7/22/2022

10:13 AM

Received by
EPA Region VIII
Hearing Clerk

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 8**

| **IN THE MATTER OF:** | **NOTICE OF VIOLATION** |
|---|---|
| **WPX Energy, Inc.**<br>**3500 One Williams Center**<br>**Tulsa, Oklahoma**<br>**74172** | **Docket No.** CAA-08-2022-0008<br><br>Proceedings Pursuant to<br>the Clean Air Act,<br>42 U.S.C. §§ 7401-7671q |

# NOTICE OF VIOLATION

The U.S. Environmental Protection Agency alleges WPX Energy (WPX) has violated or is violating implementing regulations of the Clean Air Act (the Act) included in the Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, 40 C.F.R. part 60, subpart OOOOa (NSPS OOOOa) for oil and natural gas production facilities and at certain oil and natural gas facilities. The EPA also alleges that WPX has violated or is violating the Act and its implementing regulations of the Federal Implementation Plan for Oil and Natural Gas Production Facilities, Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota (Fort Berthold FIP), 40 C.F.R. §§ 49.4161-4168. Additionally, the EPA also alleges that WPX has violated or is violating the Act and its implementing regulations at the Federal Minor New Source Review (NSR) Program in Indian Country, 40 C.F.R. §§ 49.151-.165. Further the EPA also alleges that WPX has violated or is violating Part C of Title I of the Act, 42 U.S.C. §§ 7470-92, and its implementing regulations for the Prevention of Significant Deterioration (PSD), at 40 C.F.R. § 52.21; and Section 502(b) of the Act, 42 U.S.C. §§ 7661-7661f, and its implementing regulations for Federal Operating Permits (Title V Permits), at 40 C.F.R. Part 71.

## I. STATUTORY AND REGULATORY BACKGROUND

1. The Act's purpose is "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).

2. Section 108 of the Act, 42 U.S.C. § 7408, directs the EPA to identify pollutants that may "reasonably be anticipated to endanger public health or welfare" and to issue air quality criteria based on the "latest scientific knowledge" about the effects of the pollutants on public health and the environment. These pollutants are known as "criteria pollutants."

3. Section 109 of the Act, 42 U.S.C. § 7409, requires the EPA to establish national ambient air quality standards (NAAQS) for criteria pollutants. The primary standard must be set at a level "requisite to protect the public health" with an adequate margin of safety, and the secondary standard is intended to protect the "public welfare."

4. Ground-level ozone is one of six criteria pollutants for which EPA has promulgated national standards, due to its adverse effects on human health and the environment. Short-term exposure (1 to 3 hours) to ground-level ozone can cause acute health effects observed even at low concentrations, including temporary pulmonary inflammation. Long-term exposure (months to years) may cause permanent damage to lung tissue. Children and adults who are active outdoors are particularly susceptible to the adverse effects of exposure to ozone. *See* 73 Fed. Reg. 16,436 (Mar. 27, 2008).

5. Ozone is not emitted directly from sources of air pollution. Ozone is a photochemical oxidant, formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. NOx and VOCs are called "ozone precursors." Sources that emit ozone precursors are regulated to reduce ground-level ozone. 62 Fed. Reg. 38,856 (July 18, 1997).

6. Section 110(a)(2)(C) of the Clean Air Act requires that every state implementation plan for national primary and secondary ambient air quality standards include a program to regulate the construction and modification of stationary sources, this includes a permitting program as required by parts C and D of Title I of the Act. 42 U.S.C. § 7410(a)(2)(C).

7. Sections 301(a) and 301(d)(4) of the Clean Air Act, as implemented through the Tribal Authority Rule, provide the EPA with broad discretion to develop a program to regulate major, and new and modified minor sources in Indian Country in the absence of an approved tribal program. See 42 U.S.C. §§ 7601(a), 7601(d).

8. Section 165(a) of the Act, 42 U.S.C. § 7475(a), among other things, prohibits the construction of a "major emitting facility" in an attainment area unless a permit has been issued that comports with the requirements of the PSD program at Section 165.

9. Major sources subject to PSD requirements in Indian Country where a Tribe does not have an EPA-approved PSD program is subject to the federal PSD requirements at 40 C.F.R. § 52.21.

10. In 2011, the EPA promulgated rules for the "Review of New Sources and Modifications in Indian Country" which applies to new and modified minor sources in Indian Country and minor modifications to major sources. The purpose of the program is to create a preconstruction permitting program for new and modified minor sources and a registration system to allow the reviewing authority to maintain a record of minor source emissions in Indian Country. *See* Review of New Sources and Modifications in Indian Country, 76 Fed. Reg. 38788, 37854 (July 1, 2011) (codified at 40 C.F.R. §§ 49.151-.165).

11. In 2013, the EPA finalized a Federal Implementation Plan for the Fort Berthold Indian Reservation for Oil and Natural Gas Well Production Facilities. *See* 40 C.F.R. §§ 49.4161-.4168. Among other requirements, the Forth Berthold FIP requires owners and operators of oil and natural gas production facilities to reduce VOC emissions from production and storage operations.

12. Section 111(b) of the Act authorizes the Administrator of the EPA to promulgate standards of performance applicable to "new sources" within categories of sources that cause

"air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b).

13. A "new source" is any stationary source, the construction or modification of which is commenced after the publication of the standards of performance that will apply to such source. 42 U.S.C. § 7411(a)(2).

14. A "stationary source" is a building, structure, facility, or installation that emits or may emit any air pollutant. 42 U.S.C. § 7411(a)(3).

15. In 1979, the EPA listed "Crude Oil and Natural Gas Production" as a source category that contributes significantly to air pollution and for which standards of performance would be established. 44 Fed. Reg. 49,222 (Aug. 21, 1979).

16. It is unlawful for owners and operators of any new source to operate in violation of applicable standards of performance after the standards have gone into effect. 42 U.S.C. § 7411(e).

**A. <u>Fort Berthold Indian Reservation Federal Implementation Plan</u>**

17. In 2013, the EPA finalized the Fort Berthold FIP, codified at 40 C.F.R. §§ 49.4161–.4168, to protect tribal air resources. The Fort Berthold FIP ensures compliance with the NAAQS. Approval and Promulgation of Federal Implementation Plan for Oil and Natural Gas Production Facilities; Fort Berthold Indian Reservation (Mandan, Hidatsa, and Arikara Nation, North Dakota, 78 Fed. Reg. 17,836 (Mar. 22, 2013).

18. The Fort Berthold FIP "establish[es] legally and practicably enforceable requirements to control and reduce VOC emissions from well completion operations, well recompletion operations, production operations, and storage operations at existing, new and modified oil and natural gas production facilities." 40 C.F.R. § 49.4161(a).

19. The Fort Berthold FIP applies to oil and natural gas production facilities with one or more oil and natural gas wells, for any one of which completion or recompletion operations are or were performed on or after August 12, 2007. *Id*. § 49.4161(b). Compliance with the Fort Berthold FIP is required no later than June 20, 2013, or upon initiation of well completion operations or well recompletion operations, whichever is later. *Id*. at § 49.4161(c).

20. An "oil and natural gas production facility" means "all of the air pollution emitting units and activities located on or integrally connected to one or more oil and natural gas wells that are necessary for production operations and storage operations." *Id*. at § 49.4163(a)(11).

