



REGION 5

CHICAGO, IL 60604

VIA ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

Bret Dockter, Manager
Equinor USA Onshore Properties Inc.
Building 2, Suite 100
Austin, TX 78730
brdo@equinor.com

Re: Notice and Finding of Violation
Equinor USA Onshore Properties Inc.
Austin, Texas

Dear Bret Dockter:

The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to Equinor ("Equinor" or "you") under Section 113(a) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a). We find that you are violating the New Source Performance Standards (NSPS) for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015 (Subpart OOOO), the NSPS for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 (Subpart OOOOa), and terms of your Ohio Permits to Install and Operate (PTIOs) at your Ohio facilities listed in Attachment A to the NOV/FOV.

Section 113 of the CAA gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the NOV/FOV prior to the conference date.

Please plan for your facilities' technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contacts in this matter are Sasha Letuchy and Jacob Herbers. You may email them at Letuchy.Alexandra@epa.gov and Herbers.Jacob@epa.gov to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

For legal questions, please contact Jolie McLaughlin, Associate Regional Counsel, at mclaughlin.jolie@epa.gov.

SARAH
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Date: 2024.05.08
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Sarah Marshall
Supervisor, Air Enforcement and Compliance Assurance Section (MI/WI)

cc:

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
Equinor USA Onshore Properties Inc.	)	NOTICE AND FINDING OF
	)	VIOLATION
Austin, Texas	)	
	)	EPA-5-24-OH-06
Proceedings Pursuant to	)	
Section 113(a)(1) and (3) of the	)	
the Clean Air Act, 42 U.S.C.	)	
§ 7413(a)(1) and (3)	)	
	)	

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice and Finding of Violation (NOV/FOV) under Section 113(a)(1) and (3) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1) and (3). Based on available information and as explained below, the EPA finds that Equinor USA Onshore Properties Inc. (Equinor) is violating the Ohio State Implementation Plan (SIP) and Section 111(e) of the CAA, 42 U.S.C. § 7411(e). Specifically, Equinor is violating the New Source Performance Standards (NSPS) for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015, at 40 C.F.R. Part 60, Subpart OOOO (Subpart OOOO); the NSPS for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, at 40 C.F.R. Part 60, Subpart OOOOa (Subpart OOOOa); and terms of Equinor's Ohio Permits to Install and Operate (PTIOs) issued under the Ohio SIP, as follows:

Statutory and Regulatory Authority

1. The CAA, and the regulations promulgated thereunder, establish a statutory and regulatory scheme designed to, among other things, protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. *See* 40 U.S.C. § 7401(b)(1).

2. Section 111(b) of the CAA, 42 U.S.C. § 7411(e), requires the EPA to promulgate emission standards for new stationary sources falling within industrial categories that significantly contribute to air pollution.

The New Source Performance Standards General Provisions

3. Pursuant to Section 111(b) of the CAA, the EPA promulgated the NSPS General Provisions, at 40 C.F.R. Subpart A, which apply to owners and operators of any stationary source that contains an affected facility, the construction or modification of which commenced after the date of publication of any standard applicable to that facility.

4. The NSPS General Provisions, at 40 C.F.R. § 60.2, define “owner or operator” to mean “any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.”

5. Subpart A, at 40 C.F.R. § 60.18(a)(1), contains requirements for control devices used to comply with applicable subparts of 40 C.F.R. Parts 60 and 61.

6. Subpart A, at 40 C.F.R. § 60.18(b), states that paragraphs (c) – (f) apply to flares.

7. Subpart A, at 40 C.F.R. § 60.18(c)-(f), contains requirements for flares, including requirements for designing flares to operate with no visible emissions, the net heating value of the gas being combusted, and exit velocity.

NSPS Subpart OOOO

8. Pursuant to Section 111(b) of the CAA, the EPA promulgated NSPS Subpart OOOO, at 40 C.F.R. Part 60, Subpart OOOO, which establishes emissions standards and compliance schedules for the control of volatile organic compound (VOC) and sulfur dioxide emissions from affected facilities in the crude oil and natural gas production source category that commenced construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015.

9. Owners and operators of one or more affected facilities that commenced construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015, are subject to the applicable provisions of Subpart OOOO. 40 C.F.R. § 5365(e).

10. Subpart OOOO, at 40 C.F.R. § 60.5365(e), provides that “affected facilities” include any “storage vessel affected facility.”

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

12. Subpart OOOO, at 40 C.F.R. § 60.5365(e), provides that a single storage vessel is a “storage vessel affected facility” if a properly performed emission determination indicates that the storage vessel has the potential for VOC emissions equal to or greater than six tons per year. 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 specified in 40 C.F.R. § 60.5365. The determination may take into account requirements under a legally and practicably enforceable limit in an operating permit or other requirement established under a federal, state, local, or tribal authority.

13. Subpart OOOO, at 40 C.F.R. § 60.5365(e)(2), provides that a storage vessel affected facility that subsequently has its potential for VOC emissions decrease to less than 6 tons per year shall remain an affected facility under this subpart.

14. Subpart OOOO requires the owner or operator of a storage vessel affected facility to comply with the following emission control requirements:

- a. The owner or operator of a storage vessel affected facility 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 tons per year without considering control. See 40 C.F.R. § 60.5395(d)(1)-(2).
- b. For an owner or operator of a storage vessel electing to comply with the 95.0 percent emission reduction requirement in 40 C.F.R. § 60.5395(d)(1), the required emission reduction must be achieved by control requirements that include, per 40 C.F.R. § 60.5395(e):
 - i. equipping the storage vessel with a cover that meets the requirements of 40 C.F.R. § 60.5411(b); and
 - ii. connecting the storage vessel and cover to a closed vent system that meets the requirements of 40 C.F.R. § 60.5411(c) and either routing the emissions to a control device that meets the conditions specified in 40 C.F.R. § 60.5412(c)-(d) or routing the closed vent system to a process.

15. Subpart OOOO, at 40 C.F.R. § 60.5411(b)(1)-(3), requires owners and operators of storage vessel affected facilities to ensure that covers on storage vessels meet the following requirements: (1) the cover and all openings on the cover shall form a continuous impermeable barrier over the entire surface area of the liquid in the vessel; (2) each cover opening shall be secured in a closed, sealed position except to add or remove material from the unit, to inspect or sample the material in the unit, to inspect, maintain, repair, or replace equipment in the unit, or to vent material through a closed vent system; and (3) each storage vessel thief hatch shall be equipped, maintained, and operated with a weighted mechanism or equivalent, to ensure the lid remains properly seated.

16. Subpart OOOO, at 40 C.F.R. § 60.5412(d)(1)(iii), requires that owner and operators shall operate enclosed combustion devices (*e.g.*, thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) with no visible emissions, except for periods not to exceed a total of one minute during any 15-minute period. A visible emissions test using section 11 of EPA Method 22, 40 C.F.R. Part 60, Appendix A, must be performed at least once every calendar month, separated by at least 15 days between each test. All inspection, repair and maintenance activities for each unit must be recorded in a maintenance and repair log and must be available for inspection.

17. Subpart OOOO, at 40 C.F.R. § 60.5413, requires performance testing for combustion control devices used to demonstrate compliance at storage vessels, unless exempted pursuant to 40 C.F.R. § 60.5413(a). 40 C.F.R. § 60.5413(a)(1) exempts a flare from performance testing if it is designed and operated in accordance with the General Provisions, at 40 C.F.R. § 60.18(b). This includes a compliance determination using Method 22 at 40 C.F.R. Part 60, Appendix A–7, to determine visible emissions.

18. Subpart OOOO, at 40 C.F.R. § 60.5413(e), requires that owners and operators of combustion control devices tested by the manufacturer demonstrate that the control device achieves continuous compliance with the performance requirements in 40 C.F.R. § 60.5413(d)(11) by installing a device tested under 40 C.F.R. § 60.5413(d) and complying with the criteria specified in 40 C.F.R. § 60.5413(e)(1) through (7). These criteria include, but are not limited to, the following:

- a. The inlet gas flow rate must be equal to or less than the maximum specified by the manufacturer. 40 C.F.R. § 60.5413(e)(1).
- b. Devices must be operated with no visible emissions, except for periods not to exceed a total of one minute during any 15-minute period. A visible emissions test conducted according to section 11 of EPA Method 22, 40 C.F.R. Part 60, Appendix A, must be performed at least once every calendar month, separated by at least 15 days between each test. The observation period shall be 15 minutes. 40 C.F.R. § 60.5413(e)(3).

