief devices, open end valves or lines, and pump and compressor seals in VOC or wet gas service.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions in this permit are federally enforceable, with the exception of those listed below, which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions in this permit are enforceable under state law only, with the exception of those listed below, which are federally enforceable.

a. 5.b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Develop and implement a site-specific leak detection and repair program for ancillary equipment as described in paragraph 5.c)(2).
b.	40 CFR Part 60 Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.	Each natural gas-driven pneumatic controller designed and operated to have a bleed rate less than or equal to 6 standard cubic feet per hour (scf/hr) and maintained in accordance with the manufacturer’s instructions, shall not be considered an affected facility, subject to Part 60 Subpart

<sup>4</sup> “Ancillary Equipment” means the same as defined in 40 CFR Part 63, Subpart HH. The Subpart HH definition is being used for this permit but note that the equipment leak standards found in Subpart HH do not apply for this permit because this permit is for an “area source” and the equipment leak standards do not apply to area sources.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR 63.5365(d); 40 CFR 60.5390; and 40 CFR 60.5410(d)	OOOO.  Each pneumatic controller constructed, modified, or reconstructed on or after 10/15/13, located between the wellhead and a natural gas processing plant, and designed to have a bleed rate equal to or greater than 6 scf/hr is an affected facility subject to the requirements of Part 60 Subpart OOOO.  Each pneumatic controller affected facility that is constructed after 8/23/11 and is subject to these standards shall be tagged with the month and year of installation.
c.	OAC 3745-31-05(F)	Emissions of Volatile Organic Compounds (VOC) shall not exceed 10.56 tons per year from fugitive equipment leaks.

(2) Additional Terms and Conditions

a. None

c) Operational Restrictions

(1) Pneumatic Controller Restrictions

Unless it can be demonstrated that the pneumatic controller needs to have a higher bleed rate based on functional needs in accordance with 40 CFR 60.5390(a), each natural gas-driven pneumatic controller affected facility installed, modified, or reconstructed on or after 10/15/13 and located between the wellhead and the point of custody transfer to an oil pipeline or a natural gas transmission line or storage facility, must be designed and operated with a bleed rate less than or equal to 6 standard cubic feet per hour (6 scf/hr).

[40 CFR 60.5390(c)(1), (d), and (e)], [40 CFR 60.5365(d)], [40 CFR 60.5410(d)], and [40 CFR 60.5415(d)(1)]

(2) Ancillary Equipment Leak Detection and Repair Program

The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment covered by this permit, including each pump, compressor, pressure relief device, connector, valve, flange, vent, cover, any bypass in the closed vent system, and each storage vessel. This program shall meet the following requirements:

a. Leaks shall be detected by the use of either a “Forward Looking Infra Red” (FLIR) camera or an analyzer meeting U.S. EPA Method 21 of 40 CFR Part 60, Appendix A.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- b. An initial monitoring shall be completed within 90 days of startup and quarterly thereafter for a period of four consecutive quarters (1 year).
  - c. If following the initial four consecutive quarters, less than or equal to 2.0% of the ancillary equipment are determined to be leaking during the most recent quarterly monitoring event, then the frequency of monitoring can be reduced to semi-annual.
  - d. If following two consecutive semi-annual periods, less than 2.0% of the ancillary equipment are determined to be leaking during the most recent semi-annual monitoring event, then the frequency of the monitoring can be reduced to annual.
  - e. If more than or equal to 2.0% of the ancillary equipment are determined to be leaking during any one of the semi-annual or annual monitoring events, then the frequency of monitoring shall be returned to quarterly.
  - f. The program shall require the first attempt at repair within five (5) calendar days of determining a leak.
  - g. The program shall require that the leaking component is repaired within 30 calendar days after the leak is detected.
  - h. The program shall allow for the delayed repair of a leaking component following the language found in 40 CFR 60.5416(c)(5).
  - i. The program shall following the Monitoring and Record Keeping requirements described in paragraph 5.d) of this permit.
- (3) In the event that a leak or defect is detected in the cover, closed vent system, process equipment, or control device, the permittee shall make a first attempt at repair no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 30 calendar days after the leak is detected as allowed in 40 CFR 60.5416(c)(4). Any delay of repair of a leak or defect shall meet the requirements of 40 CFR 60.5416(c)(5).

[40 CFR 60.5416(c)(4) and (5)], [40 CFR 60.5415(e)(3)], and [ORC 3704.03(T)]

d) Monitoring and/or Recordkeeping Requirements

(1) Pneumatic Controller Monitoring and Record Keeping

- a. Each natural gas-driven pneumatic controller affected facility installed or reconstructed on or after 8/23/11, located between the wellhead and natural gas processing plant shall be tagged with the month and year of installation, reconstruction, or modification and with information that can identify or trace the records for the manufacturer's design specifications.
- b. The following records shall be maintained for each natural gas-driven pneumatic controller installed at the facility after 8/23/11:
  - i. records of the date installed or reconstructed, the location and/or equipment each controller is servicing, and the manufacturer specifications;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- ii. if applicable, the records needed to demonstrate why the operations require the use of a pneumatic controller with a bleed rate greater than 6 scf/hr and the functional basis for requiring the higher bleed rate; or
  - iii. if installed on or after 10/15/13, records of the manufacturer's specification indicating that the pneumatic controller is designed to have a natural gas bleed rate less than or equal to 6 scf/hr; or
  - iv. if the pneumatic controller has been installed on or after 8/23/11 and before 10/15/13, the manufacturer's designed bleed rate; and
  - v. where a higher bleed rate has not been demonstrated to be needed, the records of any deviations from the 6 scf/hr bleed rate for each pneumatic controller installed on or after 10/15/13.
- c. Once a gas-driven pneumatic controlled has been documented to have a bleed rate less than or equal to 6 scf/hr, it is no longer subject to the requirements of Part 60 Subpart OOOO. The manufacturer's specifications for the pneumatic controller and/or other records demonstrating compliance or exemption from the requirements should be maintained until the well site is closed.

[40 CFR 60.5390(c) and (f)], [40 CFR 60.5410(d)], [40 CFR 60.5415(d)(3)], [40 CFR 60.5420(c)(4)], and [40 CFR 60.5365(d)]

(2) Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing FLIR Camera's

- a. Leaks shall be determined by visually observing each ancillary component through the FLIR camera to determine if leaks are visible.
- b. The following information shall be recorded during each leak inspection:
  - i. the date the inspection was conducted;
  - ii. the name of the employee conducting the leak check;
  - iii. the identification of any component that was determined to be leaking;
  - iv. the date the first attempt to repair the component was made;
  - v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
  - vi. the date the component was repaired and determined to no longer be leaking;
  - vii. the total number of components that are leaking; and
  - viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. The permittee shall maintain records that demonstrate the FLIR camera is operated and maintained in accordance with the manufacturer’s operation and maintenance instructions.
- d. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

(3) Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing a Method 21 Analyzer

- a. Leaks shall be measured by utilizing U.S. EPA Method 21 (40 CFR Part 60, Appendix A). All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm or 10,000 ppm (as applicable) for determining compliance.
- b. A component is considered to be leaking if the instrument reading is equal to or greater than:

pressure relief device in gas/vapor service	10,000 ppm
pressure relief device in light liquid service	10,000 ppm
pumps in light liquid service	10,000 ppm
compressor	500 ppm
sampling connection system*	*
open ended valves or lines**	**
valves in gas/vapor and light liquid service	10,000 ppm
closed vent system	500 ppm
connectors	10,000 ppm
all other ancillary and associated equipment in VOC service	10,000 ppm

\* must be equipped with a closed-purge, closed-loop, or closed-vent system

\*\* must be equipped with a cap, blind flange, plug, or a second valve

- c. The following information shall be recorded during each leak inspection:
  - i. the date the inspection was conducted;
  - ii. the name of the employee conducting the leak check;
  - iii. the identification of any component that was determined to be leaking (company ID and component type (flange, pump, etc.);

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- iv. the date the first attempt to repair the component was made;
  - v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
  - vi. the date the component was repaired and determined to no longer be leaking;
  - vii. the total number of components that are leaking; and
  - viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.
- d. The permittee shall maintain records that demonstrate the Method 21 analyzer is operated and maintained in accordance with the manufacturer's operation and maintenance instructions.
- e. In order to calibrate the analyzer, the following calibration gases shall be used:
- i. zero air, which consists of less than 10 ppm of hydrocarbon in air; and
  - ii. a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppm of methane or n-hexane.
- f. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) Supplement to the PER for the Ancillary Equipment Leak Detection and Repair Program
- For each inspection that occurred during the year, the permittee shall submit the following information with the annual PER from data collected by the ancillary equipment leak detection and repair program:
- a. the date of the inspection;
  - b. the number of components determined to be leaking;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. the company ID and component type (flange, pump, etc.) of each leaking component;
- d. the total number of components at the site;
- e. the percent of components determined to be leaking;
- f. a list of all components that have not been repaired due to a delay of repair and the reason for the delay; and
- g. a notification indicating if the permittee has changed future inspection frequencies based on the percent of components leaking.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

(3) Pneumatic Controller Reporting

The permittee shall submit an initial annual report, for each natural gas-driven pneumatic controller installed at the facility after 8/23/11, within 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410. Subsequent annual reports are due on the same date each year following the initial report. The annual reports may contain multiple facilities if each pneumatic controller is clearly identified along with its location, and the report includes the following information from 40 CFR 60.5420 for each natural gas-driven pneumatic controller:

- a. company name and address of the affected facility;
- b. identification of each affected facility included in the annual report\*;
- c. beginning and ending dates of the reporting period;
- d. the identification of each pneumatic controller and the equipment it controls;
- e. the month and year each pneumatic controller was installed, reconstructed, or modified;
- f. a statement as to whether the manufacturer's specifications indicate the controller is designed to maintain a natural gas bleed rate less than or equal to 6 scf/hour; or the explanation of why the bleed rate needs to be operated to exceed this and the manufacturer's specifications for the bleed rate;
- g. records of any deviations from the appropriate natural gas bleed rate; and
- h. certification of the responsible official of truth, accuracy, and completeness.

\* One report for multiple affected facilities may be submitted provided the report contains all of the information required and is clearly separated and identified for each well site.

[40 CFR 60.5410(d)], [40 CFR 60.5420(b)(1) and (5) and (c)(4)], [40 CFR 60.5390(f)], and [40 CFR 60.5415(d)(2)]

f) Testing Requirements

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emissions Limitation:

Emissions of VOC shall not exceed 10.56 tons per year from fugitive equipment leaks.

Applicable Compliance Method:

The annual VOC limitation is the estimated potential-to-emit based upon the maximum number of components and type of service (gas/vapor and light liquid) expected at the natural gas production site. Unless or until more accurate emission factors have been demonstrated or established for the site (e.g. following initial and subsequent monitoring and inspections), the appropriate emissions factors from U.S. EPA's "Protocol for Equipment Leak Emission Estimates", Table 2-4, for Oil and Gas production Operations (a conservative estimate), shall be used to demonstrate compliance with the annual limit. The facility's potential emissions from ancillary and associated equipment shall be documented from the summation of the following calculations:

Component Type      # of components x emission factor x % VOC\* = lb VOC/hr

In Gas/Vapor Service

Number of connectors x 0.000441 lb/hr x 50% VOC = lb VOC/hr

Number of valves x 0.00992 lb/hr x 50% VOC = lb VOC/hr

Number of flanges x 0.00086 lb/hr x 50% VOC = lb VOC/hr

Number of compressor seals x 0.01940 lb/hr x 50% VOC = lb VOC/hr

Number of relief valves x 0.01940 lb/hr x 50% VOC = lb VOC/hr

Number of high bleed pneumatic controllers x 0.0194 lb/hr x 50% VOC = lb VOC/hr

In Light Liquid Service

Number of connectors x 0.000463 lb/hr x 100% VOC = lb VOC/hr

Number of valves x 0.00551 lb/hr x 100% VOC = lb VOC/hr

Number of flanges x 0.00024 lb/hr x 100% VOC = lb VOC/hr

Number of pump seals x 0.0287 lb/hr x 100% VOC = lb VOC/hr

Number of relief valves x 0.01653 lb/hr x 100% VOC = lb VOC/hr

Number of high bleed pneumatic controllers x 0.01653 lb/hr x 100% VOC = lb VOC/hr

The total summation of VOC emissions per hour shall be multiplied by 8760 hours per year and divided by 2000 pounds to calculate the estimated annual fugitive VOC emissions.

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

Compliance with the ton per year limit shall be determined following the first 12 months of operation.

As an alternative to using the above emission factors to calculate VOC emissions, the permittee may use facility specific VOC information for site specific emission factors.

\* The % VOC for Gas/Vapor service was based on the highest percent VOC in gas analyses submitted by representative facilities.

(2) Emission Limitation:

Each natural gas-driven pneumatic controller installed after 10/15/13 shall be operated with a bleed rate less than or equal to 6 scf/hr, unless it can be demonstrated that the pneumatic controller needs to have a higher bleed rate based on functional needs.

Applicable Compliance Method:

Natural gas shall be used as a surrogate for VOC. If required, the detection of leaks of natural gas into the ambient air from the pneumatic controller(s) may be determined using Method 21 from 40 CFR 60 Appendix A; however, compliance is demonstrated through maintaining the manufacturer's design specifications, showing that the controller is designed to operate with a bleed rate less than 6 scf/hr. If required, Method 21 may be used during inspections of the facility.

[40 CFR 60.5390(a) or (c)(1)], [40 CFR 60.5410(d)], and [40 CFR 60.5415(d)(1)], with [ORC 3704.03(T)]

g) Miscellaneous Requirements

- (1) Any amendment to Part 60, Subpart OOOO shall supersede the Subpart OOOO compliance limitations and/or options contained in this permit.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**6. Emissions Unit: Flash Vessel/Storage Vessels and truck loading for produced water, crude oil, condensate, and/or petroleum liquids: T001**

**Operations, Property and/or Equipment Description:**

T001	One or multiple vertical fixed roof flash vessel/storage vessel(s) with a combined capacity of no more than 252,000 gallons (6,000 barrels), where each flash vessel/storage vessel has an individual capacity of no more than 39,894 gallon (950 barrel).
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) 6.b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	<p>Total VOC emissions (including breathing losses, working losses, and flashing losses) from all storage vessels combined at the site shall not exceed 4.28 tons per month averaged over a 12-month rolling period.</p> <p>In order to comply with the tons per month emission limit, utilize one or more of the following controls:</p> <p>Use of add-on control (vapor recovery, flare or equivalent) to control emissions from storage vessels as needed to comply with the annual VOC emission limitations. If a flare is used, it must meet the requirements</p>

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

		detailed in emissions unit P004.
b.	OAC Rule 3745-21-09(L)	See b)(2)a.
c.	Part 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	<p>The facility must calculate the potential for VOC emissions for each single storage vessel using an accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels*, or determined for a 30-day period of production prior to 4/15/14 or 30 days after startup for Group 2 storage vessels**.</p> <p>Where these potential VOC emissions are calculated to equal or exceed 6 TPY, the permittee must either maintain the uncontrolled actual VOC emissions at less than 4 TPY and maintain monthly emission calculations in accordance with 40 CFR 60.5395(d)(2); or install a control device, closed vent system, and covers designed and operated to reduce VOC emissions by 95.0%, and by 4/15/14 or 60 days after startup for Group 2 storage vessels or by 4/15/15 for Group 1 storage vessels.</p> <p>Conduct monthly inspections of collection and control equipment.</p> <p>Any final amendments to this rule will supersede the requirement(s) in this permit.</p> <p>See b)(2) b. through f.</p>
d.	40 CFR 60.5413(d)	Option to demonstrate compliance with Part 60 Subpart OOOO through the use a control device model tested by the manufacturer.
e.	40 CFR 60.5412(d)(1)(iii)  40 CFR 60.5413(e)(3)	<p>If required to install controls in accordance with 40 CFR 60.5395, an enclosed combustion device must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.</p> <p>If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no</p>

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

		visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.
f.	40 CFR 60.5365(e) OAC 3745-31-05(F)	The permittee accepts a voluntarily limit to restrict the potential VOC emissions from each storage vessel to less than 6 tons per year.