21. The Fort Berthold FIP provides, in relevant part:

a. "Each owner or operator must operate and maintain all liquid and gas collection, storage, processing and handling operations, regardless of size, so as to minimize leakage of natural gas emissions to the atmosphere." *Id*. § 49.4164(a).

b. Within 90 days of the first date of production, "each owner or operator must . . . [r]oute all standing, working, breathing, and flashing losses from the produced oil storage tanks and any produced water storage tank interconnected with the produced oil storage tanks through a closed vent system to . . . (i) [a]n operating system designed to recover and inject the natural gas emissions into a natural gas gathering pipeline system for sale or other beneficial use; or (ii) an enclosed combustor or utility flare capable of reducing the mass content of VOC…by at least 98.0 percent." *Id*. § 49.4164(d)(2).

c. "Each owner or operator must equip all openings on each produced oil storage tank and produced water storage tank interconnected with produced oil storage tanks with a cover to ensure that all natural gas emissions are efficiently being routed through a closed-vent system to a vapor recovery system, an enclosed combustor, a utility flare, or a pit flare." *Id.* § 49.4165(a).

d. "Each cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves (PRV), and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the produced oil and produced water in the storage tank." *Id*. § 49.4165(a)(1).

e. "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 [to add or remove material, inspect or sample material, or inspect or repair equipment]." *Id*. § 49.4165(a)(2).

f. "Each thief hatch cover shall be weighted and properly seated." *Id*. § 49.4165(a)(3).

g. "Each PRV shall be set to release at a pressure that will ensure that natural gas emissions are routed through the closed-vent system to the [control device] under normal operating conditions." *Id*. § 49.4165(a)(4).

h. "Each closed-vent system must route all produced natural gas and natural gas emissions from production and storage operations to the natural gas sales pipeline or the control devices required by [40 C.F.R. § 49.4165(a)]." *Id.* § 49.4165(b)(1).

i. "All vent lines, connections, fittings, valves, relief valves, or any other appurtenance employed to contain and collect natural gas, vapor, and fumes and transport them to a natural gas sales pipeline and any VOC control equipment must be maintained and operated properly at all times." *Id.* § 49.4165(b)(2).

j. "Each closed-vent system must be designed to operate with no detectable natural gas emissions." *Id*. § 49.4165(b)(3).

k. Each owner or operator must meet requirements for enclosed combustors and utility flares, including ensuring each utility flare is designed and operated in accordance with the requirements of 40 C.F.R. § 60.18(b). *Id*. § 49.4165(c)(4).

l. Each owner or operator must ensure that each enclosed combustor and utility flare is operated with no visible smoke emissions. *Id*. § 49.4165(c)(6)(vii). If visible smoke is

observed, owners and operators must use EPA Reference Method 22 of 40 C.F.R. part 60, appendix A, to determine whether visible smoke emissions are present. *Id*. § 49.4166(g)(3).

**B. <u>New Source Performance Standards, 40 C.F.R. Part 60, Subpart OOOOa</u>**

22. In 2016, the EPA promulgated "Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015" under Section 111 of the Act. 81 Fed. Reg. 35,824 (June 3, 2016). These standards are set forth in 40 C.F.R part 60, subpart OOOOa, which includes 40 C.F.R. §§ 60.5360a–5432a (NSPS OOOOa).

23. Each of these standards is a "standard of performance" within the meaning of section 111(a)(1) of the Act, 42 U.S.C. § 7411(a)(1), or a "design, equipment, work practice, or operational standard, or combination thereof" under section 111(h) of the Act, 42 U.S.C. § 7411(h).

24. NSPS OOOOa applies to "affected facilities" for which owners or operators commence construction, modification or reconstruction after September 18, 2015. 40 C.F.R. § 60.5365a.

25. A "storage vessel affected facility" under NSPS OOOOa is a single storage vessel that has the potential for VOC emissions equal to or greater than 6 tons per year (tpy) as calculated in accordance with 40 C.F.R. § 60.5365a(e).

26. NSPS OOOOa requires "[a]t 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 practice for minimizing emissions." 40 C.F.R. § 60.5370a(b).

27. NSPS OOOOa requires storage vessel affected facilities that utilize a control device to be equipped with a cover that meets the requirements of 40 C.F.R. § 60.5411a(b) and is connected through a closed vent system that meets the requirements of § 60.5411a(c) and (d), and emissions must be routed to a control device that meets the conditions specified in § 60.5412(c) and (d). *Id.* § 60.5395a(b)(1).

28. Owners and operators must comply with the following requirements for covers on storage vessel affected facilities under NSPS OOOOa:

a. The cover and all openings on the cover (e.g., access hatches and pressure relief valves) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel. *Id.* § 60.5411a(b)(1).

b. Each cover opening must be secured in a closed, sealed position whenever material is in the unit, except during those times specified in 40 C.F.R. § 60.5411(b)(2)(i)–(iv). *Id.* § 60.5411a(b)(2).

c. Each storage vessel thief hatch must be equipped, maintained and operated with a weighted mechanism or equivalent, to ensure that the lid remains properly seated and sealed under normal operating conditions, including such times when working, standing/breathing, and flash emissions may be generated. *Id.* § 60.5411a(b)(3).

29. Owners and operators must comply with the following requirements for closed vent systems associated with storage vessel affected facilities under NSPS OOOOa:

a. 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. *Id.* § 60.5411a(c)(1).

b. Design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections or optical gas imaging inspections. *Id.* § 60.5411a(c)(2).

30. Owners and operators must comply with the following requirements for control devices to reduce emissions from storage vessel affected facilities under NSPS OOOOa:

a. Reduce VOC emissions from storage vessel affected facilities by 95%. *Id.* § 60.5395a(a)(2).

b. Ensure each enclosed combustion device is maintained in a leak free condition. *Id.* §§ 60.5412a(d)(1)(i), 60.5413a(e)(7).

c. Install and operate a continuous burning pilot flame. *Id.* §§ 60.5412a(d)(1)(ii), 60.5413a(e)(2).

d. Design and operate a flare in accordance with the requirements of 40 C.F.R. § 60.18. *Id.* §§ 60.5412a(d)(3), 60.5425a.

e. Operate the control device with no visible emissions, except for periods not to exceed a total of one minute during any fifteen-minute period, as determined using EPA Method 22, 40 C.F.R. part 60, appendix A. *Id.* §§ 60.5412a(d)(1)(iii), 60.5413a(e)(3).

f. Operate each control device used to comply with NSPS OOOOa at all times when gases, vapors, and fumes are vented from storage vessel affected facilities through the closed vent system to the control device. *Id.* § 5412a(d)(4).

31. Owners and operators of each storage vessel affected facility are required to submit an annual report to the EPA with the required information set forth at *Id.* §§60.520(b)(6)(i)-(vii).

### C. Prevention of Significant Deterioration of Air Quality

32. The Prevention of Significant Deterioration (PSD) provisions of Part C of Title I of the Clean Air Act requires preconstruction review and permitting for stationary sources. *See* 42 U.S.C. §§ 7470-7492.