19. Subpart OOOO, at 40 C.F.R. § 60.5415(e), requires owners and operators of storage vessel affected facilities to demonstrate continuous compliance with Subpart OOOO for each storage vessel by reducing VOC emissions as specified in 40 C.F.R. § 60.5395(d), and by ensuring that any control device that is installed meets the applicable requirements of Subpart OOOO.

20. Subpart OOOO, at 40 C.F.R. § 60.5416(c), requires owners and operators of storage vessel affected facilities to conduct an inspection of each cover and closed vent system at least once every calendar month, and to maintain records of the inspection results.

21. Subpart OOOO, at 40 C.F.R. § 60.5416(c)(4)(i) and (ii), requires owners and operators of storage vessel affected facilities to make a first attempt at repair no later than five calendar days after a leak is detected and to complete repair of leaks no later than 30 calendar days after a leak is detected in a cover or closed vent system inspection.

22. Subpart OOOO, at 40 C.F.R. § 60.5417(d), requires owners and operators of storage vessel affected facilities to install, calibrate, operate, and maintain a device equipped with a continuous recorder to measure the values of operating parameters appropriate for the control device.

23. Subpart OOOO, at 40 C.F.R. § 60.5417(h)(1), requires owners and operators of each combustion control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395(d)(1) for storage vessel affected facilities to, among other things, conduct inspections at least once every calendar month (separated by at least 14 days) to confirm that the pilot is lit when vapors are being routed to the combustion device and that the continuous burning pilot flame is operating properly, monitor for visible emissions from the combustion device using section 11 of Method 22, and conduct olfactory, visual, and auditory inspections of all equipment associated with the combustion device. Owners and operators are exempt from this requirement if the owner or operator installs a control device model and meets all requirements in 40 C.F.R. § 60.5413(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413(e).

24. Subpart OOOO, at 40 C.F.R. § 60.5417(h)(2), requires owners and operators of each vapor recovery device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395(d)(1) for storage vessel affected facilities to conduct inspections at least once every calendar month (separated by at least 14 days) to ensure physical integrity of the control device according to the manufacturer's

instructions. Owners and operators are exempt from this requirement if the owner or operator installs a control device model and meets all requirements in 40 C.F.R. § 60.5413(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413(e).

25. Subpart OOOO, at 40 C.F.R. § 60.5417(h)(3), requires owners and operators to operate each control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395(d)(1) for storage vessel affected facilities in accordance with the manufacturer's written operating instructions, procedures, and maintenance schedule to ensure good air pollution control practices for minimizing emissions. Records of the manufacturer's written operating instructions, procedures, and maintenance schedule must be available for inspection as specified in 40 C.F.R. § 60.5420(c)(13). Owners and operators are exempt from this requirement if the owner or operator installs a control device model and meets all requirements in 40 C.F.R. § 60.5413(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413(e).

26. Subpart OOOO, at 40 C.F.R. § 60.5420(b), requires owners and operators of affected facilities to submit annual reports containing the information specified in 40 C.F.R. § 60.5420(b)(1)-(8).

27. Subpart OOOO, at 40 C.F.R. § 60.5420(b)(6)(v), requires owners and operators to include in their annual reports a statement, for each storage vessel affected facility, that the owner or operator has met the requirements specified in at 40 C.F.R. § 60.5410(h)(2) to reduce VOC emissions in accordance with § 60.5395(d).

28. Subpart OOOO, at 40 C.F.R. § 60.5420(c), requires owners and operators of affected facilities to maintain all records required by the subpart for at least five years. These records include, but are not limited to, records related to pneumatic controllers, records of each VOC emissions determination for each storage vessel affected facility made under 40 C.F.R. § 60.5365(e), including identification of the model or calculation methodology used to calculate the VOC emission rate, records of each cover inspection, and records of inspections using section 11 of Method 22. See 40 C.F.R. § 60.5420(c)(4), (5)(ii), (6), (7), (13).

29. Subpart OOOO, at 40 C.F.R. § 60.5370(b), requires that at all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any storage vessel affected facility in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA which may include but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

NSPS Subpart OOOOa

30. Pursuant to Section 111(b) of the CAA, the EPA promulgated NSPS Subpart OOOOa, at 40 C.F.R. Part 60, Subpart OOOOa, which establishes emission standards for the control of emissions of VOCs, sulfur dioxide, and greenhouse gases in the form of methane from affected facilities in the crude oil and natural gas production source category that commenced construction, modification, or reconstruction after September 18, 2015.

31. Subpart OOOOa, at 40 C.F.R. § 60.5365a, provides that owners and operators of one or more affected facilities that commenced construction, modification, or reconstruction after September 18, 2015, are subject to the applicable provisions of Subpart OOOOa.

32. Subpart OOOOa, at 40 C.F.R. § 60.5365(e), provides that under NSPS Subpart OOOOa, “affected facilities” include any “storage vessel affected facility.”

33. Subpart OOOOa, at 40 C.F.R. § 60.5430a, defines “storage vessel” as a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support.

34. Subpart OOOOa, at 40 C.F.R. § 60.5365a(a), provides that a single well that conducts a well completion operation following hydraulic fracturing or refracturing is a “well affected facility.”

35. Subpart OOOOa, at 40 C.F.R. § 60.5365a(e), provides that a storage vessel is a “storage vessel affected facility” if a properly performed emission determination indicates that the storage vessel has the potential for VOC emissions equal to or greater than six tons per year. The potential for VOC emissions 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 August 2, 2016, or within 60 days after startup (whichever was later). The determination may take into account requirements under a legally and practicably enforceable limit in an operating permit or other requirement established under a federal, state, local, or tribal authority.

36. Subpart OOOOa, at 40 C.F.R. § 60.5365a(e)(4), provides that a storage vessel affected facility that subsequently has its potential for VOC emissions decrease to less than six tons per year shall remain an affected facility under this subpart.

37. Subpart OOOOa, at 40 C.F.R. § 60.5365a(h)(2), provides that a pneumatic pump affected facility at a well site is a single natural gas-driven diaphragm pump that is in operation not less than 90 days per calendar year.

38. Subpart OOOOa, at 40 C.F.R. § 60.5375a(a)(3), provides that for each new well completion operation with hydraulic fracturing that began on or after January 1, 2015, if it is technically infeasible to route the recovered gas, the owner or operator of a well affected facility must capture and direct recovered gas to a completion combustion device equipped with a reliable continuous pilot flame, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact tundra, permafrost or waterways.

39. Subpart OOOOa, at 40 C.F.R. § 60.5393a(b), requires owners and operators of pneumatic pump affected facilities at a well site to reduce natural gas emissions by 95.0 percent, unless there is no control device installed on site and no ability to route pneumatic pump emissions to a process, in which case they must submit a certification in accordance with 40 C.F.R. § 60.5420a(b)(8)(i) in their next annual report, certifying that there is no available control device or process on site and maintain the records required under 40 C.F.R. § 60.5420a(c)(16)(i) and (ii). If an owner or operator determines, through an engineering assessment, that routing a pneumatic pump to a control device or a process is technically infeasible, then certain requirements for the assessment are specified, including a certification in accordance with 40 C.F.R. § 60.5420a(b)(8)(i) in their next annual report.

40. Subpart OOOOa requires the owner or operator of a storage vessel affected facility to comply with the following emission control requirements:

- a. The owner or operator of a storage vessel affected facility must either: (i) reduce VOC emissions from the storage vessel by 95.0 percent within 60 days after startup; or (ii) maintain the uncontrolled actual VOC emissions from the storage vessel at less than four tons per year without considering control. *See* 40 C.F.R. § 60.5395a(a)(2)-(3).
- b. For a storage vessel electing to comply with the 95.0 percent emission reduction requirement in 40 C.F.R. § 60.5395a(a)(2), the required emission reduction must be achieved by control requirements that include, per 40 C.F.R. § 60.5395a(b):
 - i. equipping the storage vessel with a cover that meets the requirements of 40 C.F.R. § 60.5411a(b); and
 - ii. connecting the storage vessel to a closed vent system that meets the requirements of 40 C.F.R. § 60.5411a(c) and (d) and either routing the emissions to a control device that meets the conditions specified in 40 C.F.R. § 60.5412a(d), or routing the closed vent system to a process.