(2) Additional Terms and Conditions

- a. The permittee shall not place, store, or hold in these fixed roof tanks any petroleum liquid other than crude oil and condensate where there is no custody transfer, unless such tank is designed or equipped in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 with an internal floating roof or equivalent control approved by the Director, prior to storing such petroleum liquids.

[OAC rule 3745-21-09(L)]

- b. Any storage vessel subject to and controlled in accordance with the requirements for storage vessels in 40 CFR Part 60 Subpart Kb, or 40 CFR Part 63 Subparts G, CC, HH, or WW are not subject to Part 60 Subpart OOOO.

[40 CFR 60.5395(h)]

- c. If the storage vessel affected facility is installed with a floating roof to reduce VOC emissions, it must meet the requirements of 40 CFR 60.112b(a)(1) or (2) and the relevant monitoring, inspection, recordkeeping, and reporting requirements in Part 60, Subpart Kb.

[40 CFR 60.5395(e)(2)]

- d. The permittee shall calculate the potential for VOC emissions for each single storage vessel (defined in 40 CFR 60.5430) using an accepted model or calculation methodology. Emissions of VOC shall be based on the maximum average daily throughput determined for:

- i. a 30-day period of production prior to 10/15/13 for storage vessels installed after 8/23/11 and on or before 4/12/13, i.e., Group 1 storage vessels; and/or
- ii. a 30-day period of production prior to 4/15/14 or 30 days after startup for storage vessels installed after 4/12/13, i.e., Group 2 storage vessels.

[40 CFR 60.5410(h)] and [40 CFR 60.5365(e)]

- e. Unless meeting the requirements of 40 CFR 60.5395(d)(2), where the uncontrolled actual VOC emissions can be demonstrated to be less than 4 tons per year, or where it has been demonstrated that the potential VOC emissions are less than 6 TPY, the VOC emissions from each storage vessel affected facility shall be reduced by 95.0 percent by April 15, 2014, or within 60 days after



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

startup, for Group 2 storage vessels; or by April 15, 2015 for Group 1 storage vessels.

[40 CFR 60.5395] and [40 CFR 60.5415(e)(3)]

- f. Any vapors from storage vessels that are recovered and routed to a vapor recovery unit (VRU) system meeting the cover and closed vent system requirements specified in 40 CFR 60.5411(b) and (c) are not required to be included in the determination of VOC potential to emit for purposes of determining affected facility status for NSPS Subpart OOOO. However, if the VRUs are removed or if the system fails to meet the cover and closed vent system requirements of Subpart OOOO, the potential VOC emissions from each such storage vessel shall be calculated within 30 days of the removal or non-compliant operations of the VRU system.

[40 CFR 60.5365(e)]

c) Operational Restrictions

- (1) Total capacity of all storage vessels storing condensate and/or condensed water shall not exceed 252,000 gallons (6000 barrels) combined, excluding any exempt or de minimis vessels.
- (2) Each storage vessel subject to the control requirements of Part 60 Subpart OOOO shall be equipped with a cover that meets the requirements of 40 CFR 60.5411(b); and the storage vessel shall be connected through a closed vent system designed and operated with no detectable emissions, as determined using olfactory, visual and auditory inspections, and in accordance with 40 CFR 60.5411(c) to either: 1. an enclosed combustion control device, designed and operated in accordance with 40 CFR 60.5412(d) or 40 CFR 60.5413(d); 2. an open flare meeting the requirements identified in this permit; or 3. to a process. The collection and control systems shall be operated at all times when gases, vapors, and fumes are vented from the subject storage vessels to a control device; and where routing emissions to a process it must be operational 95% or more of the year.

[40 CFR 60.5365(e)], [40 CFR 60.5395], [40 CFR 60.5410(h)], [40 CFR 60.5411(b) and (c)(1) and (2)], and [40 CFR 60.5412(d)] or [40 CFR 60.5413(d)], and [40 CFR 60.5415(e)(3)]

- (3) In the event that a leak or defect is detected in the cover or closed vent system that is used to demonstrate compliance, the permittee shall make a first attempt at repair no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 30 calendar days after the leak is detected in accordance with 40 CFR 60.5416(c)(4) and (5). A record of the leak detected and repairs must be maintained for a period of five years.

[40 CFR 60.5416(c)(4) and (5)] and [40 CFR 60.5415(e)(3)]

- (4) Where the closed vent system (used to demonstrate compliance) contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device or a process, the requirements identified in 40 CFR 60.5416(c)(3) shall be met.

[40 CFR 60.5416(c)(3)], [40 CFR 60.5411(c)(3)] and [40 CFR 60.5415(e)(3)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (5) Each enclosed combustion device, used to meet the emission reduction standard in 40 CFR 60.5395(d), shall be installed and operated in accordance with 40 CFR 60.5412(d) and 40 CFR 60.5417(h). As an alternative, a combustion control device may be installed whose model has been tested by the manufacturer in accordance with 40 CFR 60.5413(d), and the facility can instead meet the criteria in 40 CFR 60.5413(d)(11) and 40 CFR 60.5413(e).

[40 CFR 60.5410(h)], [40 CFR 60.5412(d)], [40 CFR 60.5417(d)(1)(iii) and (h)], and [40 CFR 60.5415(e)(3)]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records documenting the facility's determination of emissions from each storage vessel:
- a. the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels and prior to 4/15/14 or 30 days after startup for Group 2 storage vessels;
  - b. the content of each storage vessel;
  - c. the lab analyses, calculations, and process simulation model results documenting the annual emissions from breathing, working, and flashing losses; and
  - d. the records for the content and annual throughput (in gallons per year) for each storage vessel.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5365(e)] and [40 CFR 60.5410(h)]

- (2) Where using vapor recovery unit(s) (VRU) for compliance, the permittee shall maintain records that document the VRU system is operated in compliance with the cover and closed vent system requirements of 40 CFR 60.5411(b) and 40 CFR 60.5411(c).

[40 CFR 60.5365(e)]

- (3) Where required, the permittee shall conduct monthly inspections for each closed vent system, each cover, and the combustion control device used to demonstrate compliance in accordance with 40 CFR 60.5416(c) and 40 CFR 60.5417(h); and shall maintain the records identified in 40 CFR 60.5420(c).

[40 CFR 60.5416(c)], [40 CFR 60.5417(h)], [40 CFR 60.5411(b) and (c)], [40 CFR 60.5415(e)(3)], and [40 CFR 60.5420(c)]

- (4) Where the facility is using an enclosed combustion device for compliance, the permittee shall maintain the appropriate records to demonstrate that the control device is designed and operated to reduce VOC by 95.0% by weight and is operated and maintained in accordance with 40 CFR 60.5412(d); or if the model device has been performance tested by the manufacturer in accordance with 40 CFR 5413(d), the device shall be monitored, operated and maintained in accordance with 40 CFR 5413(e).

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

[40 CFR 60.5410(h)], [40 CFR 60.5412(d)] or [40 CFR 60.5413(d) and (e)]

- (5) Where using an open flare for compliance, the permittee shall maintain the records required to demonstrate that the open flare is designed and operated in accordance with Part 60 Subpart OOOO and the requirements of this permit.
- (6) Where the permittee has accepted a voluntarily limit to restrict the potential VOC emissions to less than 6 tons per year and less than 0.50 tons per month averaged over a 12-month rolling period, the records documenting the maximum monthly potential VOC emissions (calculated in accordance with 40 CFR 60.5365(e)) shall be maintained and made readily available upon request.

[40 CFR 60.5365(e)] and [OAC 3745-31-05(F)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall submit an initial annual report within 90 days after the end of the initial compliance period for each storage vessel determined to have potential VOC emissions equal or greater than 6 tons per year. Subsequent annual reports are due no later than the same date each year following the initial report. The reports shall include the information identified in 40 CFR 60.5420(b).

[40 CFR 60.5420(b)] and [40 CFR 60.5410(h) and (i)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- (1) Emissions limitation:

Total VOC emissions from all storage vessels (including breathing losses, working losses, and flashing losses) shall not exceed 4.28 tons per month averaged over a 12-month rolling period.

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

For each storage vessels not meeting the collection and control requirements of Part 60 Subpart OOOO, the potential annual VOC emissions must be documented to be less than 6 tons/year; or the uncontrolled actual VOC emissions shall be calculated to be less than 4 tons/year in accordance with 40 CFR 60.5395(d)(2) through monthly determinations.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

For each storage vessel with potential emissions equal to or greater than 6 tons VOC/year, reduce VOC emissions by 95.0% by installing a closed vent system designed and operated with no detectable emissions, that routes all gases, vapors, and fumes to a process or a combustion control device meeting the requirements of 40 CFR 60.5412(d) or 40 CFR 60.5413(d).

Applicable Compliance Method, documenting emissions:

Annual emissions from breathing, working, and flashing losses from each storage vessel shall be calculated based on the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels and/or prior to 4/15/14 or 30 days after startup for Group 2 storage vessels.

Flashing losses shall be calculated using a generally accepted model or process simulation software program(s) and/or calculation methodology such as, but not limited to, E&P Tank, HYSIM, HYSIS, VMG, or ProMax, to calculate the VOC emissions.

Pressurized samples shall be taken after the separator and at the same time from the flash gas and condensate/oil lines for flash gas analyses; and the data from these lab analyses shall be used in the process simulation software to document emissions from flashing.

Instead of taking pressurized samples from the separator(s) or from the storage vessels, the permittee may utilize pressurized samples acquired from another similar facility operating under similar conditions, or choose to take a representative reservoir sample from a well in another part of the play. If the permittee chooses to use pressurized samples from another facility, the flash gas analyses shall be submitted along with documentation demonstrating that the facility's pressurized condensate/oil and gases would have similar chemical compositions and would be under similar pressures; and provide evidence that if pressurized samples were taken and lab analyses were conducted, the results would provide equivalent or lower emissions. "Similar", in this case, means that the chemical composition, pressures, and operating parameters/conditions of the similar facility are close enough to this facility's condensate/oil and gas composition, pressures, and operations, that the expected emissions would be equivalent to or less than the emissions calculated from the flash gas analyses obtained from the similar facility. If the permittee chooses to use a representative reservoir sample, the analyses must be incorporated into an approved process simulation modeling program utilizing site-specific operating parameters. "Representative", in this case, means having an API gravity no more than 3 degrees below the API gravity of the condensate detected at the facility being permitted. A representative sample with a higher API gravity results in a more conservative emissions estimate and is, therefore, not a concern. If changes to the operating conditions and/or liquid composition are such that the emissions would be expected to exceed those determined with the representative analyses, the permittee shall either submit site-specific analyses using pressurized samples from the separator (with the highest pressures, if more than one), or submit emissions estimates using another representative analyses. The Director reserves the right to require the owner/operator to obtain samples from the facility in order to verify compliance.

Working and breathing losses may be calculated using E&P Tank, EPA Tanks 4.0 software, or other accepted calculation methodology; and/or the working/loading emissions may be calculated using the "Loading Loss Equation" from AP-42, Section

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

5.2, for Transportation and Marketing of Petroleum Liquids, which is based on multiplying a loading loss factor ( $L^*$ ) by the annual petroleum liquid throughput in gallons per year, as follows:

$$*L = 12.46 \text{ SPM/T}$$

For uncontrolled loading, the VOC emissions shall be calculated by multiplying an uncontrolled loading loss factor ( $L_{UC}$ ) by the rolling, 12-month summation of the throughput of condensate and petroleum liquids (in gallons) and dividing by 2000 lbs/ton. The result will be added to the breathing and flashing emission estimates.

$$L_{UC} = 12.46 \text{ SPM/T}$$

For controlled loading, the VOC emissions shall be calculated by multiplying a controlled loading loss factor ( $L_C$ ) by the rolling, 12-month summation of the throughput of condensate and petroleum liquids (in gallons) and dividing by 2000 lbs/ton. The result will be added to the breathing and flashing emission estimates.

$$L_C = 12.46 \text{ SPM/T} [1 - \text{Efficiency}/100]$$

Where:

$$\text{Capture Efficiency} = 97\%$$

$$\text{Destruction Efficiency} = 98\%$$

$$\text{Control Efficiency} = 97\% \times 98\% = 95\%$$

Where:

L = loading loss, pounds per 1000 gallons loaded (Q)

S = saturation factor

P = vapor pressure of liquid loaded, pounds per square inch absolute

M = molecular weight of vapor

T = temperature of bulk liquid ( $^{\circ}\text{R}$ )

Applicable Compliance Method, through design of collection and controls:

Initial compliance with the Part 60, Subpart OOOO standards for storage vessel affected facilities shall be demonstrated by complying with the applicable portions of 40 CFR 60.5411(b) and (c), and 40 CFR 60.5412(d) or 40 CFR 60.5413(e) if the control device is tested by the manufacturer.

Continuous compliance with the Part 60, Subpart OOOO standards for storage vessel affected facilities shall be demonstrated by complying with the applicable portions of 40 CFR 60.5415(e), 40 CFR 60.5416(c), and 40 CFR 60.5417(d) or (h).

Group 1 storage vessels (installed between 8/24/11 and 4/12/13) must be in compliance by April 15, 2015; and Group 2 storage vessels (installed after 4/12/13) must be in

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

compliance by 4/15/14 or within 60 days after startup. In the event an amendment to NSPS Subpart OOOO requires a performance test for the combustion control device to demonstrate compliance, the permittee shall schedule such performance test as required by the amended rules.