33. A "major emitting facility" is prohibited from being constructed in areas designated as attainment or unclassifiable with the NAAQs unless a permit has been issued that comports with the requirements of Section 165 and the facility employs the "best available control technology" (BACT) for each pollutant subject to regulation under the Act emitted from the facility. *See* 42 U.S.C. § 7475(a).

34. A "major emitting facility" includes any source "with a potential to emit two hundred and fifty tons per year or more of any pollutant." 42 U.S.C. § 7479(1).

35. The Act defines BACT, in part, as "an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility…. In no event shall application of 'best available control technology' result in emissions of any pollutants which shall exceed the emissions allowed by any applicable standard established pursuant to section 7411…of this title." 42 U.S.C. § 7479(3).

36. The federal PSD regulations at 40 C.F.R. § 52.21 apply to all lands owned by the federal government as well as Indian Reservations located in any state whose approved SIP incorporates the federal PSD regulations. 40 C.F.R. § 52.21(a).

37. The federal PSD regulations "apply to the construction of any new major stationary source …in an area designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the [CAA]." *Id*. at § 52.21(a)(2)(i).

38. The PSD requirements of 40 C.F.R. § 52.21(j)–(r)(5) apply to the construction of any new major stationary source except as otherwise provided by the federal PSD regulations. *Id*. at § 52.21(a)(2)(ii).

39. Under the federal PSD regulations, a "major stationary source" is defined to include "any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant." *Id*. at § 52.21(b)(1)(i)(b).

40. A "regulated NSR pollutant" means "any pollutant for which a national ambient air quality standard has been promulgated." *Id.* at § 52.21(b)(50)(i).

41. The federal PSD regulations define "potential to emit" as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source." *Id*. § 52.21(b)(4).

42. Under the federal PSD regulations, "begin actual construction" is defined in general as the "initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building

supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change." *Id.* at § 52.21(b)(11).

43. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator to initiate an action for injunctive relief, as necessary to prevent the construction, modification or operation of a major emitting facility that does not conform to the PSD requirements in part C of the Act.

### D. Title V Operating Permits

44. Title V of the Act, 42 U.S.C. §§ 7661-7661f, establishes a permit program for any "major sources" of air pollution, as defined by Title V or a major stationary source required to have a PSD permit. 42 U.S.C. § 7661a(b).

45. Title V ensures all "applicable requirements" that apply to a source regulated under the Act are collected in one permit. *Id.* § 7661c(a).

46. In accordance with section 502(b) of the Act, 42 U.S.C. § 7661a(b), EPA promulgated regulations implementing Title V of the Act. *See* 61 Fed. Reg. 34228 (July 1, 1996). Those regulations for federal air quality operating permit programs are codified at 40 C.F.R. Part 71.

47. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 71.4(b) requires that the Administrator administer and enforce an operating permit program in Indian country, as defined in 40 C.F.R. § 71.2. Th effective date of the Part 71 program in Indian country was March 22, 1999.

48. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 71.7(b) provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except as in compliance with a Title V operating permit (Title V Permit).

49. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to timely submit an application for a permit, including information required to be submitted with the application. *See also* 40 C.F.R. § 71.5(a).

50. All sources subject to the operating permit requirements of Title V "shall have a permit to operate that assures compliance by the source with all applicable requirements." 40 C.F.R. § 71.1(b).

### E. 40 C.F.R. Part 49, Subpart C—Federal Minor New Source Review Program in Indian Country

51. The EPA published the "Review of New Sources and Modifications in Indian Country," effective July 1, 2011. 76 Fed. Reg. 38,748 (July 1, 2011). This rule created two New Source Review (NSR) regulations for the protection of air quality in Indian Country, including the "Tribal minor NSR rule."

52. The two new regulations work together with the pre-existing PSD program at 40 C.F.R. § 52.21 and the title V operating permits program at 40 C.F.R. § 71 to "provide a comprehensive permitting program for Indian country to ensure that air quality in Indian country will be protected in the manner intended by the Act." Proposed Rule, Review of New Sources and Modifications in Indian Country, 78 Fed. Reg. 33266, 33269 (June 3, 2013).

53. The federal Indian country minor NSR rule is codified at 40 C.F.R. §§ 49.151-49.161.

54. The purpose of the program is to establish a preconstruction permitting program for all new and modified minor sources and minor modifications at major sources located in Indian country. *See* 40 C.F.R. § 49.151(b)(1).

55. A "minor source" means a source with a potential to emit (PTE) regulated NSR pollutants in amounts that are less than the major source thresholds in 49.167, section 52.21, or section 71.2 of chapter 40, as applicable, but equal to or greater than the minor NSR thresholds in § 49.153. 40 C.F.R. § 49.152(d).

56. A "true minor source" "means a source, not including the exempt emissions units and activities listed in § 49.153(c), that emits or has to potential to emit regulated NSR pollutants in amounts that are less than the major source thresholds in § 49.167 or § 52.21 of this chapter, as applicable, but equal to or greater than the minor NSR thresholds in § 49.153 without the need to take an enforceable restriction to reduce its potential to emit to such levels. That is, a *true minor source* is a minor source that is not a synthetic minor source. The potential to emit includes fugitive emissions to the extent that they are quantifiable, only if the source below to one of the source categories listed in part 51, Appendix S, paragraph II.A.4(iii) or § 52.21(b)(1)(ii) of this chapter, if applicable." *Id.*

57. "Volatile Organic Compounds" (VOCs) are among the regulated NSR pollutants. *See* Table 1, *Id*. at § 49.153.

58. "Hazardous Air Pollutants" (HAPs) under 40 C.F.R. § 63.2 are defined as any air pollutant listed under section 112(b) of the Clean Air Act. Section 112(b) of the Act includes, amongst other air pollutants, benzene. 42 U.S.C. § 7412(b).

59. A "stationary source" means any building, structure, facility, installation which emits or may emit a regulated NSR pollutant. 40 C.F.R. § 51, Appendix S, para. II(A)(1).

60. A "building, structure, facility or installation" means all of the pollutant-emitting activities which belong to the same industrial group, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)." *Id*. at para. II(A)(2)(i).

61. A "building, structure, facility or installation" means for onshore activities under SIC Major Group 13: Oil and Gas Extraction, "all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on

surface sites that are within ¼ mile of one another . . . and they share equipment." *Id*., at para. II(A)(2)(ii).

62. The federal Indian Country minor NSR Rule also created a registration program for true minor sources located on Indian Country. *See* 40 C.F.R. § 49.160.

63. Under the registration program, owners and operators of true minor sources must submit a Part 1 Registration Form 30 days prior to the beginning of construction. Within 30 days after the startup of production, the owner or operator of the source must determine the potential for emissions and submit a Part 2 Registration Form ("Part 2 Registration"), including emissions information within 60 days after startup. 40 C.F.R §49.160(c)(iv).