41. Subpart OOOOa, at 40 C.F.R. § 60.5411a(b)(1)-(3), requires owners and operators of storage vessel affected facilities to ensure that covers on storage vessels meet the following requirements: (1) the cover and all openings on the cover shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel; (2) each cover opening shall be secured in a closed, sealed position except to add or remove material from the unit, to inspect or sample the material in the unit, to inspect, maintain, repair, or replace equipment in the unit, or to vent material through a closed vent system; and (3) each storage vessel thief hatch shall be equipped, maintained, and operated with a weighted mechanism or equivalent, to ensure the lid remains properly seated and sealed under normal operating conditions, including such times when working, standing/breathing, and flash emissions may be generated.

42. Subpart OOOOa, at 40 C.F.R. § 60.5411a(c), requires owners and operators of storage vessel affected facilities using a control device to control emissions or routing emissions to a process to design closed vent systems to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the requirements of 40 C.F.R. § 60.5412a(c) and (d), and to design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual, and auditory inspections.

43. Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(1)(iii), requires owner and operators to operate the combustion control device with no visible emissions, except for periods not to exceed a total of one minute during any 15-minute period. A visible emissions test using section 11 of EPA Method 22 of Appendix A-7 of Part 60 must be performed at least once every calendar month, separated by at least 15 days between each test. The observation period shall be 15 minutes. Devices failing the visible emissions test must follow the manufacturer's repair instructions, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan, to return the unit to compliant operation. All inspection, repair and maintenance activities for each unit must be recorded in a maintenance and repair log and must be available for inspection. Following return to operation

from maintenance or repair activity, each device must pass a Method 22 of Appendix A–7 of Part 60 visual observation as described in this paragraph.

44. Subpart OOOOa, at 40 C.F.R. § 60.5412a(d), requires that each control device used to meet the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) for storage vessel affected facilities must be installed according to 40 C.F.R. § 60.5412a(d)(1) through (4), as applicable. As an alternative to 40 C.F.R. § 60.5412a(d)(1), owners and operators of storage vessel affected facilities may install a control device model tested under 40 C.F.R. § 60.5413a(d), which meets the criteria in 40 C.F.R. § 60.5413a(d)(11) and meets the continuous compliance requirements in 40 C.F.R. § 60.5413a(e).

45. Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(1)(iv), requires that each combustion control device must be designed and operated in accordance with one of the following performance requirements:

- a. reduce the mass content of VOC in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of 40 C.F.R. § 60.5413a(b);
- b. reduce the concentration of TOC in the exhaust gases at the outlet to the device to a level equal to or less than 275 parts per million by volume as propane on a wet basis corrected to three percent oxygen as determined in accordance with the requirements of 40 C.F.R. § 60.5413a(b);
- c. operate at a minimum temperature of 760 °Celsius, provided the control device has demonstrated, during the performance test conducted under 40 C.F.R. § 60.5413a(b), that combustion zone temperature is an indicator of destruction efficiency; or
- d. introduce the vent stream into the flame zone of the boiler or process heater, if a boiler or process heater is used as the control device.

46. Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(4), requires that owners and operators must operate each control device at all times when gases, vapors, and fumes are vented from the storage vessel affected facility through the closed vent system to the control device.

47. Subpart OOOOa, at 40 C.F.R. § 60.5413a, requires performance testing for combustion control devices used to demonstrate compliance at storage vessels, unless exempted pursuant to 40 C.F.R. § 60.5413a(a). 40 C.F.R. § 60.5413a(a)(1) exempts a flare from performance testing if it is designed and operated in accordance with the General Provisions, at 40 C.F.R. § 60.18(b). This includes a compliance determination using Method 22 at 40 C.F.R. Part 60, Appendix A–7, to determine visible emissions. 40 C.F.R. § 60.5413a(a)(7) exempts a control device whose model can be demonstrated to meet the performance requirements of 40 C.F.R. § 60.5412a(a)(1) or (d)(1) through a performance test conducted by the manufacturer from this requirement, as specified in 40 C.F.R. § 60.5413a(d).

48. Subpart OOOOa, at 40 C.F.R. § 60.5413a(e), requires that owners and operators of combustion control devices tested by the manufacturer demonstrate that the control device achieves continuous compliance with the performance requirements in 40 C.F.R. § 60.5413a(d)(11) by installing a device tested under 40 C.F.R. § 60.5413a(d) and complying with the criteria specified in 40 C.F.R. § 60.5413a(e)(1) through (8). These criteria include, but are not limited to, the following:

- a. The inlet gas flow rate must be equal to or less than the maximum specified by the manufacturer. 40 C.F.R. § 60.5413a(e)(1).
- b. Devices must be operated with no visible emissions, except for periods not to exceed a total of one minute during any 15-minute period. A visible emissions test conducted according to section 11 of EPA Method 22 of Appendix A–7 of Part 60 must be performed at least once every calendar month, separated by at least 15 days between each test. The observation period shall be 15 minutes. 40 C.F.R. § 60.5413a(e)(3).

49. Subpart OOOOa, at 40 C.F.R. § 60.5417a(h)(1), requires owners and operators of each combustion control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) for storage vessel affected facilities to, among other things, conduct inspections at least once every calendar month (separated by at least 14 days) to confirm that the pilot is lit when vapors are being routed to the combustion device and that the continuous burning pilot flame is operating properly, monitor for visible emissions from the combustion device using section 11 of Method 22, and conduct olfactory, visual, and auditory inspections of all equipment associated with the combustion device. Owners and operators are exempt from this requirement if the owner and operator installs a control device model and meets all requirements in 40 C.F.R. § 60.5413a(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413a(e).

50. Subpart OOOOa, at 40 C.F.R. § 60.5417a(h)(2), requires owners and operators of each vapor recovery device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) for storage vessel affected facilities to conduct inspections at least once every calendar month (separated by at least 14 days) to ensure physical integrity of the control device according to the manufacturer's instructions. Owners and operators are exempt from this requirement if they install a control device model and meet all requirements in 40 C.F.R. § 60.5413a(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413a(e).

51. Subpart OOOOa, at 40 C.F.R. § 60.5417a(h)(3), requires owners and operators to operate each control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) for storage vessel affected facilities in accordance with the manufacturer's written operating instructions, procedures, and maintenance schedule to ensure good air pollution control practices for minimizing emissions. Records of the manufacturer's written operating instructions, procedures, and maintenance schedule must be available for inspection as specified in 40 C.F.R. § 60.5420a(c)(13). Owners and operators are exempt from this requirement if they install a control device model and meet all requirements in 40 C.F.R. § 60.5413a(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413a(e).

52. Subpart OOOOa, at 40 C.F.R. § 60.5415a(e), requires owners and operators of storage vessel affected facilities to demonstrate continuous compliance with Subpart OOOO for each storage vessel by reducing VOC emissions as specified in 40 C.F.R. § 60.5395a(a)(2), and by ensuring that any control device that is installed meets the applicable requirements of Subpart OOOOa.

53. Subpart OOOOa, at 40 C.F.R. § 60.5416a(c), requires owners and operators of storage vessel affected facilities to conduct an inspection of each cover and closed vent system at least once every calendar month, and to maintain records of the inspection results.

54. Subpart OOOOa, at 40 C.F.R. § 60.5416a(c)(4)(i) and (ii), requires owners and operators of storage vessel affected facilities to make a first attempt at repair no later than five calendar days after a leak is detected and complete repair of leaks no later than 30 calendar days after a leak is detected in a cover or closed vent system inspection.

55. Subpart OOOOa, at 40 C.F.R. § 60.5420a(b), requires owners and operators of affected facilities to submit annual reports containing the information specified in 40 C.F.R. § 60.5420a(b)(1)-(8) and (12).