[40 CFR 60.5365(e)], [40 CFR 60.5395], [40 CFR 60.5410(h)], [40 CFR 60.5411(b) and (c)], [40 CFR 60.5412(d) or 40 CFR 60.5413(d)], [40 CFR 60.5415(e)(3)], and [ORC 3704.03(T)]

(2) Visible Emissions Limitation for an enclosed combustion control device used to demonstrate compliance with Part 60 Subpart OOOO:

An enclosed combustion device used to demonstrate compliance must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.

[40 CFR 60.5412(d)(1)(iii)]

OR

If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

[40 CFR 60.5413(e)(3)]

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 60.5412(d)(1)(iii)] [40 CFR 60.5413(e)(3)] and [40 CFR 60.5413(a)(1)]

g) **Miscellaneous Requirements**

- (1) Any amendment to Part 60, Subpart OOOO shall supersede the Subpart OOOO compliance limitations and/or options contained in this permit.

**Attachment 2: Ohio Model General PTIO 12.2**

Permit Number: [Permit Number]  
Facility Name: [Facility Name]  
Facility ID: [Facility ID]  
Working Copy of a Permit in Progress

## GENERAL PERMIT 12.2 TEMPLATE

High Volume Horizontal Hydraulic Fracturing, OIL AND GAS WELL SITE PRODUCTION OPERATIONS

### **B. Facility-Wide Terms and Conditions**

The following are the terms and conditions for a General PTIO to be issued to a **non-Title V** facility



Permit Number: [Permit Number]  
Facility Name: [Facility Name]  
Facility ID: [Facility ID]  
**Working Copy of a Permit in Progress**

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) B.6. and B.8.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) B.9. and B.10.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines; and Part 63 Subpart HH, the National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities . At this time, the Ohio EPA is not accepting delegation for area sources subject to the Maximum Achievable Control Technology NESHAP (MACT) rules. The requirements of these rules, that are applicable to the area source(s) for hazardous air pollutants (HAP) identified in this permit, shall be enforceable by U.S. EPA. The complete requirements of this rule (including the Part 63 General Provisions) may be accessed via the Internet from the Electronic code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the appropriate Ohio EPA District Office or Local Air Agency.
3. Multiple emissions units contained in this permit must comply with various federal New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards. The complete NSPS and MACT requirements may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District Office or local air agency. The permittee must comply with the applicable requirements of 40 CFR Part 60 Subparts OOOO, JJJJ, and IIII and 40 CFR Part 63 Subparts HH and ZZZZ as they apply to the emissions source.
4. Air contaminant sources that qualify as de minimis under OAC rule 3745-15-05, or are exempt under OAC rule 3745-31-03(A)(1) or (4) are not subject to emission standards established within this permit. Although this permit does not apply to de minimis or exempt sources, emissions from de minimis or exempt sources must be included in the total potential to emit (PTE) calculations for this permit. PTE calculations should include sources such as:
  - a) qualifying non-road engines (exempt per 3745-31-03(A)(1)(pp)),
  - b) emergency diesel generator(s) (exempt per 3745-31-03(A)(1)(nn)),
  - c) micro turbines less than 200 kW (de minimis per OAC rule 3745-15-05), and
  - d) natural gas-fired heaters/boilers of various types that are less than 10 MMBtu/hr heat input (exempt per 3745-31-03(A)(1)(a)).
5. Emissions units permitted under a previously issued PTI/PTIO as portable sources shall be subject to the requirements of this General Permit during the time they are located at this site, provided that the emission unit(s) meets the qualifying criteria.

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

6. The requirements of this permit do not supersede any Ohio Department of Natural Resources requirements.
7. It is the permittee's responsibility to determine if any air pollution emitting equipment not covered by this permit needs a separate air permit.
8. Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), is not necessary if/when the maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, is less than 1.0 ton per year (or are subject to a standard under 40 CFR Part 63). OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.
9. The permittee remains subject to all applicable federal law and regulations and all applicable provisions of the Ohio State Implementation Plan as approved by the Administrator of the U.S. EPA. The provisions of the Ohio State Implementation Plan are independently enforceable by the U.S. EPA.
10. If the determination that the facility is not a major source is based on actual emissions of 5 tons per year or more of any single HAP or 12.5 tons per year or more of a combination of HAP, the permittee shall update the facility's major source determination within 1 year of the prior determination and each year thereafter, using gas composition data measured during the preceding 12 months of operation. Only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for major source determination at the production field facility (facility located prior to the point of custody transfer).  
[40 CFR 63.760(c)] and [40 CFR 63.761]
11. Emission units and any required control and monitoring equipment shall be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions.  
[40 CFR 63.764(j)], [40 CFR 60.4243(b)], and [40 CFR 60.4211(g)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

## **C. Emissions Unit Terms and Conditions**

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**1. Emissions Unit: Dehydration System, P001**

**Operations, Property and/or Equipment Description:**

P001	Up to two glycol dehydration unit(s) (includes contact tower or absorption column and glycol dehydration unit reboiler) and gas-condensate-glycol (GCG) separator (flash separator), which may be vented to a condenser or BTEX (benzene, toluene, ethyl benzene, xylene) elimination system with condenser, and/or flare (less than 10 MMBtu/hr) or a facility-wide flare (see P004).
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. 1.b)(1)d.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. 1.b)(1)e. and 1.b)(1)f.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	For Total Organic Compounds (TOC), total hazardous air pollutants (total HAP), or benzene, compliance with the applicable control requirements of 40 CFR Part 63, Subpart HH.  Emissions from a flare used to control emissions from the glycol dehydration unit shall not exceed:  0.25 ton Nitrogen Oxides (NOx) per month averaged over a 12-month rolling period;  0.23 ton VOC per month averaged over a 12-month rolling period; and

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.15 ton Sulfur dioxide (SO <sub>2</sub> ) per month averaged over a 12-month rolling period.  See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b.
c.	ORC 3704.03(T)	Carbon Monoxide (CO) emissions from a flare used as a control device for the dehydrator shall not exceed 1.35 tons CO per month averaged over a 12-month rolling period.
d.	OAC rule 3745-31-05(E)	See b)(2)b.
e.	Part 63, Subpart HH, National Emission Standards for hazardous air pollutants (NESHAP) from Oil and Natural Gas Production Facilities	Compliance with the applicable portions of 40 CFR Part 63, Subpart HH. Any final amendments to this rule will supersede any previous Subpart HH requirement(s) in this permit.
f.	40 CFR 63.11(b)(4)	No visible emissions except for 5 minutes during any 2 consecutive hours.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then BAT no longer applies.
- b. These rules apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
- i. This permit takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
- (a) Emissions of Volatile Organic Compounds (VOC) (excludes methane and ethane) shall not exceed 5.0 tons/year;
- (b) Use of a dehydration system flash separator that captures flash vapors; and

Permit Number: [Permit Number]

Facility Name: [Facility Name]

Facility ID: [Facility ID]

Working Copy of a Permit in Progress

- (c) Use of a flare and/or a BTEX Elimination System with condenser on the dehydration still vent(s) as needed to comply with the 5.0 ton VOC/year emission limit.
      - ii. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> and SO<sub>2</sub> emissions from this air contaminant source since the potential to emit for NO<sub>x</sub> and SO<sub>2</sub> are less than ten tons per year.
- c) Operational Restrictions
  - (1) If this facility does not qualify for the dehydrator exemption found in 40 CFR Part 63.764(e), then this facility must comply with all applicable operational restrictions and control requirements found in 40 CFR Part 63, Subpart HH, including the requirements for a flare.
  - (2) If this facility does qualify for the dehydrator exemption found in 40 CFR Part 63.764(e), then:
    - a. If a flare is used to control emissions from the dehydrator:
      - i. The flare shall be operated with a flame present at all times when gases are vented to it.
      - ii. An automatic flame ignition system shall be installed.
      - iii. If the permittee is using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then an alarm shall sound.
      - iv. If the permittee is using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.
      - v. Any flare, auto ignition system, and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
    - b. If a condenser (or BTEX elimination system) is used to control emissions from the dehydrator:
      - i. The condenser shall be operated at all times when gases are vented to it.
      - ii. The condenser must be equipped with a continuous temperature monitoring device that continuously monitors and records the dehydration still vent temperature.
      - iii. The condenser, temperature monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

Permit Number: [Permit Number]  
Facility Name: [Facility Name]  
Facility ID: [Facility ID]  
**Working Copy of a Permit in Progress**

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput or a record of the maximum potential annual throughput rate attainable, based on the physical and operational design of the unit, in accordance with 40 CFR 63.760(a).
- (2) Where a flare is used to control the dehydration still vent, the permittee must:
  - a. continuously monitor the presence of the flame;
  - b. record all periods during which the automatic flare ignition system (pilot flame or electronic arc ignition system) or thermocouple was not working; and
  - c. record all periods during which there was gas being vented to the flare but the flare was not lit.
- (3) Where a condenser (or BTEX elimination system) is used to control the dehydration still vent, the permittee must:
  - a. continuously monitor and record the vapor outlet temperature of the condenser; and
  - b. record all periods of time when the condenser is not operating correctly to control the emissions from the dehydration still vent.
- (4) For each triethylene glycol (TEG) dehydration unit, the permittee shall document the method of compliance as follows:
  - a. if the permittee is using the exemption for the annual average flow rate of natural gas to the TEG dehydration unit, the permittee shall either install and operate a monitoring instrument to directly measure and record the natural gas flow rate to the glycol dehydration unit or demonstrate to the Director's satisfaction that the actual annual average natural gas flow rate to the dehydration unit is less than 85,000 scm/day, in accordance with 40 CFR 63.772(b)(1); or
  - b. if the permittee is using the exemption for the actual average benzene emissions from the TEG dehydration unit, the permittee shall keep the record of the determination (including the test methods and data used to support it) using either the GRI-GLYCalc™ model or by directly measuring benzene using the appropriate methods identified in 40 CFR 63.772(a)(1), in accordance with 40 CFR 63.772(b)(2); or
  - c. if the permittee does not meet one of the exemptions identified in 40 CFR 63.764(e) and is not located in a Urbanized Area (UA) plus offset and Urban Cluster (UC) boundary (as defined in 40 CFR 63.761), the permittee may (instead of meeting the control requirements) keep the record of the calculation for the optimal circulation rate (or alternate circulation rate as allowed using GRI-GLYCalc™ model) and records documenting this circulation rate is not exceeded in accordance with 40 CFR 63.764(d)(2); or

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- d. if the permittee does not meet one of the exemptions identified in 40 CFR 63.764(e) and is located in a Urban Area (UA) plus offset and Urban Cluster (UC) boundary (as defined in 40 CFR 63.761), the permittee shall comply with the control requirements specified in 40 CFR 63.765 and the monitoring and recordkeeping requirements identified in 40 CFR 63.764(d)(1) to demonstrate compliance.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. the annual facility natural gas or hydrocarbon liquid throughput for the year of the report, in accordance with 40 CFR 63.760(a);
  - b. identification of the kind of liquid glycol used in the dehydrator during the year of the report, e.g., ethylene glycol, diethylene glycol, or triethylene glycol\*;
  - c. if the permittee is using triethylene glycol and meeting the exemption for the flow rate of natural gas to the TEG dehydration unit, the actual annual average natural gas flow rate to the TEG dehydration unit; and either the calculations and/or method of measurement of this flow rate or a statement that this flowrate was based on the maximum design capacity of the unit;
  - d. if the permittee is using triethylene glycol and meeting the exemption for benzene emissions, the actual annual average emissions of benzene from the TEG dehydration unit; and if these emissions were determined using the GRI-GLYCalc™ model, the method used to determine the benzene concentration entered into the model, and/or identification of the method used for direct measurement;
  - e. if the permittee is using triethylene glycol and the area source is not located in an UA plus offset and UC boundary and does not meet one of the exemptions identified in 40 CFR 63.764(e), the calculation for the optimal circulation rate and the method of measurement for the gas flowrate (MMscf/day) and inlet/outlet water content (lbs/MMscf), and a statement as to whether or not the optimal circulation rate was exceeded, to include the date, duration, and the non-compliant circulation rate measured;
  - f. if the permittee is using triethylene glycol and the area source is located in an UA plus offset and UC boundary and does not meet one of the exemptions identified in 40 CFR 63.764(e), the method of control that was used to demonstrate



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

compliance, the results of the compliance demonstration, and a statement as to whether or not the selected compliance option was met;

- g. where a flare is used to control the dehydration still vent, all periods of time during which the automatic flare ignition system was not functioning properly or the flare was not maintained as required in this permit, to include the date, time, and duration of each such period of time;
- h. where a condenser (or BTEX elimination system) is used to control the dehydration still vent, all periods of time when the continuous temperature monitoring device for the condenser vapor outlet temperature is not working or is not continuously recording the vapor outlet temperature when process gas is being vented to the condenser; and
- i. where the triethylene glycol dehydrator does not meet one of the exemptions in 40 CFR 63.764(e) or is not demonstrating compliance by documenting and maintaining the optimum glycol circulation rate as required in 40 CFR 63.764(d)(2), the flare or condenser used to demonstrate compliance shall meet all of the requirements of Part 63 Subpart HH.

\* if not using triethylene glycol, the information in “c” through “i” is not required

[40 CFR 63.764(d) and (e)], [40 CFR 63.765], and [40 CFR 63.772(a) and(b)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emissions Limitation:

For total TOC, total HAP, or benzene, compliance with the applicable control requirements of 40 CFR Part 63, Subpart HH.

Applicable Compliance Method:

The permittee may determine the annual total TOC (excludes methane and ethane), total HAP, or benzene emissions using the appropriate methods identified in 40 CFR 63.772 and/or GRI-GLYCalc™ model, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit(s) and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1);

Potential TOC, total HAP, and/or benzene emissions estimates shall be based on the maximum glycol circulation rate(s), in gallons per minute (gpm); the worst case pollutant concentrations from representative extended gas analyses of the inlet wet gas; and the maximum natural gas flow rate, as determined by 40 CFR 63.772(b)(1)(i); or for a new unit, potential emissions shall be estimated in accordance with 40 CFR 63.760(a) and increased by a factor of 1.2. The permittee may also determine the estimated annual

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

VOC emission through direct measurement using Method M25A or Method 18, both from Appendix A of Part 60.