64. 40 C.F.R. § 49.160(c)(3) requires that owners or operators of a true minor source adhere to the following procedure for estimating emissions in the Part 2 Registration:

**Procedure for estimating emissions.** Your registration should include potential to emit or estimates of the allowable and actual emissions, in tpy, of each regulated NSR pollutant for each emissions unit at the source.

a. Estimates of allowable emissions must be consistent with the definition of that term in § 49.152(d). Allowable emissions must be based on 8,760 operating hours per year (*i.e.*, operating 24 hours per day, 365 days per year) unless the reviewing authority approves a different number of annual operating hours as the basis for the calculation.

b. Estimates of actual emissions must take into account equipment, operating conditions and air pollution control measures. For a source that operated during the entire calendar year preceding the initial registration submittal, the reported actual emissions typically should be the annual emissions for the preceding calendar year, calculated using the actual operating hours, production rates, in-place control equipment and types of materials processed, stored or combusted during the preceding calendar year. However, if you believe that the actual emissions in the preceding calendar year are not representative of the emissions that your source will actually emit in coming years, you may submit an estimate of projected actual emissions along with the actual emissions from the preceding calendar year and the rationale for the projected actual emissions. For a source that has not operated for an entire year, the actual emissions are the estimated annual emissions for the current calendar year.

c. The allowable and actual emission estimates must be based upon actual test data, or in the absence of such data, upon procedures acceptable to the reviewing authority. Any emission estimates submitted to the reviewing authority must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

    (i) Source specific emission tests;

    (ii) Mass balance calculations;

(iii) Published, verifiable emission factors that are applicable to the source;

(iv) Other engineering calculations; or

(v) Other procedures to estimate emissions specifically approved by the Regional Administrator.

65. Submittal of a Part 1 and Part 2 Registration does not relieve owners and operators of sources of the duty to obtain any required permit, including a pre-construction permit, or to comply with the Federal Implementation Plan for the oil and natural gas production sector. 40 C.F.R. § 49.160(c)(4).

## II. FACTUAL BACKGROUND & FINDINGS OF VIOLATION

### A. Factual Background

66. WPX owns or operates oil and natural gas well production facilities on the Fort Berthold Indian Reservation in North Dakota.

67. Oil and water produced from these wells are stored in produced oil and produced water storage tanks. Produced oil storage tanks are kept at or near atmospheric pressure.

68. When pressurized oil is transferred to atmospheric storage tanks (a/k/a "storage vessels"), some of the hydrocarbons in the oil, including VOC and hazardous air pollutants, vaporize in a phenomenon known as "flashing." After flashing occurs, the oil continues to emit vapors due to liquid level changes and temperature fluctuations.

69. Vapors from storage tanks are captured and controlled through a series of pipes or vent lines that route vapors to a control device (e.g., enclosed combustor or flare). For purposes of this Notice of Violation, the term "vapor control system" refers to the vent and vent lines from a storage tank or group of connected storage tanks to a combustion device, and all connections, fittings, pressure relief devices (including thief hatches), and any other appurtenance used to contain and collect storage tank vapors, and to transport or convey the vapors to a control device.

70. A properly designed and well-maintained vapor control system ensures that VOC emissions are controlled by routing all VOC vapors from the oil storage tank through the closed vent system to a control device where VOC emissions are burned and destroyed at certain rates of efficiency.

71. An insufficiently designed or poorly maintained and operated vapor control system may result in VOC emissions from the vapor control system directly to atmosphere during normal operation. For example, thief hatches with seals that are worn, not properly seated, or improperly maintained may result in the vapor control system releasing VOC emissions directly to the atmosphere.

72. On February 25, 2021, the EPA issued WPX an information request (Information Request) pursuant to 42 U.S.C. § 7414(a).

73. The EPA's Information Request required WPX to submit data on the design of twenty-six oil and natural gas production facilities (Well Pads) located within the exterior boundaries of the Fort Berthold Indian reservation including, but not limited to, the following information: site-specific pressurized liquid sampling analyses, pressures, temperatures, pressure relief device settings, and production data for each tank system.

74. The EPA's Information Request also required WPX to submit a narrative description of WPX's operations and maintenance program.

75. On May 21, 2021, WPX submitted responses to the EPA's Information Request (Information Request Response).

76. On the dates listed for each identified oil and natural gas production facility in Table 1, WPX submitted Part 2 Registrations to the EPA that included potential to emit calculations utilizing data from the identified sample source:

**Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates**

| NOV Facility ID | Oil and Natural Gas Production Facility | Date of Part 2 Registration Submittal | Date of First Production (FDOP)* | Part 2 Registration Sample Date | Part 2 Registration Sample Source |
|---|---|---|---|---|---|
| 1 | Beaver 22-21H Pad | 4/13/2020 | 10/7/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 2 | Bird Bear 35-26H Pad | 2/21/2020 | 9/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 3 | Bison 27-34H Pad | 1/31/2020 | 10/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2- |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| | | | | | 13H and Patricia Charging 4-15H |
| 4 | Delores Sand 29-32H Pad | 9/18/2019 | 6/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 5 | Ethal Blackhawk 1-12H Pad | 5/7/2020 | 1/1/2020 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 6 | Good Voice 34-27H Pad | 3/22/2019 | 12/1/2018 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 7 | Grizzly Pad | 2/28/2019 | 9/1/2018 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| 8 | Joseph Eagle 19-18H Pad | 1/3/2019 | 5/1/2018 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 9 | Lawrence Bull Pad | 2/28/2019 | 12/1/2018 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 10 | Lead Woman Pad | 2/18/2019 | 11/1/2018 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 11 | Lion 18-19H Pad | 11/25/2019 | 7/1/2019 | 4/19/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| 12 | Minot Grady 26-35H Pad | 9/17/2019 | 5/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 13 | Nancy Dancing Bull 1-36H Pad | 4/7/2020 | 11/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 14 | North Mabel 2-35H Pad | 6/18/2019 | 3/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 15 | Pheasant 33-28H Pad | 5/7/2020 | 1/1/2020 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| 16 | Plenty Sweet Grass 18-19H Pad | 9/3/2019 | 1/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 17 | Rubia 16-24H Pad | 5/7/2020 | 2/1/2020 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 18 | Ruby 31-30H Pad | 9/18/2019 | 6/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 19 | Skunk Creek 23-14H Pad | 3/10/2020 | 12/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 20 | Spotted Horn #2 Pad | 11/25/2019 | 7/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| | | | | | (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 21 | St. Anthony 9-16H Pad | 10/22/2020 | 12/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 22 | Sweet Grass Woman 22-15H Pad | 10/7/2019 | 7/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 23 | White Owl 32-29H Pad | 4/7/2020 | 10/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 24 | Young Bird 34-27H Pad | 4/1/2019 | 1/1/2019 | 4/9/2013 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2- |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| | | | | | 13H and Patricia Charging 4-15H |
| 25 | Behr Pad | 12/17/2018 | 6/1/2018 | 09/13/2011 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well name: Dakota-3 Cross 2-13H and Patricia Charging 4-15H |
| 26 | Badlands Pad | 7/30/2019 | 5/1/2019 | 9/24/2010 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well Name: Pennington 16-15H and Van Hook 16-14H Averages |
| 27 | Mandan North Pad | 3/9/2018 | 3/1/2018 | 9/24/2010 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well Name: Pennington 16-15H and Van Hook 16-14H Averages |
| 28 | Raptor Pad | 1/25/2019 | 10/1/2018 | 9/24/2010 | Oil Tank with Separator, E&P Tank V2.0 Modeling Run (Low Pressure Oil); Well Name: |

| Table 1. Oil and Natural Gas Production Facility Part 2 Registration Pressurized Liquid Sample Source and Dates | | | | | |
|---|---|---|---|---|---|
| **NOV Facility ID** | **Oil and Natural Gas Production Facility** | **Date of Part 2 Registration Submittal** | **Date of First Production (FDOP)*** | **Part 2 Registration Sample Date** | **Part 2 Registration Sample Source** |
| | | | | | Pennington 16-15H and Van Hook 16-14H Averages |
| 29 | Howling Wolf Production Pad | 8/5/2019 | 10/1/2018 | 4/9/2013 | Treater; Mandaree 30-31HW (FDOP 12/1/2014) |
| 30 | Maggie Old Dog Pad | 12/15/2017 | 4/1/2012 | 8/19/2017 | Treater; Mandaree 30-31HW (FDOP 12/1/2014) |