56. Subpart OOOOa, at 40 C.F.R. § 60.5420a(b)(6)(v), requires owners and operators of storage vessel affected facilities to provide in their annual reports certain information for each storage vessel constructed, modified, reconstructed, or returned to service during the reporting period that is complying with § 60.5395a(a)(2) by using a control device tested under § 60.5413a(d) that meets the criteria in § 60.5413a(d)(11) and (e).

57. Subpart OOOOa, at 40 C.F.R. § 60.5420a(c), requires owners and operators of affected facilities to maintain all records required by the subpart for at least five years. These records include, but are not limited to, records related to pneumatic controllers, records of each VOC emissions determination for each storage vessel affected facility made under 40 C.F.R. § 60.5365a(e), including identification of the model or calculation methodology used to calculate the VOC emission rate, records of each closed vent system inspection, records of each cover inspection (including a record of each cover inspection and record of the corrective action taken to repair defects), records of inspections using section 11 of Method 22, the fugitive emissions monitoring plan, and records of each fugitive emissions monitoring survey. See 40 C.F.R. § 60.5420a(c)(4), (5)(ii), (6), (7), (13), (15)(vi)-(vii).

58. Subpart OOOOa, at 40 C.F.R. § 60.5365a(i), provides that the “collection of fugitive emission components” at a “well site” is an “affected facility,” subject to Subpart OOOOa.

59. Subpart OOOOa, at 40 C.F.R. § 60.5430a, provides that a “well site” is one or more surface sites that are constructed for the drilling and subsequent operation of any oil, natural gas, or injection well.

60. Subpart OOOOa, at 40 C.F.R. § 60.5430a, provides that a “fugitive emissions component” is any component that has the potential to emit fugitive emissions of VOCs at a well site or compressor station, including valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to 40 C.F.R. § 60.5411 or 40 C.F.R. § 60.5411a, thief hatches or other openings on a controlled storage vessel not subject to 40 C.F.R. § 60.5395 or 40 C.F.R. § 60.5395a, compressors, instruments, and meters.

61. Subpart OOOOa, at 40 C.F.R. § 60.5397a(b), requires owners and operators of collections of fugitive components at a well site to develop an emissions monitoring plan in accordance with 40 C.F.R. § 60.5397a(c)-(d) that covers the collection of fugitive emissions components within each company-defined area. The emissions monitoring plan must include, but is not limited to, the following:

- a. An initial monitoring survey conducted within 90 days of the startup of production for each collection of fugitive emissions components, and monitoring surveys conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys

must be conducted at least four months apart and no more than seven months apart. See 40 C.F.R. § 60.5397a(f) and (g); and

- b. A technique for determining fugitive emissions, which must be either method 21 of Appendix A-7 to Subpart OOOOa meeting the requirements of 40 C.F.R. § 60.5397a(c)(8), or optical gas imaging meeting the requirements of 40 C.F.R. § 60.5397a(c)(7)(i)-(vii). See 40 C.F.R. § 60.5397a(c)(2).

62. Subpart OOOOa, at 40 C.F.R. § 60.5397a(h)(1) and (2), requires owners and operators of collections of fugitive emissions components at a well site to make a first attempt at repair no later than 30 calendar days after a source of fugitive emissions is detected and complete repair of identified sources of fugitive emissions as soon as practicable, but no later than 30 calendar days after the first attempt at repair.

63. Subpart OOOOa, at 40 C.F.R. § 60.5397a(h)(4) requires that each identified source of fugitive emissions must be resurveyed before the repair is deemed complete.

64. Subpart OOOOa, at 40 C.F.R. § 60.5370a(b), requires that at all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance practices are being used will be based on information available to the EPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 C.F.R. § 60.8(c) do not apply to Subpart OOOOa.

The Ohio SIP

65. Pursuant to Section 110(a)(1) of the CAA, 42 U.S.C. § 7410(a)(1), each state is responsible for adopting and submitting to the EPA for approval an implementation plan that provides for the implementation, maintenance, and enforcement of National Ambient Air Quality Standards (NAAQS) for particular pollutants, including ground-level ozone.

66. Under Section 110(a)(2) of the CAA, 42 U.S.C. § 7410(a)(2), each SIP must include enforceable emission limitations and other control measures, means, or techniques, as well as schedules for compliance, as may be necessary to meet applicable requirements, and must include a permit program to provide for the enforcement of these limitations, measures, and schedules as necessary to assure the NAAQS are achieved.

67. Upon the EPA's approval of a SIP, the plans become independently enforceable by the Federal Government, as stated under Section 113(a)(1) of the CAA, 42 U.S.C. § 7413(a)(1). Thus, the EPA may take enforcement action if the EPA finds that any person is in violation of any SIP requirements, including conditions contained in permits issued pursuant to a SIP.

68. EPA has approved various provisions of the Ohio Administrative Code (Ohio Admin. Code) as part of the Ohio SIP, including Ohio Admin. Code §§ 3745-31-02 and 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).

69. The Ohio SIP, at Ohio Admin. Code § 3745-31-02, establishes requirements for installation, modification, and operation of new and existing air contaminant sources via a program for sources to obtain a Permit-to-Install (PTI) or a Permit-to-Install-and-Operate (PTIO).

70. The Ohio SIP, at Ohio Admin. Code § 3745-31-29, allows the Director of the Ohio Environmental Protection Agency (OEPA) to develop model general PTIs and PTIOs for categories of air contaminant sources, including oil and gas well site production sources.

The GP 12.1 and 12.2 Permit Program for Oil and Gas Well-Site Production Operations

71. On January 31, 2012, OEPA finalized a model general PTIO for oil and gas well production operations (GP 12). In April 2014, OEPA revised the GP 12 to incorporate Subpart OOOO requirements and to create two different versions of the model permit (GP 12.1 and GP 12.2) for facilities that meet different qualifying criteria.^{1, 2}

72. GP PTIO 12.1 and GP PTIO 12.2 expressly incorporate relevant requirements of Subparts OOOO and OOOOa. GP PTIO 12.1 and GP PTIO 12.2 supplement, but do not supplant, the requirements of Subpart OOOO for storage vessels at oil and gas well production facilities.

73. GP PTIO 12.1 and GP PTIO 12.2, at Condition A. 1, state:

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

74. GP PTIO 12.1 and GP PTIO 12.2 contain provisions for equipment and pipeline leaks at Condition C. 5, which states, at Condition C. 5. a) (1), that all of the provisions of Section C. 5. are federally enforceable for the purpose of a permit-to-install.

75. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 4. d) (1), state:

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

¹ The different versions pertain to capacities of the flare and engines at the well pad. With respect to the general permit language cited in this NOV/FOV, both versions of the general model permit contain identical language, and so the differences in permit versions are not relevant to this NOV/FOV.

² The location of the GP PTIO Permit Conditions cited below may vary across individual permits issued to Equinor's facilities. The citations below are to the template GP PTIO 12.1 and GP PTIO 12.2, available on OEPA's website at https://epa.ohio.gov/static/Portals/27/oil%20and%20gas/GP12.1_PTIOA20140403final.pdf and https://epa.ohio.gov/static/Portals/27/oil%20and%20gas/GP12.2_PTIOA20140403final.pdf.

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 C.F.R. 60.18(b), as applicable per federal rules.

76. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 5. c) (2), state, in pertinent part:

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. . . . 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. . . . An initial monitoring shall be completed within 90 days of startup and quarterly thereafter for a period of four consecutive quarters (1 year). . . . 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 semiannual. . . . 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. . . . 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 The program shall require the first attempt at repair within five (5) calendar days of determining a leak The program shall require that the leaking component is repaired within 30 calendar days after the leak is detected. . . . The program shall [follow] the Monitoring and Record Keeping requirements described in paragraph 5.d) of this permit.

77. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 5. c) (3), state:

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)].

78. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 5. d) (1) b., state:

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;*
- 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.*

79. GP PTIO 12.1 and GP PTIO 12.2, at Conditions C. 5. d) (2) b., state:

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.*

80. GP PTIO 12.1 and GP PTIO 12.2 contain provisions for flash vessels and storage vessels at Condition C. 6, which states, at Condition C. 6. a) (1), that all of the provisions of Section C. 6. are federally enforceable for the purpose of a permit-to-install.

81. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. b) (1) c., state:

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**.³*

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.

³ GP PTIO 12.1 and GP PTIO 12.2 contain the asterisks but have no corresponding footnotes. However, Subpart OOOO, at 40 C.F.R. § 60.5430, defines a "Group 1 storage vessel" as a storage vessel for which construction, modification or reconstruction commenced after August 23, 2011, and on or before April 12, 2013. Subpart OOOO, at 40 C.F.R. § 60.5430, defines a "Group 2 storage vessel" as a storage vessel for which construction, modification or reconstruction commenced after April 12, 2013, and on or before September 18, 2015.

[The permittee must] [c]onduct monthly inspections of collection and control equipment.

82. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. b) (2) e., state:

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)]

83. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. c) (2), state:

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)]

84. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. c) (3), state:

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)].

85. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. d) (3), state:

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)]

86. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. d) (4), state:

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).

87. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. d) (5), state:

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.

88. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. e) (2), state:

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)]

89. GP PTIO 12.1 and GP PTIO 12.2, at Condition C. 6. f) (1), state, in pertinent part:

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).

Relevant Factual Background and Conclusions of Law

90. Equinor is a limited liability company incorporated in the State of Texas and operating in the State of Ohio.

91. Equinor is a “person” within the meaning of Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

92. Equinor owns and operates many oil and natural gas well pads in Monroe County in Eastern Ohio. The well pads subject to this NOV/FOV are listed in Attachment A, and are referred to collectively as “Equinor’s well pads.” Each well pad was issued a GP 12.1 or 12.2 PTIO under OEPA’s General Permit program, and site-specific permit citations are listed in Attachment A.

93. On August 30, 2022, EPA staff inspected the Eisenbarth (aka Michael) oil and gas well pad owned and operated by Equinor (August 2022 Inspection).

94. On February 3, 2023, the EPA issued to Equinor an Information Request under Section 114 of the CAA covering the following well pads owned and operated by Equinor in Ohio at that time: Bauer, Circosta, Collector's Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler.

95. On March 8, 2023, Equinor responded to the February 2023 Information Request (Equinor's Response).

96. On October 5, 2023, EPA staff inspected the following dry gas well pads, owned and operated by Equinor (October 2023 Inspections): Bauer, Circosta, Collector's Triangle, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler.

97. All of Equinor's dry gas well pads, and some of the wells at the Eisenbarth well pad, extract gas from the Utica shale formation.

Potential to Emit VOCs From Storage Vessels and 95.0 Percent Reduction of VOC Emissions

98. Each of Equinor's well pads has vessels that contain an accumulation of condensate and/or produced water and are constructed primarily of non-earthen materials. Therefore, each vessel is a "storage vessel" as that term is defined in Subpart OOOO, at 40 C.F.R. § 60.5430, and Subpart OOOOa, at 40 C.F.R. § 60.5430a.

99. In the EPA's Information Request, the EPA requested calculations of the potential VOC emissions from each storage vessel and annual reports required under Subparts OOOO and OOOOa for each well pad.

100. In Equinor's Response, Equinor provided the potential for VOC emissions determinations for each storage vessel at Eisenbarth in the 2020 annual report, but this submittal did not contain supporting documentation.

101. In Equinor's Response, Equinor did not provide any records of the potential VOC emissions from the storage vessels at Bauer, Circosta, Collector's Triangle, Dangel, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler.

102. According to Equinor's Response and the EPA's evaluation of the Response, each of Equinor's storage vessels at each of Equinor's well pads had the potential for VOC emissions equal to or greater than six tons per year for a 30-day period of production prior to the emission determination deadline in Subparts OOOO and OOOOa, as applicable, and the PTIOs issued to the well pads do not include any legally or practicably enforceable limits to restrict the potential VOC emissions from each storage vessel to less than six tons per year. Therefore, the storage vessels at Equinor's well pads are

“storage vessel affected facilities” under either Subpart OOOO or OOOOa, depending on the storage vessel’s date of construction, reconstruction, or modification identified in Attachment A.⁴

103. In Equinor’s Response, Equinor indicated that for the storage vessels at Eisenbarth, Equinor was complying with the requirement to achieve 95.0 percent reduction of VOC emissions from each storage vessel affected facility. Equinor did not indicate or provide any evidence that any of its storage vessels at Bauer, Circosta, Collector’s Triangle, Dangel, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler had uncontrolled actual VOC emissions of less than four tons per year. Therefore, Equinor is required by Subpart OOOO, Subpart OOOOa, and the PTIOs to achieve 95.0 percent reduction of VOC emissions from each storage vessel affected facility at these well pads.

Uncontrolled Storage Vessels

104. In the EPA’s information request, the EPA requested a list of emission units and associated air pollution control equipment for each well pad owned by Equinor.

105. According to Equinor’s Response and as observed during the EPA’s October 2023 Inspections, the storage vessels at each of Equinor’s dry gas well pads are not routed to a control device. Equinor did not provide any information demonstrating that vapors or emissions are being routed to a process at any of its dry gas well pads.

Storage Vessel Covers, Closed Vent System, and Fugitive Emissions

106. Each of Equinor’s well pads is subject to the leak detection and repair (LDAR) provisions in its respective PTIO.

107. Each of Equinor’s well pads is subject to the closed vent system and cover requirements in Subpart OOOO or OOOOa.

108. Each of Equinor’s well pads is a surface site constructed for oil and/or gas drilling that includes components that have the potential to emit fugitive emissions of VOC at a well site or compressor station. Therefore, at each well pad that commenced construction, reconstruction, or modification after September 18, 2015, Equinor owns and operates the “collection of fugitive emissions components” at a “well site” pursuant to Subpart OOOOa, making the well pad subject to the applicable requirements for the collection of fugitive emissions components in Subpart OOOOa.

109. During the August 2022 Inspection of Eisenbarth, EPA inspectors detected VOC emissions using an optical gas imaging (OGI) camera from thief hatches.

110. During the October 2023 Inspections, EPA inspectors detected VOC emissions using an OGI camera from thief hatches, pressure/vacuum relief devices attached to storage vessels, and gas processing unit (GPU) cabinet vents at Bauer, Circosta, Collector’s Triangle, Faunda, Isaly, Pfalzgraf, R&D Hilltop, Stalder, and Wefler.

⁴ As discussed in Paragraphs 8 and 30, storage vessels constructed, reconstructed, or modified between August 23, 2011 and September 18, 2015 are subject to NSPS Subpart OOOO, and storage vessels constructed, reconstructed, or modified after September 18, 2015 are subject to NSPS Subpart OOOOa.

111. During the October 2023 Inspections, EPA inspectors noted odors near storage vessels at Circosta, Faunda, Isaly, Pfalzgraf, Stalder, and Wefler.

112. During the August 2022 and October 2023 Inspections, no one was adding or removing material from the storage vessels; inspecting or sampling the material in the storage vessels; inspecting, maintaining, repairing, or replacing equipment in the storage vessels; or venting material from the storage facilities through a closed vent system through each cover opening – with the exception of R&D Hilltop in October 2023, at which at least one or more of these activities were occurring.

113. In the EPA’s Information Request, the EPA requested records of all inspections, including LDAR and OGI inspections, and associated repairs performed for each of Equinor’s well pads from January 2018 to the date of receipt of the Information Request.

114. In Equinor’s Response, Equinor provided records of OGI inspections conducted at each of Equinor’s well pads and associated repair records. Equinor did not provide any records of LDAR inspections.

115. Equinor’s Response showed that, during the company’s OGI inspections listed in Attachment B, VOC emissions were venting from the thief hatches at Bauer, Circosta, Eisenbarth, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler.

116. In Equinor’s Response, Equinor provided records showing that Bauer, Circosta, Collector’s Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler each had one or more leaks detected from pumps, compressors, pressure relief devices, connectors, valves, flanges, vents, covers, closed vent systems, collections of fugitive emissions components, process equipment, and storage vessel affected facilities where there was no repair attempted within five days of detection. Summaries of these records are listed in Attachment C.