[40 CFR 63.765(b)(1) and/or (c)(3)], [40 CFR 63.771(c) and (d)], [40 CFR 63.772], [40 CFR 63.773(d)], and [OAC rule 3745-31-05(E)]

(2) Emission Limitation from a flare used to control the dehydrator:

1.35 tons of CO per month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for CO is based on using the AP-42 emission factor of 0.37 lb CO/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for Flare Operations" and using the estimated burner rating of 10.0 MMBtu/hr. Estimated CO emissions shall be determined by the following calculations:

$$0.37 \text{ lb CO/MMBtu} \times 10.0 \text{ MMBtu/hr} = 3.7 \text{ lbs CO/hr}$$

$$3.7 \text{ lbs CO/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 16.2 \text{ tons CO/year}$$

$$16.2 \text{ tons CO} \div 12 \text{ months} = 1.35 \text{ tons CO/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(3) Emission Limitation from a flare used to control the dehydrator:

0.23 ton of VOC per month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for VOC is based on using the AP-42 emissions factor of 0.14 lb of hydrocarbon/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1 "Emission Factors for Flare Operations" excluding emissions of methane (55% per Table 13.5-2 "Hydrocarbon Composition of Flare Emissions") and using the estimated burner rating of 10 MMBtu/hr. Estimated VOC emissions shall be determined by the following calculation:

$$0.14 \text{ lb VOC/MMBtu} \times 45\% \times 10.0 \text{ MMBtu/hr} = 0.63 \text{ lb VOC/hr}$$

$$0.63 \text{ lb VOC/hr} \times 8760 \text{ hr/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 2.8 \text{ tons VOC/year}$$

$$2.8 \text{ tons VOC} \div 12 \text{ months} = 0.23 \text{ ton VOC/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(4) Emission Limitation from a flare used to control the dehydrator:

0.25 ton of NOx per month averaged over a 12-month rolling period

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

The emissions limitation for NO<sub>x</sub> is based on using the AP-42 emission factor of 0.068 lb NO<sub>x</sub>/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for Flare Operations" and using the estimated burner rating of 10 MMBtu/hr. Estimated NO<sub>x</sub> emissions shall be determined by the following calculation:

$$0.068 \text{ lb NO}_x/\text{MMBtu} \times 10.0 \text{ MMBtu/hr} = 0.68 \text{ lb NO}_x/\text{hr}$$

$$0.68 \text{ lb NO}_x/\text{hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 3.0 \text{ tons NO}_x/\text{year}$$

$$3.0 \text{ tons NO}_x \div 12 \text{ months} = 0.25 \text{ ton NO}_x/\text{month} \text{ averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(5) Emission Limitation from a flare used to control the dehydrator:

0.15 ton of SO<sub>2</sub> per month averaged over a 12-month rolling period

Applicable Compliance Method:

The SO<sub>2</sub> emissions limitation is based on a fuel gas with a maximum H<sub>2</sub>S content of 250 ppmv for sour gas.

Compliance with the ton per year SO<sub>2</sub> emissions limitation shall be determined by the following calculations:

$$10 \text{ MMBtu/hr} \times 1 \text{ scf}/1020 \text{ Btu} \times 1 \text{ lb-mole}/379.5 \text{ scf} \times 250 \text{ ppm H}_2\text{S} \times 64 \text{ lb SO}_2/\text{lb-mole} = 0.41 \text{ lb SO}_2/\text{hr}$$

$$0.41 \text{ lb SO}_2/\text{hr} \times 8760 \text{ hrs/year} \times 1 \text{ ton}/2000 \text{ lbs} = 1.8 \text{ tons SO}_2/\text{year}$$

$$1.8 \text{ tons SO}_2 \div 12 \text{ months} = 0.15 \text{ ton SO}_2/\text{month} \text{ averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(6) Emission Limitation:

Where the flare is used to demonstrate compliance with Part 63, Subpart HH, there shall be no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 63.11(b)(4)]

g) Miscellaneous Requirements

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

(1) None.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**2. Emissions Units: Spark Ignition Internal Combustion Engines, P002**

**Operations, Property and/or Equipment Description:**

P002	<p>One or multiple stationary natural gas-fired spark ignition (SI) internal combustion engines (ICE) with a combined total horsepower (HP) of no more than 1,000 HP for the site.*</p> <p>Includes 2007 and later model year engines manufactured after the applicable effective date identified in 40 CFR 60.4230(a)(3); and engines manufactured before the effective date of the NSPS, where compliance with the Part 60 Subpart JJJJ emissions standards for the same size engine can be met by retrofitting the engine with a control device and demonstrated through stack testing.</p>
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\* In order to maintain the carbon monoxide (CO) emissions below major source thresholds, where the sum of the total horsepower (HP) of the spark ignition (SI) engines exceeds 500 HP, the SI engines rated at or over 100 HP may be required to meet more stringent standards for CO than is applicable to the engine.

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (a) None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (a) 2.b)(1)a.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart JJJJ In accordance with 40 CFR	Engines shall either be certified to the applicable Part 60 Subpart JJJJ emission standards and/or the exhaust emissions shall not exceed the

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	<p>60.4230, the engines in this emissions group are subject to the New Source Performance Standards (NSPS) for Stationary Spark Ignition (SI) Internal Combustion Engines (ICE).</p> <p>40 CFR 60.4233(e)</p> <p>40 CFR 60.4231(a), (d), and (e)-mfg.</p> <p>Table 1 to Part 60, Subpart JJJJ</p>	<p>following emission limitations:</p> <p>the applicable emission standards for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC) as identified in Table 1 to Part 60, Subpart JJJJ; or</p> <p>for engines less than or equal to 25 HP, the applicable standards from 40 CFR Part 90 or Part 1054; or</p> <p>for engines greater than 25 HP and less than 100 HP, the applicable standards from Part 1048.</p> <p>Where the total summation of the SI ICE HP is equal to or less than 500 HP, the natural gas engine emissions together shall not exceed the worst-case emission standards for engines of 100 HP or greater from Table 1 to the subpart<sup>1</sup>:</p> <p>2.0 grams of NO<sub>x</sub> per horsepower hour (2.0 g NO<sub>x</sub>/HP-hr);</p> <p>4.0 grams of CO per horsepower hour (4.0 g CO/HP-hr); and</p> <p>1.0 gram of VOC per horsepower hour (1.0 g VOC/HP-hr);</p> <p>In order to maintain CO emissions below major source thresholds, where the total summation of the SI ICE HP is greater than 500 HP, the natural gas engine emissions together shall not exceed the following:</p> <p>2.0 grams of NO<sub>x</sub> per horsepower hour (2.0 g NO<sub>x</sub>/HP-hr);</p> <p>2.0 grams of CO per horsepower hour (2.0 g CO/HP-hr); and</p> <p>1.0 gram of VOC per horsepower hour (1.0 g VOC/HP-hr).</p> <p>See b)(2)c., d. and e.</p>
b.	<p>OAC rule 3745-17-11(B)(5)</p> <p>ORC 3704.03(T)</p>	<p>Particulate Emissions (PE) shall not exceed 0.310 lb/MMBtu for stationary small internal combustion engines rated less than or equal to</p>

<sup>1</sup> Note: Each engine shall be required to meet the applicable emission standards under 40 CFR Part 60, Subpart JJJJ, based on the manufacture date and size engine, or where required, shall meet the Subpart JJJJ Table 1 standards or the limits identified in this permit by retrofitting pre-NSPS engines with a control device.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		600 HP and 0.062 lb/MMBtu for stationary large internal combustion engines rated over 600 HP.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
d.	OAC rule 3745-18-06(G)	Pursuant to OAC rule 3745-18-06(A), this stationary internal combustion engine is exempt from the sulfur dioxide (SO <sub>2</sub> ) emission limitation specified by this rule during any calendar day in which natural gas is the only fuel burned.
e.	ORC 3704.03(T)	Compliance with the applicable g/HP-hr limits from 40 CFR Part 60, Subpart JJJJ for NO <sub>x</sub> and CO.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Compliance with the applicable g/HP-hr limit found in 40 CFR Part 60, Subpart JJJJ for VOC. See b)(2)a.
g.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
h.	40 CFR Part 60 Subpart JJJJ 40 CFR 60.4233 and OAC 3745-31-05(F)	All SI ICE shall meet all applicable NSPS requirements where the model year is subject to these emission standards and all older model year engines shall be fitted with a control device (where required) and shall be demonstrated to meet the NSPS emission standards as applicable to 2007 and later model year engines of the same size/power.
i.	OAC 3745-31-05(F)	4.4 lbs NO <sub>x</sub> /hr from all SI engines combined.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emission limitations/control measures no longer apply.

- b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO<sub>2</sub> and VOC emissions from this air contaminant source since the potentials to emit for SO<sub>2</sub> and VOC are less than ten tons per year.

- c. The stationary spark ignition (SI) internal combustion engine(s) (ICE) are subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart JJJJ, standards of performance for stationary SI ICE.

[40 CFR 60.4230(a)]

- d. The owner/operator of all SI ICE shall demonstrate compliance with the emissions standards identified in 40 CFR 60.4233 of Part 60, Subpart JJJJ in accordance with 40 CFR 60.4243(b).

[40 CFR 60.4233] and [40 CFR 60.4243(b)]

- e. The gram per horsepower-hour emissions limitations are based on the emission standards from Table 1 of NSPS JJJJ for natural gas-fired engines. In order to maintain the carbon monoxide (CO) emissions below major source thresholds, where the sum of the total horsepower (HP) of the spark ignition (SI) engines exceeds 500 HP, the SI engines rated at or over 100 HP shall meet the CO limits identified in the Testing Section of this permit. However, each engine installed at the natural gas production site and subject to a more stringent standard, based on the model year and engine's size, must be demonstrated to comply with the applicable emissions standard established in 40 CFR 60.4233.

c) **Operational Restrictions**

- (1) The stationary SI ICE shall be installed, operated, and maintained according to the manufacturer's recommendations or in accordance with the operator's Operation and Maintenance (O&M) Plan and in a manner consistent with good air pollution control practice for minimizing emissions. The permittee shall operate and maintain the stationary SI ICE to achieve the emission standards identified in 40 CFR 60.4233 over the entire life of the engine(s). The air-to-fuel ratio controllers shall be set by the operator according to the manufacturer's operations manual, to ensure proper operation of the engines and their control device (catalytic converter) and to minimize emissions.

[40 CFR 60.4234], [40 CFR 60.4243(b)], and [40 CFR 60.4243(g)]

d) **Monitoring and/or Recordkeeping Requirements**



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (1) The following records shall be maintained for each spark ignition engine operating at the well site:
  - a. all notifications submitted to comply with and all documentation supporting compliance with Part 60 Subpart JJJJ;
  - b. all notifications submitted to comply with and all documentation supporting compliance with Part 63 Subpart ZZZZ;
  - c. records of all maintenance conducted on the engines;
  - d. for certified engines less than or equal to 100 HP, the certification from the manufacturer, documenting that the engine(s) meet(s) the emission standards identified in 40 CFR 60.4231 or for uncertified engines, the testing results from the initial and subsequent performance tests, as applicable, conducted to meet the requirements of 40 CFR 60.4243(b)(2)(i) or (ii); and
  - e. the information identified in 40 CFR Parts 90, 1048, 1054, and/or 1060 that is required to be provided by the manufacturer to the operator/owner, as applicable to the model year and horsepower of the engines.

The permittee or owner/operator (if leased) of the engines shall keep the above records and a maintenance plan for the engines, and shall maintain documentation that the engine is maintained and operated according the manufacturer's emission-related instructions.

[40 CFR 60.4245(a)] and [40 CFR 60.4243(a) and (b)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. each SI engine located (and operated) at the production site during the year, identified by the model year, horse power, and the date of manufacturer of each engine;
  - b. a statement as to whether each engine was purchased certified by the manufacturer, in accordance with the Subpart JJJJ, i.e., the manufacturer has provided a warranty for the emissions when the engine was first sold;
  - c. a statement as to whether each engine was operated and maintained in accordance with the manufacturers emission-related instructions;

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- d. the date each uncertified SI engine was tested for compliance with the applicable emission standards identified in Part 60 Subpart JJJJ; and
  - e. identification of each engine that did not meet the applicable emission standards identified in 40 CFR 60.4233 and/or this permit, the number of hours each such engine was in operation while not in compliance, the pollutant limitation(s) that were exceeded, and information on the date and resolution of compliance.
- (3) For each natural gas SI ICE not certified to the applicable emission standards identified in 40 CFR Part 60 Subpart JJJJ, and subject to the performance testing requirements of 40 CFR 60.4243(b)(2), the permittee shall submit a copy of the results of each performance test conducted to demonstrate compliance within 60 days after the test has been completed.

[40 CFR 60.4245(d)]

f) **Testing Requirements**

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods.

- (1) The SI engines shall meet the applicable emissions standards identified in 40 CFR 60.4233 and/or the applicable emission limits required in this permit. Engines greater than 100 HP shall not exceed the emission standards identified in Table 1 to Subpart JJJJ and engines less than 100 HP shall not exceed the applicable standards identified in 40 CFR 60.4231, as required per 40 CFR 60.4233, all as applicable to each engine's horsepower and model year. In order to maintain the facility below major source thresholds and significant impact levels, older engines that were manufactured before the effective date of the NSPS shall be retrofitted with controls that can demonstrate the emission limits established in this permit are met.
- (2) For each natural gas engine purchased without an EPA certificate of conformity (most engines >25 HP), the permittee shall conduct or have conducted an initial performance test to demonstrate compliance with the NSPS standards for NOx, CO, and VOC; and for each engine greater than 500 HP, subsequent performance tests shall be conducted every 8,760 hours or 3 years, whichever comes first.

[40 CFR 60.4243(b)(2)]

(3) **Emission Limitation:**

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

**Applicable Compliance Method:**

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[OAC rule 3745-17-07(A)(1)]

(4) **Emissions Limitations:**

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Particulate Emissions (PE) shall not exceed 0.310 lb/MMBtu for small engines  $\leq$  600 HP; and 0.062 lb/MMBtu for large engines  $>$  600 HP

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[OAC 3745-17-11(B)(5)]

(5) Emissions Limitations:

2.0 grams NO<sub>x</sub> /HP-hr for engines  $\geq$  100 HP; and/or

the combination of SI engines shall be calculated to not exceed 4.4 lbs NO<sub>x</sub>/hour, based on the summation of the emission stack test results and/or the pound per hour NO<sub>x</sub> emissions calculated from the emission rate certified by the manufacturer.

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr NO<sub>x</sub> standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year NO<sub>x</sub> emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ. The combination of SI engines together shall be calculated to not exceed 4.4 lbs NO<sub>x</sub>/hour, based on the summation of the emission stack test results and/or the pound per hour NO<sub>x</sub> emissions calculated from the emission rate certified by the manufacturer.

The following calculations establish the pound per hour emissions of NO<sub>x</sub> from the spark ignition engines covered in this permit:

$$2.0 \text{ g NO}_x/\text{HP-hr} \times 1,000 \text{ HP} \times 1\text{lb}/454 \text{ g} = 4.4 \text{ lbs NO}_x/\text{hr}$$

When required, the permittee shall demonstrate compliance with the NO<sub>x</sub> limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

(6) Emissions Limitations:

4.0 grams CO/HP-hr for engines  $\geq$  100 HP; or

2.0 grams CO/HP-hr for engines  $\geq$  100 HP where the total engine power is greater than 500 HP; and/or

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

the combination of SI engines shall be calculated to not exceed 4.4 lbs CO/hour, based on the summation of the emission stack test results and/or the pound per hour CO emissions calculated from the emission rate certified by the manufacturer.