*First Date of Production (FDOP) as reported by Enverus (Drilling Info)

77. WPX derived oil storage tank flash gas VOC weight percentages, VOC molecular weights, and flash gas emission factors from each Part 2 Registration sample source listed in Table 1, above, and utilized the results as inputs in its Part 2 Registration VOC potential to emit (PTE) calculations. None of the source samples were specific to the Well Pads that were the subject of WPX's Part 2 Registrations to the EPA. WPX did not submit any additional documentation or support for the use of these source samples for the Part 2 Registrations.

78. Table 2, below, compares WPX's VOC PTE inputs from non-site-specific pressurized liquid samples to the State of North Dakota's oil storage default emission factors for VOC weight percentage, VOC molecular weight, and flash gas:

| Table 2. Oil Storage Tank Flash Gas PTE Calculations Input Comparison with North Dakota Default Emission Factors | | | |
|---|---|---|---|
| **Date and Location of Site-Specific Testing** | **VOC Weight Percentage** | **VOC Molecular Weight** | **Flash Gas Factor** |
| State of North Dakota Default Factors | 79.80% | 45.19 lb/lb-mol | 97.91 scf/bbl |
| Pennington 16-15H and Van Hook 16-14H on 9/24/2010 | 77.29% | 41.99 lb/lb-mol | 39.10 scf/bbl 41.57 scf/bbl |
| Dakota-3 Cross 2-13H and Patricia Charging 4-15H 9/13/2011 | 73.42% | 40.93 lb/lb-mol | 39.1 scf/bbl |
| Dakota-3 Cross 2-13H and Patricia Charging 4-15H on 4/9/2013 | 73.42% | 40.93 lb/lb-mol | 39.1 scf/bbl |
| Mandaree 30-31HW on 8/19/2017 | 73.42% | 40.93 lb/lb-mol | 30 scf/bbl |

79. The EPA calculated each of the Well Pads' PTE VOCs listed in Table 3, below, utilizing the State of North Dakota default emission factors. Table 3 compares the EPA's VOC PTE calculations and WPX's VOC PTE calculations submitted in its Part 2 Registrations:

**Table 3. Comparison of Potential to Emit VOC Calculations**

| Facility Name | Date of Registration | WPX's VOC Emission Estimates in Part 2 Registrations (utilizing non-site specific inputs) | EPA's VOC Emission Estimates (utilizing North Dakota default storage tank inputs) |
|---|---|---|---|
| Alfred Old Dog Pad | 12/15/2017 | 248.38 | 521.13 |
| Badlands Pad | 7/30/2019 | 257.36 | 225.95 |
| Bearstail Pad | 12/15/2017 | 248.77 | 502.97 |
| Beaver 22-21H Pad | 4/13/2020 | 248.95 | 318.54 |
| Behr Pad | 12/17/2018 | 249.15 | 392.20 |
| Benson 16-3H Pad | 2/21/2020 | 99.02 | 109.43 |
| Bird Bear 35-26H Pad | 2/21/2020 | 248.86 | 369.16 |
| Bison 27-34H Pad | 1/31/2020 | 248.95 | 284.21 |
| Delores Sand 29-32H Pad | 9/18/2019 | 234.96 | 313.90 |
| Dora Smith 5-8H Pad | 12/3/2019 | 245.03 | 249.87 |
| Ethal Blackhawk 1-12H Pad | 5/7/2020 | 249.00 | 232.76 |
| Etstatis Pad | 11/22/2017 | 248.86 | 452.97 |
| Fox 14-8H Pad | 3/5/2018 | 7.71 | 9.30 |
| Good Voice 34-27H Pad | 3/22/2019 | 249.29 | 384.70 |
| Grizzly Pad | 2/28/2019 | 249.39 | 481.60 |
| Hidatsa North Pad | 1/2/2019 | 115.33 | 215.79 |
| Howling Wolf Production Pad | 8/5/2019 | 693.23 | 856.75 |
| Joseph Eagle 19-18H Pad | 1/3/2019 | 249.87 | 236.50 |
| KYW 27-34H Pad | 2/21/2020 | 98.95 | 116.09 |
| Lawrence Bull Pad | 2/28/2019 | 248.99 | 297.59 |
| Lead Woman Pad | 2/18/2019 | 249.27 | 282.36 |
| Lion 18-19H Pad | 11/25/2019 | 248.21 | 409.45 |
| Mabel Levings 14-23H Pad | 12/17/2019 | 174.50 | 208.64 |
| Maggie Old Dog Pad | 12/15/2017 | 248.60 | 539.31 |
| Mandan North Pad | 3/9/2018 | 172.09 | 476.45 |
| Mary R Smith 5-8H Pad | 12/2/2019 | 244.94 | 252.96 |
| Minot Grady 26-35H Pad | 9/17/2019 | 234.80 | 428.77 |
| Nancy Dancing Bull 1-36H Pad | 4/7/2020 | 244.92 | 258.18 |
| North Mabel 2-35H Pad | 6/18/2019 | 236.94 | 349.72 |
| Otter Woman Drilling Pad | 9/4/2019 | 23.32 | 23.32 |
| Paul Peter Coffee 35H Pad | 3/10/2020 | 98.99 | 103.76 |
| Pheasant 33-28H Pad | 5/7/2020 | 248.97 | 316.62 |

| Table 3. Comparison of Potential to Emit VOC Calculations | | | |
|---|---|---|---|
| **Facility Name** | **Date of Registration** | **WPX's VOC Emission Estimates in Part 2 Registrations (utilizing non-site specific inputs)** | **EPA's VOC Emission Estimates (utilizing North Dakota default storage tank inputs)** |
| Plenty Sweet Grass 18-19H Pad | 9/3/2019 | 234.95 | 343.72 |
| Raptor Pad | 1/25/2019 | 249.16 | 222.73 |
| Rubia 16-24H Pad | 5/7/2020 | 248.96 | 286.76 |
| Ruby 31-30H Pad | 9/18/2019 | 234.81 | 320.20 |
| Skunk Creek 23-14H Pad | 3/10/2020 | 248.88 | 388.46 |
| Spotted Horn #2 Pad | 11/25/2019 | 244.98 | 372.08 |
| Spotted Horn 26-35H Pad | 3/10/2020 | 98.93 | 115.74 |
| St. Anthony 9-16H Pad | 10/22/2020 | 248.95 | 387.83 |
| Sweet Grass Woman 22-15H Pad | 10/7/2019 | 244.97 | 316.31 |
| Victor Elk 32-29H Pad | 3/1/2018 | 6.62 | 16.84 |
| White Owl 32-29H Pad | 4/7/2020 | 248.92 | 208.24 |
| Young Bird 34-27H Pad | 4/1/2019 | 237.01 | 295.31 |

## B. Findings of Violation

### i. Violations of the New Source Performance Standards OOOOa and the Fort Berthold Indian Reservation Federal Implementation Plan

80. The EPA's Information Request required WPX to submit data about the design, operation, and maintenance of 26 Well Pads located within the exterior boundaries of the Fort Berthold Indian Reservation.