117. In Equinor’s Response, Equinor provided records showing that Collector’s Triangle, Eisenbarth, Isaly, and R&D Hilltop each had detected one or more leaks from pumps, compressors, pressure relief devices, connectors, valves, flanges, vents, covers, closed vent systems, collections of fugitive emissions components, process equipment, and storage vessel affected facilities that were either not reported as repaired within 30 days of detection⁵ or had no record of repair. Summaries of these records are listed in Attachment D.

118. In Equinor’s Response, Equinor provided records for all well pads regarding cover inspections. None of the provided records included the following required details: the identification number for each cover inspected, the date of the inspection of each cover, and the corrective action taken to repair defects identified during the inspection.

119. In Equinor’s Response, Equinor provided records for all well pads, indicating that leaks at pumps, compressors, pressure relief devices, connectors, valves, flanges, vents, covers, closed vent systems, collections of fugitive emissions components, process equipment, and storage vessel affected facilities were repaired at its well pads. However, for two semiannual periods covering Spring 2021 and

⁵ The records provided by Equinor did not indicate whether the leaking valves at Eisenbarth were part of a closed vent system. For the purpose of this allegation, the EPA assumed that they are part of the closed vent system.

Spring 2022, Equinor records did not identify the date when the repair was successful and for two semiannual periods covering Fall 2020 and Fall 2021, Equinor's records did not identify when resurveying was conducted such that the repairs would be deemed complete.

Control Devices

120. During the August 2022 Inspection, EPA inspectors noted that emissions from the storage vessels at Eisenbarth were routed to a combustor, but the burner management system for the combustor was running on manual, and the pilot light, ignite light, and main light were not on.

121. In the EPA's Information Request, the EPA requested a list of emission units and associated air pollution control equipment, air emission tests, expected control efficiencies of the air pollution control equipment, maximum flow rates under which the expected control efficiencies can be achieved, visible emission records, inspection records, analyses to determine whether the control devices are sufficiently designed to handle peak flow, and continuous flow rate monitoring records.

122. In Equinor's Response, Equinor indicated that Eisenbarth uses an enclosed combustor as a control device for emissions from its water storage tanks.

123. Equinor did not provide records demonstrating continuous compliance for the combustion devices, including monthly visible emissions monitoring conducted in accordance with section 11 of EPA Method 22 for each of these control devices and inlet gas flow rate monitoring for each of these control devices such that it could demonstrate whether the inlet gas flow rate was equal to or less than the maximum specified by the manufacturer. Equinor also did not provide records demonstrating that it had conducted monthly pilot flame inspections and olfactory, visual, and auditory (AVO) inspections of all equipment associated with the enclosed combustor.

124. In Equinor's Response, Equinor indicated that Eisenbarth uses an open flare as a control device for emissions from its condensate storage tanks. Equinor provided manufacturer's specifications for the open flare that did not indicate an expected control efficiency.

125. In Equinor's Response, Equinor did not provide records demonstrating any of the following: that these flares were designed and operated to meet the required net heating value of the gas being combusted and the required exit velocity; that an EPA Method 22 compliance determination was performed for these flares; and that any performance testing had been conducted for these control devices.

126. In Equinor's Response, Equinor provided its 2020 annual Subpart OOOOa report, which described instances when recovered gas from three new well completion operations with hydraulic fracturing was not captured and directed to the flare, as shown in the table below:

Date of Onset of Flowback	Well	Duration of Venting (hours)
8/19/19	Eisenbarth S U1H	1
9/5/19	Eisenbarth S U3H	2
9/5/19	Eisenbarth S U5H	1

Pneumatic Pumps

127. In the EPA's Information Request, the EPA requested information about Equinor's natural gas-driven pneumatic pumps at each of Equinor well pads, including: a diagram of the control device and/or process the pneumatic pump is routed to, as applicable; the control efficiency / emissions reduction achieved, as applicable; records of any engineering assessments that show that such routing is technically infeasible, as applicable; total days of operation of the pneumatic pump; and other records to demonstrate compliance with Subpart OOOOa.

128. In Equinor's Response, Equinor stated that a natural gas-driven pneumatic pump has been on site at Eisenbarth since November 25, 2019, that emissions from the pump are not routed to a control device, that no engineering assessment has been completed showing that routing the pneumatic pump to a control device or a process is technically infeasible, and that the pneumatic pump operates 30 days per month. Equinor's Response did not state that the pneumatic pump is routed to a process.

129. Equinor's Response establishes that Eisenbarth is a "pneumatic pump affected facility" as that term is defined in Subpart OOOOa, at 40 C.F.R. § 60.5365a(h)(2). None of Equinor's Subpart OOOOa annual reports included any certifications or other information about the pneumatic pump affected facility at Eisenbarth.

Pneumatic Controllers

130. In the EPA's Information Request, the EPA requested information about Equinor's natural gas-driven pneumatic controllers at each of its well pads.

131. In Equinor's Response, Equinor stated that Each of Equinor's well pads has one or more gas-driven pneumatic controllers. Each pneumatic controller is a "pneumatic controller affected facility" as that term is defined in Subpart OOOO, at 40 C.F.R. § 60.5430, and Subpart OOOOa, at 40 C.F.R. § 60.5430a.

132. In the EPA's Information Request, the EPA requested manufacturer specifications, including designed bleed rate, for each pneumatic controller.

133. In Equinor's Response, Equinor provided manufacturer specifications for two pneumatic controllers, labeled as the Utica controller and the Marcellus controller, but the Response did not indicate which well pads contained these pneumatic controllers. The Utica controller manual did not include a bleed rate. Equinor did not provide any other pneumatic controller bleed rate information.

Permit Applications

134. In the EPA's Information Request, the EPA requested all air permit applications submitted to OEPA, either by Equinor or any previous owner or operator.

135. In Equinor's Response, Equinor provided copies of permit applications submitted to OEPA, by Equinor and previous owners/operators.

136. Although Equinor's (formerly known as Statoil) permit applications for the Bauer, Circosta, Collector's Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, and Stalder well pads state "[t]here are no pneumatic controllers" at these well pads, Equinor's Response stated that those same well pads have pneumatic controllers on the GPUs, and the EPA's October 2023 Inspections confirmed this.

137. Equinor's (formerly known as Statoil) permit applications for the Bauer, Circosta, Collector's Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, and Stalder well pads state that the produced water tanks (and Eisenbarth's condensate tanks) at these well pads have 0 lb/hr of VOC "Emissions before controls (max)"; 0 lb/hr of "Actual [VOC] Emissions"; 0 tpy of "Actual [VOC] Emissions"; 0 lb/hr of "Requested Allowable [VOC Emissions]"; and 0 tpy of "Requested Allowable [VOC Emissions]." However, the EPA's August 2022 and October 2023 Inspections found through OGI that the produced water tanks at those same well pads have VOC emissions.

138. Although Equinor's permit application for the Wefler well pad included a flare, Equinor's Response stated that Wefler does not have a flare, and the EPA's October 2023 Inspection confirmed that there was no flare at the Wefler well pad.

Violations

Potential to Emit VOCs from Storage Vessels

139. Equinor failed to determine the potential VOC emission rate of the storage vessels and/or maintain records of that determination at the well pads described in Paragraph 101 in violation of Subpart OOOO, at 40 C.F.R. § 60.5365(e) and § 60.5420(c)(5)(ii), or Subpart OOOOa, at 40 C.F.R. § 60.5365a(e) and § 60.5420a(c)(5)(ii), as applicable; and GP 12.1 and 12.2 Condition C. 6. b) (1) c. and C. 6. e) (2), as applicable.

Uncontrolled Storage Vessels

140. For each of its dry gas well pads, Equinor failed to reduce VOC emissions by 95.0 percent and connect the storage vessels and covers to a closed vent system that routes emissions to a control device or process that meets the requirements described in Paragraphs 105, or alternatively, maintain the uncontrolled actual VOC emissions from the storage vessels to less than four tons per year as described in Paragraph 103, in violation of Subpart OOOO, at 40 C.F.R. § 60.5395(d)(1)-(2) and § 60.5395(e)(1), or Subpart OOOOa, at 40 C.F.R. § 60.5395a(b), as applicable; and GP 12.1 Conditions C. 6. b) (1) c. and C. 6. c) (2).