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr CO standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year CO emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ. The combination of SI engines together shall be calculated to not exceed 4.4 lbs CO/hour, based on the summation of the emission stack test results and/or the pound per hour CO emissions calculated from the emission rate certified by the manufacturer.

Where the sum of the total HP of the facility SI ICE is no greater than 500 HP, the following calculations establish the pound per hour emissions of CO from the spark ignition engines covered in this permit:

$$4.0 \text{ g CO/HP-hr} \times 500 \text{ HP} \times 1\text{lb}/454 \text{ g} = 4.4 \text{ lbs CO/hr}$$

Where the sum of the total HP of the SI ICE exceeds 500 HP, an average CO limit between 4.0 grams/HP-hr and 2.0 grams/HP-hr shall be required in order to meet the 4.4 lbs/hour CO limitation established in this permit. The average emissions of CO (in grams/HP-hr) shall be calculated as follows:

$$\text{Average g CO/HP-hr} = \frac{\sum_{n=1}^n [\text{g/HP-hr} \times \text{HP}]}{\text{total HP}}$$

Where:

g/HP-hr = the standard to which each natural gas engine is certified

HP = the horsepower of each individual natural gas engine

total HP = the total horsepower or summation of the horsepower of each natural gas engine

n = number of natural gas engines at the well site

The following calculations establish the maximum pound per hour emissions of CO from the spark ignition engines covered in this permit where the summation of the horsepower exceeds 500 HP, and where the average emissions of CO is maintained at or below 2.0 grams/HP-hr:

$$2.0 \text{ g CO/HP-hr} \times 1,000 \text{ HP} \times 1\text{lb}/454 \text{ g} = 4.4 \text{ lbs CO/hr}$$

When required, the permittee shall demonstrate compliance with the CO limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

(7) Emissions Limitations:

1.0 gram VOC/HP-hr for engines  $\geq$  100 HP

Applicable Compliance Method:

The emission limitations are based on the exhaust emission standards identified in 40 CFR 60.4231(e). Compliance with the applicable g/HP-hr VOC standard shall be demonstrated through performance/stack testing, if not certified to the standard. The g/HP-hr limitations above are based on the emission standards from Table 1 to Part 60 Subpart JJJJ for engines 100 HP or larger. Compliance with the short term and ton per year VOC emissions limitation shall be determined for each non-emergency spark ignition engine located on the site using the applicable compliance methods identified in Part 60 Subpart JJJJ.

The following calculations establish the pound per hour emissions of VOC from the spark ignition engines covered in this permit:

$$1.0 \text{ g VOC/HP-hr} \times 1,000 \text{ HP} \times 1\text{lb}/454 \text{ g} = 2.20 \text{ lbs VOC/hr}$$

When required, the permittee shall demonstrate compliance with the VOC limitation according to the requirements of 40 CFR 60.4244, using the applicable test methods in Table 2 to Part 60 Subpart JJJJ.

[40 CFR 60.4233(e)], [40 CFR 60.4243(b)(2)]. [40 CFR 60.4244], and [Table 1 to Part 60 Subpart JJJJ]

g) Miscellaneous Requirements

(1) Replacement of or Installation of Additional Engines

The permittee may install additional stationary engines or replace existing engines at any time during the life of this permit as long as the following are met:

- a. at any given time, the total horsepower of all natural gas engines in service at the site is no more than 1,000 HP;
- b. all natural gas engines in service at the site meet the applicable NSPS emission standards as identified in the NSPS and this permit, and all applicable State or Federal rules;
- c. the permittee maintains a list of all stationary natural gas engines used at the site; and
- d. the permittee continues to meet the qualifying criteria associated with the natural gas engines for this general permit.

(2) Stack Height of Stationary Natural Gas Engines

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- a. Any engine with greater or equal to 250 HP shall be equipped with an exhaust stack that is at least 20' above ground level.
- b. Any engine with less than 250 HP shall be equipped with an exhaust stack that is at least 12' above ground level.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**3. Emissions Unit: Compression Ignition Engines, P003**

**Operations, Property and/or Equipment Description:**

P003	One or multiple stationary diesel-fired compression ignition (CI) (diesel) internal combustion engines (ICE) with a combined total horsepower (HP) of no more than 250 HP for the site <sup>2</sup> , and that are either certified to meet the Tier 3 emission standards (from 40 CFR 60.89.112 Table 1) for diesel engines or retrofitted with a control device that demonstrates each engine meets the Tier 3 standards.
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) 3.b)(1)a.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart IIII 40 CFR 60.4204(b) 40 CFR 60.4201(a) Table 1 to 40 CFR 89.112, Tier 3	The exhaust emissions from any compression ignition (CI) internal combustion engine (ICE) shall not exceed the appropriate Tier 3 emission standards identified in Table 1 to 40 CFR 89.112. The emission limitations are based on the following worst-case Tier 3 emission standards for engines greater than or equal to 50 HP:

<sup>2</sup> This emissions unit includes stationary diesel engines used for production. It does not include various portable engines that are temporarily used on the site nor does it include engines that are exempt from permitting. For instance, any engines qualifying for the non-road exemption found in Ohio Administrative Code (OAC) paragraph 3745-31-03(A)(1)(pp) would not be covered by this permit.

<sup>2</sup> Note: The worst case emission standards for diesel-fired engines less than 300 HP were used to establish the emissions limitation. However, each engine shall be required to meet the applicable Tier 3 emission standards (or Tier 2 standards for engines <50 HP) from Table 1 of 40 CFR 89.112.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.40 gram PM/kW-hr; 4.7 grams NOx + NMHC/kW-hr; and 5.0 grams CO/kW-hr. See b)(2)c.
b.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this engine shall not exceed 15 ppm or 0.0015% sulfur by weight. See b)(2)c., c)(2), d)(1), and e)(2).
c.	40 CFR 89.113	Engine(s) subject to Part 60, Subpart IIII shall be certified by the manufacturer to the following opacity standards:  20% opacity during the acceleration mode; 15% opacity during the lugging mode; and 50% opacity during the peaks in either the acceleration or lugging modes.
d.	OAC rule 3745-18-06	The SO <sub>2</sub> limitation established per this rule is less stringent than the limitation established in 40 CFR 80.510(b).
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this engine shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Compliance with the applicable gram/kW-hr limits found in 40 CFR Part 60, Subpart IIII for PM, NOx + NMHC, and CO. See b)(2)a.
g.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
h.	OAC rule 3745-17-11(B)(5)	The emission limitation specified by this rule is less stringent than the emission limitation established for PM pursuant to 40 CFR Part 60, Subpart IIII.
i.	40 CFR Part 60 Subpart IIII 40 CFR 60.4202	All CI ICE shall meet all applicable NSPS requirements where the model year is subject to these standards and older engines shall be fitted



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		with a control device that demonstrates the Tier 3 standards are met.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emission limitations/control measures no longer apply.

b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM, NOx, CO, and VOC emissions from this air contaminant source since the uncontrolled potential to emit for PM, NOx, CO, and VOC are less than ten tons per year.

c. The stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.

[40 CFR 60.4200(a)]

d. The stationary CI ICE has been or shall be purchased certified by the manufacturer to emission standards as stringent as those identified in 40 CFR 60.4201(a) and found in Tier 3 of 40 CFR 89.112, Table 1, for engines greater than or equal to 50 horsepower (37 kilowatt) and less than or equal to 250 horsepower (186 kilowatt), and to the opacity standards found in 40 CFR 89.113.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4203], and [40 CFR 60.4211(c)]

e. The quality of the diesel fuel burned in this engine shall meet the following specifications on an “as received” basis:

i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015 pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent; and
- iii. a heating value greater than 135,000 Btu/gallon.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

c) Operational Restrictions

- (1) The stationary CI ICE shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions over the entire life of the engine; and the permittee shall only change those emission-related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE and Part 1068, the General Compliance Provisions for Engine Programs. The permittee shall operate and maintain the stationary CI ICE to achieve the Tier 3 emission standards in Table 1 to 40 CFR 89.112, as required per 40 CFR 60.4204.

[40 CFR 60.4206] and [40 CFR 60.4211(a)]

- (2) Diesel fuel burned in the CI, ICE shall not exceed the standards for sulfur as specified by 40 CFR 80.510(b), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

[40 CFR 60.4209(b)]

- (4) The summation of engine power from all the diesel engines installed at the production facility site (following well completion) shall not exceed 250 HP.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each shipment of oil received for burning in this engine, the permittee shall maintain records of the total quantity of the diesel oil received and the oil supplier's (or permittee's) analyses for sulfur content, in parts per million (40 CFR 80.510) or percent by weight. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR 80.580, using the appropriate ASTM methods. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

[for 40 CFR 60.4207(b)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (2) The permittee shall maintain the manufacturer's certification or compliant test data for non-certified engines, to the applicable Tier 3 emission standards in Table 1 of 40 CFR 89.112 at a central location for all facility ICE and it shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the identification number of the certificate. The permittee or owner/operator (if leased) of the engines shall keep a maintenance plan and records of the maintenance conducted on each engine, to include documentation that the engine is maintained and operated according to the manufacturer's emission-related instructions.

[40 CFR 60.4211]

- (3) The permittee shall maintain a record of the diesel fuel burned in each ICE during each calendar year. The diesel fuel usage shall be calculated using the best method available to estimate the annual fuel consumption of each engine, which might include, but are not be limited to: a flow meter installed on the engine, records of the volume of diesel fuel oil received with each delivery, the fuel oil levels recorded from the diesel storage tank, and/or the recorded or estimated hours of operation along with the manufacturer's documentation of the estimated fuel flow rate.

- (4) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall keep records of the date, time, and any corrective action(s) taken in response to the notification from the backpressure monitor, that the high backpressure limit of the engine has been approached or exceeded.

[40 CFR 60.4214(c)]

- (5) The permittee shall maintain a record of visible emission checks for the stack of diesel engines. The record shall be documented during maintenance operations.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall identify in the PER:
  - a. each CI engine located (and operated) at the production site during the year, to include the year of manufacture and/or year rebuilt, the horse power;
  - b. a statement as to whether each engine was purchased certified by the manufacturer, in accordance with the Subpart IIII, i.e., the manufacturer has provided a warranty for the emissions when the engine was first sold;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. a statement as to whether each engine was operated and maintained in accordance with the manufacturers emission-related instructions;
- d. the date each uncertified SI engine was tested for compliance with the Tier 3 emission standards from 40 CFR 89.112;
- e. identification of any uncertified engine that did not meet the applicable Tier 3 emission standards, to include the horse power and year of manufacture and/or year rebuilt; and
- f. any period of time that the quality of oil burned in each engine did not meet the requirements established in 40 CFR 80.510(b), based upon the required fuel records, to include the amount burned, the engine combusting it, the date(s), and the date the non-compliant fuel was purchased\*.

\* if the fuel oil is purchased before 10/1/10, the amendments of 1/30/13 allow the fuel to be used until depleted

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall include in the PER any records of the date, time, and any corrective action(s) taken in response to the notification from the monitor that the backpressure has been approached or exceeded.

[for 40 CFR 60.4214(c)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emission Limitation:

Manufacturer's certification requirements related to opacity include:

20% opacity during the acceleration mode;

15% opacity during the lugging mode; and

50% opacity during the peaks in either the acceleration or lugging modes.

Applicable Compliance Method:

The CI ICE subject to the standards in 40 CFR Part 60, Subpart IIII shall be purchased certified by the manufacturer to the opacity standards of 40 CFR 89.113.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], and [40 CFR 89.113]

(2) Emission Limitation:

Visible particulate emissions from the exhaust stack serving this engine shall not exceed 20 %opacity, as a six-minute average, except as specified by rule.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

Visible emission checks shall be conducted following the completion of maintenance operations. Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[OAC rule 3745-17-07(A)(1)]

(3) Emission Limitation:

0.40 gram PM/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

(4) Emissions Limitations:

4.7 grams NO<sub>x</sub> + NMHC/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

For the purpose of reporting emissions, where the limitation is for NO<sub>x</sub> + NMHC, the NO<sub>x</sub> and VOC limitations shall be calculated using a ratio of 74.6% NO<sub>x</sub> to 25.4% VOC:\*

4.7 g NO<sub>x</sub>+NMHC/kW-hr x 74.6% NO<sub>x</sub>\* = 3.5 grams NO<sub>x</sub>/kW-hr.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

(5) Emissions Limitations:

5.0 grams CO/kW-hr

Applicable Compliance Method:

Compliance with the applicable g/kW-hr emissions standard shall be based on the manufacturer's certification to the standards applicable to each engine and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr standard above is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)] and [40 CFR 60.4212(a) and (c)]

(6) Emissions Limitations:

4.7 grams NO<sub>x</sub> + NMHC/kW-hr

Applicable Compliance Method:

Compliance with the emission limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limitation is the worst-case Tier 3 exhaust emission standards from Table 1 of 40 CFR 89.112 for diesel engines between 50 and 300 horsepower (37 and 225 kilowatts). An uncertified engine shall either be stack tested following installation or test data shall be submitted to demonstrate compliance with the appropriate limit based on the horsepower.

For the purpose of reporting emissions, where the limitation is for NO<sub>x</sub> + NMHC, the NO<sub>x</sub> and VOC limitations shall be calculated using a ratio of 74.6% NO<sub>x</sub> to 25.4% VOC\*:

$$4.7 \text{ g NO}_x\text{+NMHC/kW-hr} \times 25.4\% \text{ NMHC}^* = 1.19 \text{ gram VOC/kW-hr.}$$

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in f)(8)below.

[40 CFR 60.4204(b)], [40 CFR 60.4201(a)], [40 CFR 60.4211(c)], and [40 CFR 60.4212(a) and (c)]

\*This ratio is based upon the linear relationship of NO<sub>x</sub> to NMHC from Table 1 of Subpart III, Table 1 from 40 CFR 89.112, to Tables 4, 5, and 6 from 40 CFR 1039.102.

(7) Emissions Limitation:

Sulfur content 15 ppm or  $\leq$  0.0015% by weight sulfur

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the standards in 40 CFR 80.510(b), this calculates to approximately 0.0015 lb SO<sub>2</sub>/MMBtu.

[40 CFR 60.4207(b)] and [40 CFR 80.510(b)]

- (8) If it is determined by Ohio EPA that a compliance demonstration is required through performance testing, i.e., the engine is not certified or not operated in accordance with the manufacturer's emission-related instructions, it shall be conducted using one of the following test methods or procedures:

- a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR Part 1065; or
- b. in accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR Part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the "not to exceed" (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:

$$\text{NTE requirement for each pollutant} = 1.25 \times \text{STD}$$

Where:

STD = The standard specified for the pollutant in 40 CFR 89.112.