81. WPX's Information Request Response was analyzed by the EPA to determine whether each of WPX's 26 Well Pads' closed vent systems were designed to route all produced natural gas emissions to a natural gas sales pipeline or a control device. *See* 40 C.F.R. §§ 49.4165(b)(1)-(3).

82. Based on well production data reported to the North Dakota Industrial Commission (NDIC), the storage vessels at the following WPX oil and natural gas production facilities are subject to the requirements for storage vessel affected facilities in NSPS OOOOa: Lawrence Bull 1-12H, Plenty Sweet Grass 18-19H, Spotted Horn 26-35H, Blue Racer 14-11H, Saint Anthony 9-16H, Mandaree Warrior 14-11H, White Owl 32-29H, Bird Bear 35-26H, and Lion 18-19H.

83. WPX reported storage vessel affected facilities at the Lawrence Bull 1-12H, Plenty Sweet Grass 18-19H, Spotted Horn 26-35H, Blue Racer 14-11H, Saint Anthony 9-16H, Mandaree Warrior 14-11H, White Owl 32-29H, Bird Bear 35-26H, and Lion 18-19H Well Pads in its 2018 and 2019 NSPS OOOOa annual reports.

84. At the following nine of 26 Well Pads that the EPA analyzed from the Information Request Response, the EPA determined that pressures within the closed vent system exceeded its capacity to route all emissions to a control device during the following months:

**Table 4. Undersized Vapor Control Systems as per EPA Analysis**

| Row | Well Pad Name | Dates of Initial Production | Months of Venting | Month(s) of Violation |
|---|---|---|---|---|
| 1 | Lawrence Bull 1-12H | 12/1/2018 | December 2018 | 1 |
| 2 | Plenty Sweet Grass 18-19H | First well 1/1/2012<br>Additional 2 wells 1/1/2018<br>Additional 1 well 2/1/2019 | February 2019 | 1 |
| 3 | Spotted Horn 26-35H | First well 1/1/2012<br>Additional 3 wells 7/1/2019 | August 2019 | 1 |
| 4 | Blue Racer 14-11H | All four wells 3/1/2020 | March 2020<br>April 2020 | 2 |
| 5 | Saint Anthony 9-16H | All eight wells 12/1/2019 | December 2019<br>January 2020 | 2 |
| 6 | Mandaree Warrior 14-11H | First well 5/1/2012<br>Additional one well 2/1/2020<br>Additional three wells 3/1/2020 | March 2020 | 1 |
| 7 | White Owl 32-29H | 10/1/2019 | October 2019<br>November 2019 | 2 |
| 8 | Bird Bear 35-26H | 9/1/2019 | September 2019<br>October 2019<br>November 2019<br>December 2019 | 4 |
| 9 | Lion 18-19H | First well 9/1/2012<br>Additional seven wells on 7/1/2019 | August 2019<br>September 2019<br>November 2019 | 3 |

85. Based upon the EPA's review of the Information Request Response, at the nine Well Pads listed in Table 4, above, WPX violated and continues to violate the closed vent system requirements 40 C.F.R. § 60.5411a(c) because the closed vent systems were not designed to route all gases, vapors, and fumes emitted from the material of the storage vessel to a control device that meets the requirements specified in § 60.5411a(c).

86. By failing to comply with the storage vessel closed vent system requirements of 40 C.F.R. § 60.5411a(c), WPX violated and continues to violate the VOC standards for storage vessel affected facilities at 40 C.F.R. § 60.5395a(b)(1).

87. WPX's Information Request Response included data on operation and maintenance of WPX's storage vessels. In Table 5, below, WPX reported the following emissions observations from storage tank covers or pressure relief devices:

**Table 5. WPX Reported Emissions Observations from Fort Berthold FIP Regulated Tank Systems**

| Number | Tank System Name | Component with Emissions Observation | Number of Days of Violation |
|---|---|---|---|
| 1 | Bear Den 24-13H2 | Thief Hatch-2 | 25 |
| 2 | Bear Den 24-13H2 | Thief Hatch-3 | 25 |
| 3 | Bear Den 24-13H2 | Thief Hatch-4 | 25 |
| 4 | Benson 16-3H | Thief Hatch-2 | 25 |
| 5 | Benson 16-3H | Thief Hatch-5 | 25 |
| 6 | Buffalo 1-36h | Thief Hatch-1 | 1 |
| 7 | Fettig 6-7h | Thief Hatch | 27 |
| 8 | Fox 14-8H | Thief Hatch | 1 |
| 9 | Joseph Eagle 2-19H Pad | Thief Hatch-1 | 22 |
| 10 | Joseph Eagle 2-19H Pad | Thief Hatch-3 | 22 |
| 11 | Joseph Eagle 2-19H Pad | Thief Hatch-4 | 22 |
| 12 | Linseth 13-12h Pad | Thief Hatch-1 | 27 |
| 13 | Linseth 13-12h Pad | Thief Hatch-3 | 27 |
| 14 | Martin Fox 20-17H Pad | Thief Hatch | 1 |
| 15 | Mason 2-11h Pad | Thief Hatch | 21 |
| 16 | Morsette 35-26H Pad | Thief Hatch | 27 |
| 17 | Roggenbuck 4-9H Pad | Thief Hatch | 1 |
| 18 | Spotted Horn 26-35H Pad | Thief Hatch-1 | 18 |
| 19 | Spotted Horn 26-35H Pad | Thief Hatch-2 | 18 |
| 20 | Wolf 27-34H Pad | HD SW Thief Hatch | 10 |
| 21 | Wolf 27-34H Pad | HW SW Thief Hatch | 10 |
| 22 | Dora Smith 5-8H | Pressure Relief Valve | 25 |

88. Each observation of emissions from a thief hatch located on tank systems in Table 5 (rows 1-21) above, is a violation of the requirement that "[e]ach cover and all openings on the cover shall form a continuous impermeable barrier over the entire surface areas of the produced oil and produced water in the storage tank." 40 C.F.R. § 49.4165(a)(1).

89. Each observation of emissions from a thief hatch located on tank systems in Table 5 (rows 1-21), above, is a violation of the requirement that each "cover opening shall be secured

in a closed, seated positions (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed" unless an exception applies. *Id.* at § 49.4165(a)(2).

90. Each observation of emissions from a thief hatch located on tank systems in Table 5 (rows 1-21), above, is a violation of the requirement that "[e]ach thief hatch shall be weighted and properly seated." *Id.* at § 49.4165(a)(3).