Storage Vessel Covers, Closed Vent System, and Fugitive Emissions

141. Based on emissions observed by EPA inspectors and Equinor personnel using AVO and OGI at Bauer, Circosta, Collector's Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler as described in Paragraphs 109-111 and 115-119, Equinor has failed to ensure that the covers and all openings of the storage vessels at these well pads form a continuous impermeable barrier over the entire surface area of the liquid in the vessel, and that each cover opening is secured in a closed, sealed position except during the specific activities allowed by Subparts OOOO and OOOOa, in violation of Subpart OOOO, at 40 C.F.R. § 60.5411(b), or Subpart OOOOa, at 40 C.F.R.

§ 60.5411a(b), as applicable; and GP 12.1 and 12.2 Conditions C. 6. b) (1) c. and C. 6. c) (2), as applicable.

142. Equinor failed to record sufficient detail of each cover inspection and the corrective actions taken to repair defects, as described in Paragraph 118, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5420a(c)(7)(i) and (ii), as applicable; and GP 12.1 and 12.2 Conditions C. 6. c) (3) and d) (3), as applicable.

143. Equinor failed to make a first attempt at repair of fugitive emissions components, covers, closed vent systems, process equipment, and storage vessel affected facilities at Bauer, Circosta, Collector's Triangle, Eisenbarth, Faunda, Isaly, Pfalzgraf, Pirl, R&D Hilltop, Stalder, and Wefler, within five calendar days of detection and/or complete repair within 30 calendar days of detection, as described in Paragraphs 116-117, in violation of Subpart OOOO, at 40 C.F.R. § 60.5416(c)(4)(i) and (ii), or Subpart OOOOa, at § 60.5416a(c)(4)(i) and (ii), as applicable; and GP 12.1 and 12.2 Conditions C. 5. c) (2), C. 5. c) (3), and C. 6. c) (3), as applicable.

144. At Collector's Triangle, Isaly, and R&D Hilltop, Equinor failed to make a first attempt at repair of fugitive emissions components within 30 calendar days after a source of fugitive emissions was detected and failed to complete repair of identified sources of fugitive emissions within 30 calendar days after the first attempt at repair, as described in Paragraph 117, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5397a(h)(1) and (2); as applicable; and GP 12.1 and 12.2 Conditions C. 5. c) (2), C. 5. c) (3), and C. 6. c) (3), as applicable.

145. Equinor failed to provide the dates that it successfully repaired and/or resurveyed leaks from pumps, compressors, pressure relief devices, connectors, valves, flanges, vents, covers, closed vent systems, collections of fugitive emissions components, process equipment, and storage vessel affected facilities, at Equinor's well pads as described in Paragraph 119, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5397a(h)(4), and § 60.5420a(c)(15)(vii)(I)(6); and GP 12.1 and 12.2, Condition C. 5. d) (2) b. vi.

146. Equinor failed to design the closed vent systems at Eisenbarth to route all gases, vapors and fumes emitted from the material in the storage vessels to a control device, and to design and operate closed vent system at Eisenbarth with no detectable emissions, as described in Paragraphs 109-111 and 115-119, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5411a(c); and GP 12.2 Permit Conditions C. 6. b) (1) c. and C. 6. c) (2).

147. By failing to comply with the requirements of 40 C.F.R. § 60.5411a(c) at Eisenbarth as described in Paragraph 141, Equinor failed to comply with the 95.0 percent emission reduction requirement, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5395a(a)(2); and GP 12.2 Permit Condition C. 6. b) (1) c.

Control Devices

148. Equinor failed to operate the enclosed combustor at Eisenbarth at all times, as described in paragraph 120, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(4).

149. Equinor failed to demonstrate that each enclosed combustor at Eisenbarth operates with no visible emissions in accordance with Method 22. Equinor also failed to demonstrate continuous

compliance for a combustion devices tested by a manufacturer, including performing and maintaining records of visible emission monitoring with Method 22 and inlet gas flow rate monitoring, and failed to perform and maintain records of pilot light inspections and AVO inspections of all equipment associated with the enclosed combustor, as described in Paragraph 123, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(1)(iii), § 60.5413a, § 60.5413a(e), § 60.5417a(h)(1), and § 60.5420a(c)(13); and GP 12.2 Permit Conditions C. 4. d) (1), C. 4. f), C. 6. c) (2) and (5), C. 6. d) (3) and (4).

150. As described in Paragraph 123, Equinor failed to design and operate the enclosed combustor at Eisenbarth to meet the performance requirement in Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(1)(iv) and § 60.5413a(d); and GP 12.2 Permit Conditions C. 4. d) (1), C. 6. c) (2), and C. 6. d) (4).

151. Per paragraph 125, Equinor failed to properly design the flares used as control devices for emissions from the storage tanks at Eisenbarth, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5412a(d)(3) and § 60.5413a(a)(1); the General Provisions, at 40 C.F.R. § 60.18(b); and GP 12.2 Permit Conditions C. 4. d) (1), C. 6. c) (2), and C. 6. d) (5).

152. By venting emissions from well completion operations with hydraulic fracturing at three different wells at Eisenbarth in 2019, as described in paragraph 126, Equinor failed to capture and direct recovered gas to a completion combustion device, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5375a(a)(3).

Continuous Compliance

153. Equinor failed to demonstrate continuous compliance at its storage vessel affected facilities because it failed to reduce VOC emissions at the storage vessels by 95.0 percent, or alternatively, maintain the uncontrolled actual VOC emissions from the storage vessels to less than four tons per year, and also failed to ensure that all control devices meet the applicable requirements, as described in Paragraphs 104-125 , violating Subpart OOOO, at 40 C.F.R. § 60.5415(e), or Subpart OOOOa, at 40 C.F.R. § 60.5415a(e), as applicable; and GP 12.1 and 12.2 Permit Condition C. 6. f) (1), as applicable.

Pneumatic Pumps

154. Because Equinor's pneumatic pump affected facility at Eisenbarth is not routed to a control device or process, an engineering assessment showing that routing the pneumatic pump to a control device or a process is technically infeasible has not been completed, and Equinor did not submit any certifications in its OOOOa annual reports, as described in Paragraphs 128-129, Equinor failed to comply with Subpart OOOOa's VOC standards and reporting requirements, in violation of Subpart OOOOa at 40 C.F.R. § 60.5393a(b), § 60.5420a(b)(8), and § 60.5420a(c)(16)(iv).

Pneumatic Controllers

155. Equinor failed to record pneumatic controller information and/or maintain records of this information at all Utica-based well pads, as described in Paragraphs 131-133, violating Subpart OOOO, at 40 C.F.R. § 60.5420(c)(4), or Subpart OOOOa, at 40 C.F.R. § 60.5420a(c)(4), as applicable; and GP 12.1 and 12.2 Condition C. 5. d) (1) b, as applicable.

Permit Applications

156. Because Equinor's well pads had pneumatic controller(s), had nonzero emissions from storage vessels, and/or did not have a flare, as described in paragraphs 136-138, and because Equinor violated various conditions of its permits, as summarized, Equinor failed to operate the storage vessels in accordance with the application(s) submitted and all the terms and conditions contained in the PTIO(s), violating GP 12.1 and 12.2 Condition A.1., as applicable.

Good Air Pollution Control Practices

157. Because Equinor did not use control devices at its dry gas well pads, did not maintain uncontrolled emissions at the storage vessels to less than four tons per year or reduce VOC emissions at the storage vessels by 95.0 percent at any of its well pads, vented emissions from three wells at Eisenbarth in 2019, and failed to conduct inspections at the required frequencies at any of its well pads, and because the EPA observed uncontrolled emissions at Equinor's storage vessels and GPU cabinets at all of the inspected well pads, Equinor failed to operate each of its well pads in a manner consistent with good air pollution control practice for minimizing emissions, violating Subpart OOOO, at 40 C.F.R. § 60.5370(b), or Subpart OOOOa, at 40 C.F.R. § 60.5370a(b), as applicable.

Environmental Impact of Violations

158. These violations have caused or can cause excess emissions of VOCs and methane.

159. VOC emissions can cause eye, nose, and throat irritation, headaches, loss of coordination, nausea, and damage to the liver, kidneys, and the central nervous system.