[40 CFR 60.4212(a) and (c)]

g) **Miscellaneous Requirements**

(1) **Replacement of or Installation of Additional Engines**

- a. The permittee may install additional stationary compression ignition engines or replace existing stationary compression ignition engines at any time during the life of this permit as long as the following are met:
  - i. at any given time, the total horsepower of all stationary compression ignition engines in service at the site is no more than 250 HP;
  - ii. all stationary compression ignition engines in service at the site meet all applicable NSPS emission standards identified in the NSPS and this permit, and all applicable State or Federal rules;
  - iii. the permittee maintains a list of all stationary compression ignition engines used at the site; and

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- iv. the permittee continues to meet the qualifying criteria associated with the stationary compression ignition engines for this general permit.
- (2) Stack Height of Stationary Compression Ignition Engines
- a. Each stationary compression ignition engine shall be equipped with an exhaust stack that is at least 12' above ground level.



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**4. Emissions Unit: Enclosed or Open Flare/Combustion Device, P004**

**Operations, Property and/or Equipment Description:**

P004	Enclosed or Open Flare(s)/Combustion Device(s) with a maximum combined capacity heat input of no more than 250 MMBtu/hr and operated at no more than 32 MMBtu per hour combined heat input from all the sources vented to the combustion device(s), except during an emergency <sup>3</sup>
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a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions in this permit are federally enforceable, with the exception of those listed below, which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions in this permit are enforceable under state law only, with the exception of those listed below, which are federally enforceable.

a. 4.b)(1)d. and 4.b)(1)e.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	For VOC and where applicable, compliance with the applicable control requirements of 40 CFR Part 60, Subpart OOOO, by having a designed minimum control efficiency of 95% for an enclosed flare/combustor.  Carbon monoxide (CO) emissions shall not exceed 4.32 tons per month averaged over a 12-month rolling period.
b.	OAC rule 3745-31-05(A)(3), as	Nitrogen Oxide (NOx) emissions shall not

<sup>3</sup> This emissions unit applies when a facility chooses to use a flare/combustion device to control VOCs emitted from the entire facility (including, but not limited to, flash vessel/storage tanks, truck loading for water and/or petroleum liquids, and the dehydrator). If a separate flare is used to control dehydrator emissions, then the flare requirements found in the dehydrator emissions unit terms govern the dehydrator flare.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	effective 11/30/01	<p>exceed 0.79 ton per month averaged over a 12-month rolling period.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.48 ton per month averaged over a 12-month rolling period.</p> <p>See b)(2)a.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
d.	<p>Part 63, Subpart HH, National Emission Standards for hazardous air pollutants (NESHAP) from Oil and Natural Gas Production Facilities</p> <p>Control/operational requirements applicable to area source TEG dehydration units not meeting one of the exemptions found in 40 CFR 63.764(e).</p>	<p>For a triethylene glycol dehydration unit subject to the standards, compliance with the applicable portions of 40 CFR Part 63, Subpart HH. Design and operate the enclosed flare/combustion device in accordance with the requirements of 40 CFR 63.771(d)(1), i.e., reduce the mass content of either TOC or total HAP, in the gases vented to it (from the closed vent system), by 95% by weight or greater; or reduce the concentration of TOC or total HAP to less than or equal to 20 ppm by volume on a dry basis corrected to 3% oxygen, in accordance with 40 CFR 63.772(e); or design the open flare in accordance with 40 CFR 63.11(b).</p>
e.	<p>Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution</p> <p>Control requirements applicable to each storage vessel constructed, modified, or reconstructed after 8/23/11 with potential VOC emissions equal to or greater than 6 tons/year.</p>	<p>For a storage vessels subject to the standards, compliance with the applicable portions of 40 CFR Part 60, Subpart OOOO. By the applicable compliance date, design and operate an enclosed combustion device in accordance with the requirements of 40 CFR 60.5412(d)(1) to reduce the mass content of VOC by 95% by weight or greater; or install a combustion control device that's model has been tested by the manufacturer in accordance with 40 CFR 60.5413(d); or install an open flare designed in accordance with 40 CFR 60.18(b).</p>
f.	40 CFR 60.5412(d)(1)(iii)	<p>If required to install controls in accordance with 40 C FR 60.5393, an enclosed combustion device must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.</p>

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR 60.5413(e)(3)	If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emissions limitations/control measures no longer apply.
- b. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.  
  
The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NO<sub>x</sub>, and SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potential to emit for PE, NO<sub>x</sub>, and SO<sub>2</sub> are less than ten tons per year.
- c. Pit flaring is prohibited.

c) Operational Restrictions

- (1) The flare or combustion device shall be operated with a flame present at all times when gases are vented to it.
- (2) An automatic flame ignition system shall be installed to meet one of the following requirements:
  - a. If using a pilot flame ignition system, the presence of a pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame. A pilot flame shall be maintained at all times in the flare's pilot light burner. If the pilot flame goes out and does not relight, then an alarm shall sound; or

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- b. If using an electric arc ignition system, the arcing of the electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor the electric arc ignition system.
- (3) The flare, its auto ignition system, and its recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- (4) If the dehydrator does not qualify for one of the exemptions found in 40 CFR Part 63.764(e) or if it has been determined that any storage vessel emits 6 tons or more of VOC per year, the enclosed flare/combustion device must be designed and operated to reduce VOC, TOC, or total HAP, as applicable, by 95% by weight; or the concentration of TOC or Total HAP, as applicable, to 20 ppm by volume on a dry basis and corrected to 3% oxygen, in accordance with the applicable rule; or the open flare shall be designed and operated in accordance with 40 CFR 63.11(b) or 40 CFR 60.18(b).
- (5) This flare/ combustion device shall operate at no more than 32 MMBtu/hr heat input at all times except:
  - a. when a malfunction occurs, e.g., when excess gas must be safely disposed of by venting it to the flare/combustion device; or
  - b. for repair pressure blow-downs; or
  - c. when another well is being drilled or fractured and the gas must be safely disposed of by venting it to the flare/combustion device.
- d) **Monitoring and/or Recordkeeping Requirements**
  - (1) If the permittee is using the flare/combustion device to demonstrate compliance with 40 CFR 63.771(d) for the TEG dehydrator or to demonstrate compliance with 40 CFR 60.5412(d) for each storage vessel calculated to have VOC emission equal to or exceeding 6 tons per year, the permittee shall maintain the appropriate records to demonstrate that the enclosed flare/combustion device is designed and operated to reduce VOC, TOC, or total HAP by 95% by weight; or the concentration of TOC or Total HAP to 20 ppm by volume on a dry basis and corrected to 3% oxygen, all in accordance with the applicable rules; or shall maintain the records required to demonstrate that the open flare is designed and operated in accordance with 40 CFR 63.11(b) or 40 CFR 60.18(b), as applicable per federal rules.
  - (2) The permittee shall:
    - a. continuously monitor the presence of the flame;
    - b. record all periods during which the automatic flare ignition system (pilot flame or electronic arc ignition system) or thermocouple was not working and gas was being vented to the flare/combustion device; and
    - c. record all periods of time during which gas was being vented to the flare/combustion device and there was no flame.

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

- (3) The permittee shall maintain a record of all periods of time (date and number of hours) during which the flare/combustion device is burning collected gases at a heat input greater than 10 MMBtu per hour, along with a description of the emergency and/or the reason the heat input was greater than 10 MMBtu/hr.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) If the permittee is using an enclosed flare/combustion device to demonstrate compliance with 40 CFR 63.771(d) for the TEG dehydrator or to demonstrate compliance with 40 CFR 60.5412(d)(1) for each storage vessel calculated to have VOC emission equal to or exceeding 6 tons per year, the permittee shall submit the results of the compliance demonstration, conducted in accordance with the applicable subpart, in the PER.
- (3) If the permittee is using an open flare to demonstrate compliance, the permittee shall submit all visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance or reporting period, as applicable by rule.
- (4) The permittee shall identify in the PER:
  - a. all periods of time when the pilot flame or electronic arc ignition system is not working when process gas is being vented to it, including the date, time, and duration of each such period; and
  - b. all periods of time during which the flare/combustion device was operated at greater than 32 MMBtu per hour heat input rate, including the date, time, and duration of each such period, and a description of the reason why the heat input exceeded 32 MMBtu per hour.

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- (1) Emission Limitation:

4.32 tons CO/month averaged over a 12-month rolling period

Applicable Compliance Method:

The emissions limitation for CO is based on using the AP-42 emission factor of 0.37 lb CO/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, "Emission Factors for

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Flare Operations” and using the normal operation rate of 32 MMBtu/hr. Estimated CO emissions shall be determined by the following calculations:

$$0.37 \text{ lb CO/MMBtu} \times 32 \text{ MMBtu/hr} = 11.84 \text{ lbs CO /hr}$$

$$11.84 \text{ lbs CO/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 51.86 \text{ tons CO/year}$$

$$51.86 \text{ tons CO} \div 12 \text{ months} = 4.32 \text{ tons CO/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(2) Emission Limitation:

For VOC and where applicable, compliance with the applicable control requirements of 40 CFR Part 60, Subpart OOOO, by having a designed minimum control efficiency of 95% for an enclosed flare/combustor.

Applicable Compliance Method:

See the compliance method described in the flash vessel/storage vessel(s) emissions unit (T001).

(3) Emission Limitation:

$$0.79 \text{ ton NOx/month averaged over a 12-month rolling period}$$

Applicable Compliance Method:

The emissions limitation for NOx is based on using the AP-42 emission factor of 0.068 lb NOx/MMBtu from Chapter 13.5 for Industrial Flares, Table 13.5-1, “Emission Factors for Flare Operations” and using the normal operation rate of 32 MMBtu/hr. Estimated NOx emissions shall be determined by the following calculation:

$$0.068 \text{ lb NOx/MMBtu} \times 32 \text{ MMBtu/hr} = 2.176 \text{ lb NOx /hr}$$

$$2.176 \text{ lb NOx/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 9.53 \text{ tons NOx/year}$$

$$9.53 \text{ tons NOx} \div 12 \text{ months} = 0.79 \text{ ton NOx/month averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(4) Emission Limitations:

$$0.48 \text{ ton SO}_2\text{/month averaged over a 12-month rolling period}$$

Applicable Compliance Method:

The SO<sub>2</sub> emissions limitation is based on a fuel gas with a maximum H<sub>2</sub>S content of 250 ppmv for sour gas.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Compliance with the ton per year SO<sub>2</sub> emissions limitation shall be determined by the following calculations:

$$32 \text{ MMBtu/hr} \times 1 \text{ scf/1020 Btu} \times 1 \text{ lb-mole/379.5 scf} \times 250 \text{ ppm H}_2\text{S} \times 64 \text{ lb SO}_2/\text{lb-mole} = 1.32 \text{ lbs SO}_2/\text{hr}$$

$$1.32 \text{ lb SO}_2/\text{hr} \times 8760 \text{ hrs/year} \times 1 \text{ ton/2000 lbs} = 5.8 \text{ tons SO}_2/\text{year}$$

$$5.8 \text{ tons SO}_2 \div 12 \text{ months} = 0.48 \text{ ton SO}_2/\text{month} \text{ averaged over a 12-month rolling period}$$

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

(5) Visible Emissions Limitation for an enclosed combustion control device used to demonstrate compliance with Part 60 Subpart OOOO:

An enclosed combustion device used to demonstrate compliance must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.

[40 CFR 60.5412(d)(1)(iii)]

OR

If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

[40 CFR 60.5413(e)(3)]

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 60.5412(d)(1)(iii)] [40 CFR 60.5413(e)(3)] and [40 CFR 60.5413(a)(1)]

g) **Miscellaneous Requirements**

- (1) Any final amendments to Part 63 Subpart HH and/or Part 60 Subpart OOOO will supersede any previous Subpart HH or Subpart OOOO requirement(s) in this permit.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**5. Emissions Unit Group: Equipment/Pipeline Leaks, F001**

EU ID	Operations, Property and/or Equipment Description
F001	Ancillary equipment <sup>4</sup> and Associated equipment: compressors, pumps, piping, pneumatic controllers, inlet separators, gas-water/condensate/oil separators, etc.  Equipment/pipeline leaks from valves, flanges, pressure relief devices, open end valves or lines, and pump and compressor seals in VOC or wet gas service.

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions in this permit are federally enforceable, with the exception of those listed below, which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions in this permit are enforceable under state law only, with the exception of those listed below, which are federally enforceable.
    - a. 5.b)(1)b.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Develop and implement a site-specific leak detection and repair program for ancillary equipment as described in paragraph 5.c)(2).
b.	40 CFR Part 60 Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.  40 CFR 63.5365(d);	Each natural gas-driven pneumatic controller designed and operated to have a bleed rate less than or equal to 6 standard cubic feet per hour (scf/hr) and maintained in accordance with the manufacturer’s instructions, shall not be considered an affected facility, subject to Part 60 Subpart

<sup>4</sup> “Ancillary Equipment” means the same as defined in 40 CFR Part 63, Subpart HH. The Subpart HH definition is being used for this permit but note that the equipment leak standards found in Subpart HH do not apply for this permit because this permit is for an “area source” and the equipment leak standards do not apply to area sources.



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR 60.5390; and 40 CFR 60.5410(d)	<p>OOOO.</p> <p>Each pneumatic controller constructed, modified, or reconstructed on or after 10/15/13, located between the wellhead and a natural gas processing plant, and designed to have a bleed rate equal to or greater than 6 scf/hr is an affected facility subject to the requirements of Part 60 Subpart OOOO.</p> <p>Each pneumatic controller affected facility that is constructed after 8/23/11 and is subject to these standards shall be tagged with the month and year of installation.</p>
c.	OAC 3745-31-05(F)	Emissions of Volatile Organic Compounds (VOC) shall not exceed 10.56 tons per year from fugitive equipment leaks.

(2) Additional Terms and Conditions

a. None

c) Operational Restrictions

(1) Pneumatic Controller Restrictions

Unless it can be demonstrated that the pneumatic controller needs to have a higher bleed rate based on functional needs in accordance with 40 CFR 60.5390(a), each natural gas-driven pneumatic controller affected facility installed, modified, or reconstructed on or after 10/15/13 and located between the wellhead and the point of custody transfer to an oil pipeline or a natural gas transmission line or storage facility, must be designed and operated with a bleed rate less than or equal to 6 standard cubic feet per hour (6 scf/hr).