91. The observation of emissions from the pressure relief valve (PRV) located at Dora Smith 5-8H listed in row 22 of Table 5, above, is a violation of the requirement that "[e]ach PRV shall be set to release at a pressure that will ensure that natural gas emissions are routed through the closed-vent system to the vapor recovery system, the enclosed combustor, or the utility flare during normal operation conditions." *Id.* at § 49.4165(a)(4).

92. Each observation of emissions from a pressure relief device (either thief hatch or PRV) from tank systems in Table 5 (rows 1-22), above, is a violation of the requirement that "[e]ach closed vent system must route all produced natural gas and natural gas emissions from production and storage operations to the natural gas sales pipeline or the control devices required by paragraph (a) of this section." *Id*. at § 49.4165(b)(1).

93. Each observation of emissions from a thief hatch located on tank systems in Table 5 (rows 1-22), above, is a violation of the requirement that "all vent lines, connections, fittings, valves, relief vales, or any other appurtenance employed to contain and collect natural gas, vapor, and fumes and transport them to a natural gas sales pipeline and any VOC control equipment must be maintained and operated properly at all times. *Id*. at § 49.4165(b)(2).

94. WPX's Information Request Response included data on operation and maintenance of WPX's storage vessels. In Table 6, below, WPX reported the following emissions observations from tank systems subject to NSPS OOOOa:

**Table 6. WPX Reported Emissions Observations from Storage Vessel Affected Facilities Subject to NSPS OOOOa**

| Number | Tank System/Well Pad Name | Component with Emissions Observation | Number of Days of Violation |
|---|---|---|---|
| 1 | Beaks 36-35h | Thief Hatch | 20 |
| 2 | Beaks 36-35h | Thief Hatch | 20 |
| 3 | Caribou 33-34 | Thief Hatch | 28 |
| 4 | Helena Ruth Grant 33-34H | Thief Hatch | 25 |
| 5 | Helena Ruth Grant 33-34H | Thief Hatch | 28 |
| 6 | Lead Woman 23-14H Pad | Thief Hatch | 27 |
| 7 | Lead Woman 23-14H Pad | Thief Hatch | 27 |
| 8 | Plenty Sweetgrass 18-19H Pad | Thief Hatch | 28 |
| 9 | Plenty Sweetgrass 18-19H Pad | Thief Hatch | 28 |

| Table 6. WPX Reported Emissions Observations from Storage Vessel Affected Facilities Subject to NSPS OOOOa | | | |
|---|---|---|---|
| **Number** | **Tank System/Well Pad Name** | **Component with Emissions Observation** | **Number of Days of Violation** |
| 10 | Plenty Sweetgrass 18-19H Pad | Thief Hatch | 28 |
| 11 | Plenty Sweetgrass 18-19H Pad | Thief Hatch | 28 |
| 12 | Rachel Wolf Pad | Thief Hatch | 18 |
| 13 | Rachel Wolf Pad | Thief Hatch | 18 |
| 14 | Rachel Wolf Pad | Thief Hatch | 18 |
| 15 | Rachel Wolf Pad | Thief Hatch | 18 |
| 16 | Rachel Wolf Pad | Thief Hatch | 18 |
| 17 | Spotted Horn 26-35H Expansion Pad | Thief Hatch | 18 |
| 18 | Victor Elk 32-29 Pad | Thief Hatch | 28 |
| 19 | Victor Elk 32-29 Pad | Thief Hatch | 28 |
| 20 | Victor Elk 32-29 Pad | Thief Hatch | 28 |
| 21 | White Owl 32-29H Pad | Thief Hatch | 7 |
| 22 | Wolf Chief 27-34H Pad | Thief Hatch | 14 |
| 23 | Wolf Chief 27-34H Pad | Thief Hatch | 14 |
| 24 | Wolf Chief 27-34H Pad | Thief Hatch | 14 |
| 25 | Wolf Chief 27-34H Pad | Thief Hatch | 14 |
| 26 | Wolf Chief 27-34H Pad | Thief Hatch | 14 |
| 27 | Wolverine Pad | Thief Hatch | 1 |
| 28 | Young Bird 34-27H Pad | Thief Hatch | 1 |
| 29 | Helena Ruth Grant 33-34H | Bull Plugs | 14 |
| 30 | Helena Ruth Grant 33-34H | Pressure Relief Valve | 14 |

95. Each of the 30 observations of emissions from the thief hatches, pressure relief valves, or bull plugs above in Table 6, above, is a violation of each of the following requirements because all vapors were not routed to the control device:

a. The cover and all openings on the cover (e.g., access hatches and pressure relief valves) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel. 40 C.F.R. § 60.5411a(b)(1).

b. Each cover opening must be secured in a closed, sealed position whenever material is in the unit, except during those times specified in 40 C.F.R. § 60.5411(b)(2)(i)–(iv). *Id.* at § 60.5411a(b)(2).

c. Each storage vessel thief hatch must be equipped, maintained and operated with a weighted mechanism or equivalent, to ensure that the lid remains properly seated and

sealed under normal operating conditions, including such times when working, standing/breathing, and flash emissions may be generated. *Id.* at § 60.5411a(b)(3).

d. Storage vessel closed vent system requirements of 40 C.F.R. § 60.5411a(c) because the closed vent systems are not designed to route all gases, vapors, and fumes from the material in the storage vessel to a control device that meets the requirements specified in § 60.5412a(c) and (d), or to a process as required by 40 C.F.R. § 60.5411a(c)(1), and the closed vent systems are not designed and operated with no detectable emissions as determined using OVA or optical gas imaging inspections, as required by 40 C.F.R. § 60.5411a(c)(2).

e. Failure to comply with the storage vessel closed vent system requirements of 40 C.F.R. § 60.5411a(c)(2), is a violation of the VOC standards for storage vessel affected facilities at 40 C.F.R. § 60.5395a(b)(1).

96. Each of the violations alleged in Paragraphs 94-96 are violations of section 111 of the Act, 42 U.S.C. § 7411(e).

**ii. <u>Violations of 40 C.F.R. Part 49.150-160—Federal Minor New Source Review Program in Indian Country</u>**

97. Each of the oil and natural gas production facilities listed in Table 1, above, are "stationary sources" owned and operated by WPX.

98. Each of the oil and natural gas production facilities are located within the exterior boundaries of the Fort Berthold Indian Reservation and therefore, are in Indian country. *See* 18 U.S.C. § 1151.

99. WPX submitted Part 2 Registrations to the EPA that included PTE estimates calculated on the dates provided in Table 1.

100. Under 40 C.F.R. § 49.160(a), only owners and operators of true minor sources shall submit a Part 2 Registration.

101. Under 40 C.F.R. § 49.160(c)(3)(iii), "the emission estimates submitted to the reviewing authority must be verifiable using currently accepted engineering criteria."

102. Pursuant to 40 C.F.R. § 49.160(c)(3)(iii)(i)-(v), WPX submitted VOC emissions estimates for each Well Pad identified on Table 1 that did not meet the following emission estimate criteria:

a. source specific emission tests from the Well Pad submitted for registration,

b. mass balance calculations,

c. published, verifiable emission factors that are applicable to the source,

d. other engineering calculations, or

e. other procedures to estimate emissions specifically approved by the Regional Administrator.