160. VOC emissions are a precursor to ground-level ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue.

161. Methane is a potent greenhouse gas, and emissions of methane contribute to climate change.

**MICHAEL
HARRIS**

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Date: 2024.05.13
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Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division

Attachment A

Facility Name	Permit Type	Permit Issued	Facility Air Permit ID	Tanks Subject to Subpart	Control Device Violations	Pneumatic Controller Violation	Inspection and Leak Repair Violations	Storage Vessel Violations	Continuous Compliance Violation
Bauer	12.1	04/26/17	P0122480	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 7. c) (3), C. 7. d) (3)	C. 7. b) (1) c., C. 7. c) (2), C. 7. e) (2)	C. 7. f) (1)
Circosta	12.1	04/26/17	P0122586	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 7. c) (5), C. 7. d) (3)	C. 7. b) (1) c., C. 7. c) (4), C. 7. e) (2)	C. 7. f) (1)
Collector's Δ	12.1	08/06/19	P0132471	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (3) b. vi, C. 7. c) (3), C. 7. d) (3)	C. 7. b) (1) c., C. 7. c) (2), C. 7. e) (2)	C. 7. f) (1)
Dangel	12.1	02/05/24	P0135302	OOOO		C. 1. d) (1) b		C. 7. b) (1) c., C. 7. c) (2), C. 7. e) (2)	C. 7. f) (1)
Eisenbarth	12.2	12/08/22	P0132471	OOOOa	C. 4. b) (1) e., C. 4. c) (1), C. 4. d) (1), C. 4. f), C. 6. c) (2)+(5), C. 6. d) (3)-(5)	C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (7)	C. 6. f) (1)
Faunda	12.1	08/01/18	P0124770	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)
Isaly	12.1	08/20/18	P0124834	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)
Pfalzgraf	12.1	02/01/18	P0123896	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)
Pirl	12.1	08/18/17	P0123287	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)
R&D Hilltop	12.1	03/22/17	P0122409	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 7. c) (3), C. 7. d) (3)	C. 7. b) (1) c., C. 7. c) (2), C. 7. e) (2)	C. 7. f) (1)
Stalder	12.1	08/21/18	P0124834	OOOOa		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)
Wefler	12.1	10/18/16	P0121407	OOOO		C. 5. d) (1) b	C. 5. c) (2), C. 5. c) (3), C. 5. d) (2) b. vi, C. 6. c) (3), C. 6. d) (3)	C. 6. b) (1) c., C. 6. c) (2), C. 6. e) (2)	C. 6. f) (1)

Attachment B

Inspection Date	Well Pad	Findings	#	Source
9/17/2019	Bauer	Thief Hatch	2	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
9/13/2022	Circosta	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
9/16/2019	Circosta	Thief Hatch	1	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
3/1/2022	Eisenbarth	Thief Hatch	3	2022 ABO Part 60 Subpart OOOOa 60.5420a(b) Annual Report V3 23.02.24
3/20/2023	Eisenbarth	Thief Hatch	2	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
5/30/2023	Eisenbarth	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
3/10/2020	Eisenbarth	Thief Hatch	3	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
3/20/2023	Isaly	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
9/13/2022	Pfalzgraf	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
3/21/2023	Pfalzgraf	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
3/21/2023	Pirl	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
9/16/2019	Pirl	Thief Hatch	2	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
12/16/2022	R&D Hilltop	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
9/12/2022	Stalder	Thief Hatch	2	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010
9/16/2019	Stalder	Thief Hatch	2	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
3/9/2020	Stalder	Thief Hatch	1	ABO - Part 60 Subpart OOOOa - 60.5420a(b) Annual Report 2020 10 30
3/21/2023	Wefler	Thief Hatch	1	2023RY Part 60 Subpart OOOOa 60.5420a(b) Annual Report 20231010

Attachment C

Inspection Date	Well Pad	Findings	#	First Attempt Date	Final Repair Date	Days Between Inspection Date and First Attempt at Repair (>5)
3/1/2022	Bauer	Instrument	1	3/31/2022	3/31/2022	30
9/17/2019	Bauer	Thief Hatch	2	10/9/2019	10/14/2019	22
9/17/2019	Bauer	Connector	1	10/9/2019	10/14/2019	22
3/2/2022	Circosta	Valve	1	3/31/2022	3/31/2022	29
9/16/2019	Circosta	Thief Hatch	1	10/9/2019	10/9/2019	23
9/2/2020	Circosta	Connector	1	9/17/2020	9/17/2020	15
3/1/2022	Collector's Δ	Valve	1	no repair date		
9/2/2021	Eisenbarth	Connector	5	9/15/2021	9/15/2021	13
3/1/2022	Eisenbarth	Connector	2	3/31/2022	3/31/2022	30
3/1/2022	Eisenbarth	Valve	1	3/31/2022	3/31/2022	30
3/1/2022	Eisenbarth	Thief Hatch	3	3/31/2022	3/31/2022	30
3/10/2020	Eisenbarth	Thief Hatch	3	3/31/2020	3/31/2020	21
3/10/2020	Eisenbarth	Valve	5	3/31/2020	3/31/2020	21
9/3/2020	Eisenbarth	Valve	3	9/17/2020	9/17/2020	14
9/3/2020	Eisenbarth	Connector	2	9/17/2020	9/17/2020	14
3/15/2021	Collector's Δ	Valve	1	no repair date		
3/15/2021	Collector's Δ	Connector	1	no repair date		
3/15/2021	Eisenbarth	Valve	3	4/16/2021	4/16/2021	32
3/15/2021	Eisenbarth	Connector	1	4/6/2021	4/6/2021	22
3/2/2022	Faunda	Connector	2	3/31/2022	3/31/2022	29
9/2/2020	Faunda	Connector	2	9/17/2020	9/17/2020	15
3/1/2022	Isaly	Valve	1	3/31/2022	3/31/2022	30
3/1/2022	Isaly	Connector	2	3/31/2022	3/31/2022	30
9/16/2019	Isaly	Connector	2	10/9/2019	10/9/2019	23
3/15/2021	Isaly	Connector	1	no repair date		
3/2/2022	Pfalzgraf	Connector	5	3/31/2022	3/31/2022	29
3/2/2022	Pfalzgraf	Valve	1	3/31/2022	3/31/2022	29
9/17/2019	Pfalzgraf	Connector	1	10/9/2019	10/9/2019	22
9/16/2019	Pirl	Thief Hatch	2	10/9/2019	10/14/2019	23
3/1/2022	R&D Hilltop	Connector	1	3/31/2022	3/31/2022	30
3/16/2021	R&D Hilltop	Meter	1	4/6/2021	4/6/2021	21
12/16/2022	R&D Hilltop	Valve	3	no repair date		
12/16/2022	R&D Hilltop	Connector	4	no repair date		
12/16/2022	R&D Hilltop	Thief Hatch	1	no repair date		
9/16/2019	Stalder	Thief Hatch	2	10/9/2019	10/14/2019	23
9/2/2021	Wefler	Connector	1	9/15/2021	9/15/2021	13
9/2/2021	Wefler	Valve	1	9/15/2021	9/15/2021	13
3/2/2022	Wefler	Connector	1	3/31/2022	3/31/2022	29
3/16/2021	Wefler	Valve	3	4/6/2021	4/6/2021	21
3/2/2022	Welfer	Valve	1	3/31/2022	3/31/2022	29

Attachment D

Inspection Date	Well Pad	Findings	#	First Attempt Date	Final Repair Date	Days Between Inspection Date and Final Repair Date (>31)
3/1/2022	Collector's Δ	Valve	1	no repair date		
3/15/2021	Collector's Δ	Valve	1	no repair date		
3/15/2021	Collector's Δ	Connector	1	no repair date		
3/15/2021	Eisenbarth	Valve	3	4/16/2021	4/16/2021	32
3/15/2021	Isaly	Connector	1	no repair date		
12/16/2022	R&D Hilltop	Valve	3	no repair date		
12/16/2022	R&D Hilltop	Connector	4	no repair date		
12/16/2022	R&D Hilltop	Thief Hatch	1	no repair date		