[40 CFR 60.5390(c)(1), (d), and (e)], [40 CFR 60.5365(d)], [40 CFR 60.5410(d)], and [40 CFR 60.5415(d)(1)]

(2) Ancillary Equipment Leak Detection and Repair Program

The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment covered by this permit, including each pump, compressor, pressure relief device, connector, valve, flange, vent, cover, any bypass in the closed vent system, and each storage vessel. This program shall meet the following requirements:

a. Leaks shall be detected by the use of either a "Forward Looking Infra Red" (FLIR) camera or an analyzer meeting U.S. EPA Method 21 of 40 CFR Part 60, Appendix A.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- b. An initial monitoring shall be completed within 90 days of startup and quarterly thereafter for a period of four consecutive quarters (1 year).
  - c. If following the initial four consecutive quarters, less than or equal to 2.0% of the ancillary equipment are determined to be leaking during the most recent quarterly monitoring event, then the frequency of monitoring can be reduced to semi-annual.
  - d. If following two consecutive semi-annual periods, less than 2.0% of the ancillary equipment are determined to be leaking during the most recent semi-annual monitoring event, then the frequency of the monitoring can be reduced to annual.
  - e. If more than or equal to 2.0% of the ancillary equipment are determined to be leaking during any one of the semi-annual or annual monitoring events, then the frequency of monitoring shall be returned to quarterly.
  - f. The program shall require the first attempt at repair within five (5) calendar days of determining a leak.
  - g. The program shall require that the leaking component is repaired within 30 calendar days after the leak is detected.
  - h. The program shall allow for the delayed repair of a leaking component following the language found in 40 CFR 60.5416(c)(5).
  - i. The program shall following the Monitoring and Record Keeping requirements described in paragraph 5.d) of this permit.
- (3) In the event that a leak or defect is detected in the cover, closed vent system, process equipment, or control device, the permittee shall make a first attempt at repair no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 30 calendar days after the leak is detected as allowed in 40 CFR 60.5416(c)(4). Any delay of repair of a leak or defect shall meet the requirements of 40 CFR 60.5416(c)(5).

[40 CFR 60.5416(c)(4) and (5)], [40 CFR 60.5415(e)(3)], and [ORC 3704.03(T)]

d) Monitoring and/or Recordkeeping Requirements

(1) Pneumatic Controller Monitoring and Record Keeping

- a. Each natural gas-driven pneumatic controller affected facility installed or reconstructed on or after 8/23/11, located between the wellhead and natural gas processing plant shall be tagged with the month and year of installation, reconstruction, or modification and with information that can identify or trace the records for the manufacturer's design specifications.
- b. The following records shall be maintained for each natural gas-driven pneumatic controller installed at the facility after 8/23/11:
  - i. records of the date installed or reconstructed, the location and/or equipment each controller is servicing, and the manufacturer specifications;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- ii. if applicable, the records needed to demonstrate why the operations require the use of a pneumatic controller with a bleed rate greater than 6 scf/hr and the functional basis for requiring the higher bleed rate; or
  - iii. if installed on or after 10/15/13, records of the manufacturer's specification indicating that the pneumatic controller is designed to have a natural gas bleed rate less than or equal to 6 scf/hr; or
  - iv. if the pneumatic controller has been installed on or after 8/23/11 and before 10/15/13, the manufacturer's designed bleed rate; and
  - v. where a higher bleed rate has not been demonstrated to be needed, the records of any deviations from the 6 scf/hr bleed rate for each pneumatic controller installed on or after 10/15/13.
- c. Once a gas-driven pneumatic controlled has been documented to have a bleed rate less than or equal to 6 scf/hr, it is no longer subject to the requirements of Part 60 Subpart OOOO. The manufacturer's specifications for the pneumatic controller and/or other records demonstrating compliance or exemption from the requirements should be maintained until the well site is closed.

[40 CFR 60.5390(c) and (f)], [40 CFR 60.5410(d)], [40 CFR 60.5415(d)(3)], [40 CFR 60.5420(c)(4)], and [40 CFR 60.5365(d)]

(2) Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing FLIR Camera's

- a. Leaks shall be determined by visually observing each ancillary component through the FLIR camera to determine if leaks are visible.
- b. The following information shall be recorded during each leak inspection:
  - i. the date the inspection was conducted;
  - ii. the name of the employee conducting the leak check;
  - iii. the identification of any component that was determined to be leaking;
  - iv. the date the first attempt to repair the component was made;
  - v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
  - vi. the date the component was repaired and determined to no longer be leaking;
  - vii. the total number of components that are leaking; and
  - viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. The permittee shall maintain records that demonstrate the FLIR camera is operated and maintained in accordance with the manufacturer’s operation and maintenance instructions.
- d. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

(3) Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing a Method 21 Analyzer

- a. Leaks shall be measured by utilizing U.S. EPA Method 21 (40 CFR Part 60, Appendix A). All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm or 10,000 ppm (as applicable) for determining compliance.
- b. A component is considered to be leaking if the instrument reading is equal to or greater than:

pressure relief device in gas/vapor service	10,000 ppm
pressure relief device in light liquid service	10,000 ppm
pumps in light liquid service	10,000 ppm
compressor	500 ppm
sampling connection system*	*
open ended valves or lines**	**
valves in gas/vapor and light liquid service	10,000 ppm
closed vent system	500 ppm
connectors	10,000 ppm
all other ancillary and associated equipment in VOC service	10,000 ppm

\* must be equipped with a closed-purge, closed-loop, or closed-vent system

\*\* must be equipped with a cap, blind flange, plug, or a second valve

- c. The following information shall be recorded during each leak inspection:
  - i. the date the inspection was conducted;
  - ii. the name of the employee conducting the leak check;
  - iii. the identification of any component that was determined to be leaking (company ID and component type (flange, pump, etc.);

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- iv. the date the first attempt to repair the component was made;
  - v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
  - vi. the date the component was repaired and determined to no longer be leaking;
  - vii. the total number of components that are leaking; and
  - viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.
- d. The permittee shall maintain records that demonstrate the Method 21 analyzer is operated and maintained in accordance with the manufacturer's operation and maintenance instructions.
- e. In order to calibrate the analyzer, the following calibration gases shall be used:
- i. zero air, which consists of less than 10 ppm of hydrocarbon in air; and
  - ii. a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppm of methane or n-hexane.
- f. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) Supplement to the PER for the Ancillary Equipment Leak Detection and Repair Program
- For each inspection that occurred during the year, the permittee shall submit the following information with the annual PER from data collected by the ancillary equipment leak detection and repair program:

- a. the date of the inspection;
- b. the number of components determined to be leaking;

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- c. the company ID and component type (flange, pump, etc.) of each leaking component;
- d. the total number of components at the site;
- e. the percent of components determined to be leaking;
- f. a list of all components that have not been repaired due to a delay of repair and the reason for the delay; and
- g. a notification indicating if the permittee has changed future inspection frequencies based on the percent of components leaking.

[40 CFR 60.5416(c)] and [ORC 3704.03(T)]

(3) Pneumatic Controller Reporting

The permittee shall submit an initial annual report, for each natural gas-driven pneumatic controller installed at the facility after 8/23/11, within 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410. Subsequent annual reports are due on the same date each year following the initial report. The annual reports may contain multiple facilities if each pneumatic controller is clearly identified along with its location, and the report includes the following information from 40 CFR 60.5420 for each natural gas-driven pneumatic controller:

- a. company name and address of the affected facility;
- b. identification of each affected facility included in the annual report\*;
- c. beginning and ending dates of the reporting period;
- d. the identification of each pneumatic controller and the equipment it controls;
- e. the month and year each pneumatic controller was installed, reconstructed, or modified;
- f. a statement as to whether the manufacturer's specifications indicate the controller is designed to maintain a natural gas bleed rate less than or equal to 6 scf/hour; or the explanation of why the bleed rate needs to be operated to exceed this and the manufacturer's specifications for the bleed rate;
- g. records of any deviations from the appropriate natural gas bleed rate; and
- h. certification of the responsible official of truth, accuracy, and completeness.

\* One report for multiple affected facilities may be submitted provided the report contains all of the information required and is clearly separated and identified for each well site.

[40 CFR 60.5410(d)], [40 CFR 60.5420(b)(1) and (5) and (c)(4)], [40 CFR 60.5390(f)], and [40 CFR 60.5415(d)(2)]

f) Testing Requirements

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

(1) Emissions Limitation:

Emissions of VOC shall not exceed 10.56 tons per year from fugitive equipment leaks.

Applicable Compliance Method:

The annual VOC limitation is the estimated potential-to-emit based upon the maximum number of components and type of service (gas/vapor and light liquid) expected at the natural gas production site. Unless or until more accurate emission factors have been demonstrated or established for the site (e.g. following initial and subsequent monitoring and inspections), the appropriate emissions factors from U.S. EPA's "Protocol for Equipment Leak Emission Estimates", Table 2-4, for Oil and Gas production Operations (a conservative estimate), shall be used to demonstrate compliance with the annual limit. The facility's potential emissions from ancillary and associated equipment shall be documented from the summation of the following calculations:

Component Type      # of components x emission factor x % VOC\* = lb VOC/hr

In Gas/Vapor Service

Number of connectors x 0.000441 lb/hr x 50% VOC = lb VOC/hr

Number of valves x 0.00992 lb/hr x 50% VOC = lb VOC/hr

Number of flanges x 0.00086 lb/hr x 50% VOC = lb VOC/hr

Number of compressor seals x 0.01940 lb/hr x 50% VOC = lb VOC/hr

Number of relief valves x 0.01940 lb/hr x 50% VOC = lb VOC/hr

Number of high bleed pneumatic controllers x 0.0194 lb/hr x 50% VOC = lb VOC/hr

In Light Liquid Service

Number of connectors x 0.000463 lb/hr x 100% VOC = lb VOC/hr

Number of valves x 0.00551 lb/hr x 100% VOC = lb VOC/hr

Number of flanges x 0.00024 lb/hr x 100% VOC = lb VOC/hr

Number of pump seals x 0.0287 lb/hr x 100% VOC = lb VOC/hr

Number of relief valves x 0.01653 lb/hr x 100% VOC = lb VOC/hr

Number of high bleed pneumatic controllers x 0.01653 lb/hr x 100% VOC = lb VOC/hr

The total summation of VOC emissions per hour shall be multiplied by 8760 hours per year and divided by 2000 pounds to calculate the estimated annual fugitive VOC emissions.

**Permit Number:** [Permit Number]

**Facility Name:** [Facility Name]

**Facility ID:** [Facility ID]

**Working Copy of a Permit in Progress**

Compliance with the ton per year limit shall be determined following the first 12 months of operation.

As an alternative to using the above emission factors to calculate VOC emissions, the permittee may use facility specific VOC information for site specific emission factors.

\* The % VOC for Gas/Vapor service was based on the highest percent VOC in gas analyses submitted by representative facilities.

(2) Emission Limitation:

Each natural gas-driven pneumatic controller installed after 10/15/13 shall be operated with a bleed rate less than or equal to 6 scf/hr, unless it can be demonstrated that the pneumatic controller needs to have a higher bleed rate based on functional needs.

Applicable Compliance Method:

Natural gas shall be used as a surrogate for VOC. If required, the detection of leaks of natural gas into the ambient air from the pneumatic controller(s) may be determined using Method 21 from 40 CFR 60 Appendix A; however, compliance is demonstrated through maintaining the manufacturer's design specifications, showing that the controller is designed to operate with a bleed rate less than 6 scf/hr. If required, Method 21 may be used during inspections of the facility.

[40 CFR 60.5390(a) or (c)(1)], [40 CFR 60.5410(d)], and [40 CFR 60.5415(d)(1)], with [ORC 3704.03(T)]

g) Miscellaneous Requirements

- (1) Any amendment to Part 60, Subpart OOOO shall supersede the Subpart OOOO compliance limitations and/or options contained in this permit.



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

**6. Emissions Unit: Flash Vessel/Storage Vessels and truck loading for produced water, crude oil, condensate, and/or petroleum liquids: T001**

**Operations, Property and/or Equipment Description:**

T001	One or multiple vertical fixed roof flash vessel/storage vessel(s) with a combined capacity of no more than 252,000 gallons (6,000 barrels), where each flash vessel/storage vessel has an individual capacity of no more than 39,894 gallon (950 barrel).
------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) 6.b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Total VOC emissions (including breathing losses, working losses, and flashing losses) from all storage vessels combined at the site shall not exceed 4.28 tons per month averaged over a 12-month rolling period.  In order to comply with the tons per month emission limit, utilize one or more of the following controls:  Use of add-on control (vapor recovery, flare or equivalent) to control emissions from storage vessels as needed to comply with the annual VOC emission limitations. If a flare is used, it must meet the requirements

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		detailed in emissions unit P004.
b.	OAC Rule 3745-21-09(L)	See b)(2)a.
c.	Part 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	<p>The facility must calculate the potential for VOC emissions for each single storage vessel using an accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels*, or determined for a 30-day period of production prior to 4/15/14 or 30 days after startup for Group 2 storage vessels**.</p> <p>Where these potential VOC emissions are calculated to equal or exceed 6 TPY, the permittee must either maintain the uncontrolled actual VOC emissions at less than 4 TPY and maintain monthly emission calculations in accordance with 40 CFR 60.5395(d)(2); or install a control device, closed vent system, and covers designed and operated to reduce VOC emissions by 95.0%, and by 4/15/14 or 60 days after startup for Group 2 storage vessels or by 4/15/15 for Group 1 storage vessels.</p> <p>Conduct monthly inspections of collection and control equipment.</p> <p>Any final amendments to this rule will supersede the requirement(s) in this permit.</p> <p>See b)(2) b. through f.</p>
d.	40 CFR 60.5413(d)	Option to demonstrate compliance with Part 60 Subpart OOOO through the use a control device model tested by the manufacturer.
e.	40 CFR 60.5412(d)(1)(iii)	If required to install controls in accordance with 40 CFR 60.5395, an enclosed combustion device must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.
	40 CFR 60.5413(e)(3)	If demonstrating compliance using a combustion control device that is

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.
f.	40 CFR 60.5365(e) OAC 3745-31-05(F)	The permittee accepts a voluntarily limit to restrict the potential VOC emissions from each storage vessel to less than 6 tons per year.

(2) Additional Terms and Conditions

- a. The permittee shall not place, store, or hold in these fixed roof tanks any petroleum liquid other than crude oil and condensate where there is no custody transfer, unless such tank is designed or equipped in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 with an internal floating roof or equivalent control approved by the Director, prior to storing such petroleum liquids.

[OAC rule 3745-21-09(L)]

- b. Any storage vessel subject to and controlled in accordance with the requirements for storage vessels in 40 CFR Part 60 Subpart Kb, or 40 CFR Part 63 Subparts G, CC, HH, or WW are not subject to Part 60 Subpart OOOO.

[40 CFR 60.5395(h)]

- c. If the storage vessel affected facility is installed with a floating roof to reduce VOC emissions, it must meet the requirements of 40 CFR 60.112b(a)(1) or (2) and the relevant monitoring, inspection, recordkeeping, and reporting requirements in Part 60, Subpart Kb.

[40 CFR 60.5395(e)(2)]

- d. The permittee shall calculate the potential for VOC emissions for each single storage vessel (defined in 40 CFR 60.5430) using an accepted model or calculation methodology. Emissions of VOC shall be based on the maximum average daily throughput determined for:

- i. a 30-day period of production prior to 10/15/13 for storage vessels installed after 8/23/11 and on or before 4/12/13, i.e., Group 1 storage vessels; and/or
- ii. a 30-day period of production prior to 4/15/14 or 30 days after startup for storage vessels installed after 4/12/13, i.e., Group 2 storage vessels.

Permit Number: [Permit Number]  
Facility Name: [Facility Name]  
Facility ID: [Facility ID]  
Working Copy of a Permit in Progress

[40 CFR 60.5410(h)] and [40 CFR 60.5365(e)]

- e. Unless meeting the requirements of 40 CFR 60.5395(d)(2), where the uncontrolled actual VOC emissions can be demonstrated to be less than 4 tons per year, or where it has been demonstrated that the potential VOC emissions are less than 6 TPY, the VOC emissions from each storage vessel affected facility shall be reduced by 95.0 percent by April 15, 2014, or within 60 days after startup, for Group 2 storage vessels; or by April 15, 2015 for Group 1 storage vessels.

[40 CFR 60.5395] and [40 CFR 60.5415(e)(3)]

- f. Any vapors from storage vessels that are recovered and routed to a vapor recovery unit (VRU) system meeting the cover and closed vent system requirements specified in 40 CFR 60.5411(b) and (c) are not required to be included in the determination of VOC potential to emit for purposes of determining affected facility status for NSPS Subpart OOOO. However, if the VRUs are removed or if the system fails to meet the cover and closed vent system requirements of Subpart OOOO, the potential VOC emissions from each such storage vessel shall be calculated within 30 days of the removal or non-compliant operations of the VRU system.

[40 CFR 60.5365(e)]

c) Operational Restrictions

- (1) Total capacity of all storage vessels storing condensate and/or condensed water shall not exceed 252,000 gallons (6000 barrels) combined, excluding any exempt or de minimis vessels.
- (2) Each storage vessel subject to the control requirements of Part 60 Subpart OOOO shall be equipped with a cover that meets the requirements of 40 CFR 60.5411(b); and the storage vessel shall be connected through a closed vent system designed and operated with no detectable emissions, as determined using olfactory, visual and auditory inspections, and in accordance with 40 CFR 60.5411(c) to either: 1. an enclosed combustion control device, designed and operated in accordance with 40 CFR 60.5412(d) or 40 CFR 60.5413(d); 2. an open flare meeting the requirements identified in this permit; or 3. to a process. The collection and control systems shall be operated at all times when gases, vapors, and fumes are vented from the subject storage vessels to a control device; and where routing emissions to a process it must be operational 95% or more of the year.

[40 CFR 60.5365(e)], [40 CFR 60.5395], [40 CFR 60.5410(h)], [40 CFR 60.5411(b) and (c)(1) and (2)], and [40 CFR 60.5412(d)] or [40 CFR 60.5413(d)], and [40 CFR 60.5415(e)(3)]

- (3) In the event that a leak or defect is detected in the cover or closed vent system that is used to demonstrate compliance, the permittee shall make a first attempt at repair no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 30 calendar days after the leak is detected in accordance with 40 CFR 60.5416(c)(4) and (5). A record of the leak detected and repairs must be maintained for a period of five years.

[40 CFR 60.5416(c)(4) and (5)] and [40 CFR 60.5415(e)(3)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (4) Where the closed vent system (used to demonstrate compliance) contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device or a process, the requirements identified in 40 CFR 60.5416(c)(3) shall be met.

[40 CFR 60.5416(c)(3)], [40 CFR 60.5411(c)(3)] and [40 CFR 60.5415(e)(3)]

- (5) Each enclosed combustion device, used to meet the emission reduction standard in 40 CFR 60.5395(d), shall be installed and operated in accordance with 40 CFR 60.5412(d) and 40 CFR 60.5417(h). As an alternative, a combustion control device may be installed whose model has been tested by the manufacturer in accordance with 40 CFR 60.5413(d), and the facility can instead meet the criteria in 40 CFR 60.5413(d)(11) and 40 CFR 60.5413(e).

[40 CFR 60.5410(h)], [40 CFR 60.5412(d)], [40 CFR 60.5417(d)(1)(iii) and (h)], and [40 CFR 60.5415(e)(3)]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain the following records documenting the facility's determination of emissions from each storage vessel:

- a. the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels and prior to 4/15/14 or 30 days after startup for Group 2 storage vessels;
- b. the content of each storage vessel;
- c. the lab analyses, calculations, and process simulation model results documenting the annual emissions from breathing, working, and flashing losses; and
- d. the records for the content and annual throughput (in gallons per year) for each storage vessel

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[40 CFR 60.5365(e)] and [40 CFR 60.5410(h)]

- (2) Where using vapor recovery unit(s) (VRU) for compliance, the permittee shall maintain records that document the VRU system is operated in compliance with the cover and closed vent system requirements of 40 CFR 60.5411(b) and 40 CFR 60.5411(c).

[40 CFR 60.5365(e)]

- (3) Where required, the permittee shall conduct monthly inspections for each closed vent system, each cover, and the combustion control device used to demonstrate compliance in accordance with 40 CFR 60.5416(c) and 40 CFR 60.5417(h); and shall maintain the records identified in 40 CFR 60.5420(c).

[40 CFR 60.5416(c)], [40 CFR 60.5417(h)], [40 CFR 60.5411(b) and (c)], [40 CFR 60.5415(e)(3)], and [40 CFR 60.5420(c)]

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

- (4) Where the facility is using an enclosed combustion device for compliance, the permittee shall maintain the appropriate records to demonstrate that the control device is designed and operated to reduce VOC by 95.0% by weight and is operated and maintained in accordance with 40 CFR 60.5412(d); or if the model device has been performance tested by the manufacturer in accordance with 40 CFR 5413(d), the device shall be monitored, operated and maintained in accordance with 40 CFR 5413(e).

[40 CFR 60.5410(h)], [40 CFR 60.5412(d)] or [40 CFR 60.5413(d) and (e)]

- (5) Where using an open flare for compliance, the permittee shall maintain the records required to demonstrate that the open flare is designed and operated in accordance with Part 60 Subpart OOOO and the requirements of this permit.

- (6) Where the permittee has accepted a voluntarily limit to restrict the potential VOC emissions to less than 6 tons per year and less than 0.50 tons per month averaged over a 12-month rolling period, the records documenting the maximum monthly potential VOC emissions (calculated in accordance with 40 CFR 60.5365(e)) shall be maintained and made readily available upon request.

[40 CFR 60.5365(e)] and [OAC 3745-31-05(F)]

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

[OAC 3745-15-03(B)(2) and (D)]

- (2) The permittee shall submit an initial annual report within 90 days after the end of the initial compliance period for each storage vessel determined to have potential VOC emissions equal or greater than 6 tons per year. Subsequent annual reports are due no later than the same date each year following the initial report. The reports shall include the information identified in 40 CFR 60.5420(b).

[40 CFR 60.5420(b)] and [40 CFR 60.5410(h) and (i)]

f) Testing Requirements

Compliance with the Emission Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- (1) Emissions limitation:

Total VOC emissions from all storage vessels (including breathing losses, working losses, and flashing losses) shall not exceed 4.28 tons per month averaged over a 12-month rolling period.

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

Compliance with the tons/month averaged over a 12-month rolling period shall be determined following the first 12 months of operation.

For each storage vessels not meeting the collection and control requirements of Part 60 Subpart OOOO, the potential annual VOC emissions must be documented to be less than 6 tons/year; or the uncontrolled actual VOC emissions shall be calculated to be less than 4 tons/year in accordance with 40 CFR 60.5395(d)(2) through monthly determinations.

For each storage vessel with potential emissions equal to or greater than 6 tons VOC/year, reduce VOC emissions by 95.0% by installing a closed vent system designed and operated with no detectable emissions, that routes all gases, vapors, and fumes to a process or a combustion control device meeting the requirements of 40 CFR 60.5412(d) or 40 CFR 60.5413(d).

Applicable Compliance Method, documenting emissions:

Annual emissions from breathing, working, and flashing losses from each storage vessel shall be calculated based on the maximum average daily throughput determined for a 30-day period of production prior to 10/15/13 for Group 1 storage vessels and/or prior to 4/15/14 or 30 days after startup for Group 2 storage vessels.

Flashing losses shall be calculated using a generally accepted model or process simulation software program(s) and/or calculation methodology such as, but not limited to, E&P Tank, HYSIM, HYSIS, VMG, or ProMax, to calculate the VOC emissions.

Pressurized samples shall be taken after the separator and at the same time from the flash gas and condensate/oil lines for flash gas analyses; and the data from these lab analyses shall be used in the process simulation software to document emissions from flashing.

Instead of taking pressurized samples from the separator(s) or from the storage vessels, the permittee may utilize pressurized samples acquired from another similar facility operating under similar conditions, or choose to take a representative reservoir sample from a well in another part of the play. If the permittee chooses to use pressurized samples from another facility, the flash gas analyses shall be submitted along with documentation demonstrating that the facility's pressurized condensate/oil and gases would have similar chemical compositions and would be under similar pressures; and provide evidence that if pressurized samples were taken and lab analyses were conducted, the results would provide equivalent or lower emissions. "Similar", in this case, means that the chemical composition, pressures, and operating parameters/conditions of the similar facility are close enough to this facility's condensate/oil and gas composition, pressures, and operations, that the expected emissions would be equivalent to or less than the emissions calculated from the flash gas analyses obtained from the similar facility. If the permittee chooses to use a representative reservoir sample, the analyses must be incorporated into an approved process simulation modeling program utilizing site-specific operating parameters. "Representative", in this case, means having an API gravity no more than 3 degrees below the API gravity of the condensate detected at the facility being permitted. A representative sample with a higher API gravity results in a more conservative emissions estimate and is, therefore, not a concern. If changes to the operating conditions and/or liquid composition are such that the emissions would be expected to exceed those determined with the

**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

representative analyses, the permittee shall either submit site-specific analyses using pressurized samples from the separator (with the highest pressures, if more than one), or submit emissions estimates using another representative analyses. The Director reserves the right to require the owner/operator to obtain samples from the facility in order to verify compliance.

Working and breathing losses may be calculated using E&P Tank, EPA Tanks 4.0 software, or other accepted calculation methodology; and/or the working/loading emissions may be calculated using the "Loading Loss Equation" from AP-42, Section 5.2, for Transportation and Marketing of Petroleum Liquids, which is based on multiplying a loading loss factor ( $L^*$ ) by the annual petroleum liquid throughput in gallons per year, as follows:

$$*L = 12.46 \text{ SPM/T}$$

For uncontrolled loading, the VOC emissions shall be calculated by multiplying an uncontrolled loading loss factor ( $L_{UC}$ ) by the rolling, 12-month summation of the throughput of condensate and petroleum liquids (in gallons) and dividing by 2000 lbs/ton. The result will be added to the breathing and flashing emission estimates.

$$L_{UC} = 12.46 \text{ SPM/T}$$

For controlled loading, the VOC emissions shall be calculated by multiplying a controlled loading loss factor ( $L_C$ ) by the rolling, 12-month summation of the throughput of condensate and petroleum liquids (in gallons) and dividing by 2000 lbs/ton. The result will be added to the breathing and flashing emission estimates.

$$L_C = 12.46 \text{ SPM/T} [1 - \text{Efficiency}/100]$$

Where:

$$\text{Capture Efficiency} = 97\%$$

$$\text{Destruction Efficiency} = 98\%$$

$$\text{Control Efficiency} = 97\% \times 98\% = 95\%$$

Where:

L = loading loss, pounds per 1000 gallons loaded (Q)

S = saturation factor

P = vapor pressure of liquid loaded, pounds per square inch absolute

M = molecular weight of vapor

T = temperature of bulk liquid ( $^{\circ}\text{R}$ )

Applicable Compliance Method, through design of collection and controls:

Initial compliance with the Part 60, Subpart OOOO standards for storage vessel affected facilities shall be demonstrated by complying with the applicable portions of 40 CFR



**Permit Number:** [Permit Number]  
**Facility Name:** [Facility Name]  
**Facility ID:** [Facility ID]  
**Working Copy of a Permit in Progress**

60.5411(b) and (c), and 40 CFR 60.5412(d) or 40 CFR 60.5413(e) if the control device is tested by the manufacturer.

Continuous compliance with the Part 60, Subpart OOOO standards for storage vessel affected facilities shall be demonstrated by complying with the applicable portions of 40 CFR 60.5415(e), 40 CFR 60.5416(c), and 40 CFR 60.5417(d) or (h).

Group 1 storage vessels (installed between 8/24/11 and 4/12/13) must be in compliance by April 15, 2015; and Group 2 storage vessels (installed after 4/12/13) must be in compliance by 4/15/14 or within 60 days after startup. In the event an amendment to NSPS Subpart OOOO requires a performance test for the combustion control device to demonstrate compliance, the permittee shall schedule such performance test as required by the amended rules.

[40 CFR 60.5365(e)], [40 CFR 60.5395], [40 CFR 60.5410(h)], [40 CFR 60.5411(b) and (c)], [40 CFR 60.5412(d) or 40 CFR 60.5413(d)], [40 CFR 60.5415(e)(3)], and [ORC 3704.03(T)]

(2) Visible Emissions Limitation for an enclosed combustion control device used to demonstrate compliance with Part 60 Subpart OOOO:

An enclosed combustion device used to demonstrate compliance must be operated with no visible emissions except for periods not to exceed a total of 1 minute in any 15 minute period, conducting Method 22 once every calendar month.

[40 CFR 60.5412(d)(1)(iii)]

OR

If demonstrating compliance using a combustion control device that is performance tested by the manufacturer, in accordance with 40 CFR 60.5413(d), the combustion device must be operated with no visible emissions except for periods not to exceed a total of 2 minutes in any 1 hour of operation, conducting Method 22 once per calendar quarter.

[40 CFR 60.5413(e)(3)]

Applicable Compliance Method:

Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

[40 CFR 60.5412(d)(1)(iii)] [40 CFR 60.5413(e)(3)] and [40 CFR 60.5413(a)(1)]

g) **Miscellaneous Requirements**

- (1) Any amendment to Part 60, Subpart OOOO shall supersede the Subpart OOOO compliance limitations and/or options contained in this permit.

CERTIFICATE OF SERVICE

In accordance with Paragraphs 77 and 90 of the proposed Consent Decree lodged in this case, I certify that on this date I caused copies of the foregoing Complaint to be served on the following individuals by electronic mail and first-class mail, postage pre-paid:

Stephanie Timmermeyer  
Vice President of EHSR and Purchasing  
Gulfport Energy Corporation  
3001 Quail Springs Parkway  
Oklahoma City, Oklahoma 73134

Donald K. Shandy  
Robert D. Singletary  
Crowe & Dunlevy  
324 N. Robinson Ave., Ste. 100  
Oklahoma City, Oklahoma 73102

Dated: January 22, 2020

s/ Randall M. Stone