103. On the dates identified on Table 1, above, WPX submitted PTE estimates for 28 Well Pads based on unsupported data from pressurized liquid samples that cannot be not verified by using currently accepted engineering criteria, in violation of 40 C.F.R. § 49.160(c)(3)(iii)(i)-(v).

104. The use of unsupported data in its emission calculations improperly reduced WPX's PTE VOC emissions to below the major stationary source thresholds, as described in the Sections II.B(iii)-(iv) (Violations of Pre-Construction Permit Requirements and Title V Permitting Violations), below.

105. Except for the Mandan North Pad and Viktor Elk 32-29H Pad, for each of the Well Pads listed in Table 1, above, WPX submitted Part 2 Registrations to the EPA more than 60 days after startup, in violation of 40 C.F.R §49.160(c)(iv).

### iii. Violations of Pre-Construction Permit Requirements

106. For each Well Pad identified in Table 7, below, the EPA recalculated the source's potential to emit VOCs utilizing the default emission factors establishes by the State of North Dakota, as the calculations WPX submitted did not meet the requirements of 40 C.F.R. § 49.160(c)(3)(iii)(i)-(v).

**Table 7. WPX Well Pads with Potential to Emit VOC Emissions Greater than 250 TPY**

| Well Pad Number | Well Pad Name | Date of Registration | EPA's VOC Emission Estimates (utilizing North Dakota default storage tank inputs) |
|---|---|---|---|
| 1 | Alfred Old Dog Pad | 12/15/2017 | 521.13 |
| 2 | Bearstail Pad | 12/15/2017 | 502.97 |
| 3 | Beaver 22-21H Pad | 4/13/2020 | 318.54 |
| 4 | Behr Pad | 12/17/2018 | 392.20 |
| 5 | Bird Bear 35-26H Pad | 2/21/2020 | 369.16 |
| 6 | Bison 27-34H Pad | 1/31/2020 | 284.21 |
| 7 | Delores Sand 29-32H Pad | 9/18/2019 | 313.90 |
| 8 | Etstatis Pad | 11/22/2017 | 452.97 |
| 9 | Good Voice 34-27H Pad | 3/22/2019 | 384.70 |
| 10 | Grizzly Pad | 2/28/2019 | 481.60 |
| 11 | Howling Wolf Production Pad | 8/5/2019 | 856.75 |
| 12 | Lawrence Bull Pad | 2/28/2019 | 297.59 |
| 13 | Lead Woman Pad | 2/18/2019 | 282.36 |
| 14 | Lion 18-19H Pad | 11/25/2019 | 409.45 |
| 15 | Maggie Old Dog Pad | 12/15/2017 | 539.31 |
| 16 | Mandan North Pad | 3/9/2018 | 476.45 |

| Table 7. WPX Well Pads with Potential to Emit VOC Emissions Greater than 250 TPY | | | |
|---|---|---|---|
| **Well Pad Number** | **Well Pad Name** | **Date of Registration** | **EPA's VOC Emission Estimates (utilizing North Dakota default storage tank inputs)** |
| 17 | Mary R Smith 5-8H Pad | 12/2/2019 | 252.96 |
| 18 | Minot Grady 26-35H Pad | 9/17/2019 | 428.77 |
| 19 | Nancy Dancing Bull 1-36H Pad | 4/7/2020 | 258.18 |
| 20 | North Mabel 2-35H Pad | 6/18/2019 | 349.72 |
| 21 | Pheasant 33-28H Pad | 5/7/2020 | 316.62 |
| 22 | Plenty Sweet Grass 18-19H Pad | 9/3/2019 | 343.72 |
| 23 | Rubia 16-24H Pad | 5/7/2020 | 286.76 |
| 24 | Ruby 31-30H Pad | 9/18/2019 | 320.20 |
| 25 | Skunk Creek 23-14H Pad | 3/10/2020 | 388.46 |
| 26 | Spotted Horn #2 Pad | 11/25/2019 | 372.08 |
| 27 | St. Anthony 9-16H Pad | 10/22/2020 | 387.83 |
| 28 | Sweet Grass Woman 22-15H Pad | 10/7/2019 | 316.31 |
| 29 | Young Bird 34-27H Pad | 4/1/2019 | 295.31 |

107. Under 40 C.F.R. § 52.21(b)(1)(i)(b), a "major stationary source" is defined to include "any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant."

108. Each Well Pad listed in Table 7 has the potential to emit estimates greater than 250 tons per year of VOCs.

109. WPX constructed each of the 29 major stationary sources identified in Table 7, above, without first obtaining a PSD permit for the construction and operation of the source.

110. At each of the 29 major stationary sources identified in Table 7, above, WPX undertook such construction of each major stationary source without undergoing a BACT determination in connection with the construction.

111. WPX undertook the construction of 29 major stationary sources identified in Table 7, above, without installing BACT for the control of VOC emissions.

112. WPX failed to operate BACT for the control of VOC emissions in compliance with BACT limitations at the 29 major stationary sources identified in Table 7, above.

113. Each of the violations alleged in Paragraphs 106-112 are violations at 29 separate facilities of section 165(a) of the Act, 42 U.S.C. § 7475(a) and the federal PSD regulations at 40 C.F.R. § 52.21.

### iv. Title V Permitting Violations

114. As the calculation inputs WPX utilized in its Title V Permit application were not supported, the EPA also calculated WPX's actual emission estimates utilizing North Dakota State default emissions factors and data from WPX's self-reported initial 12-months of production as provided to the North Dakota Industrial Commission ("NDIC"). The EPA's actual emission estimates of VOCs at each Well Pad are listed in Table 8, below:

**Table 8. Actual VOC Emissions from Storage Tanks and Treater Flare During the First 12-Months of Production**

| Well Pad Number | Well Pad Name | Actual Emission Estimates of Well Pad | First Date Of Production (New or Modified Production) | Title V Application Date |
|---|---|---|---|---|
| 1 | Hidatsa North Pad | 718.14 | 8/1/2018 | 7/10/2019 |
| 2 | Etstatis Pad | 530.09 | 6/1/2017 | 8/30/2018 |
| 3 | Mandan North Pad | 439.54 | 3/1/2018 | 7/18/2019 |
| 4 | Grizzly Pad | 437.26 | 3/1/2017 | 10/8/2018 |
| 5 | Bird Bear 35-26H Pad | 388.12 | 9/1/2019 | 1/29/2021 |
| 6 | Lion 18-19H Pad | 384.37 | 10/1/2018 | Not Submitted |
| 7 | Howling Wolf Production Pad | 354.95 | 7/1/2019 | Not Submitted |
| 8 | Lead Woman Pad | 324.57 | 11/1/2018 | 5/1/2020 |
| 9 | Young Bird 34-27H Pad | 316.87 | 1/1/2019 | 9/2/2020 |
| 10 | Plenty Sweet Grass 18-19H Pad | 313.24 | 1/1/2019 | 7/22/2020 |
| 11 | Delores Sand 29-32H Pad | 268.25 | 6/1/2019 | 11/17/2020 |
| 12 | Sweet Grass Woman 22-15H Pad | 262.18 | 7/1/2019 | Not Submitted |
| 13 | St. Anthony 9-16H Pad | 246.19 | 12/1/2019 | 4/7/2022 |
| 14 | Raptor Pad | 241.26 | 10/1/2018 | 3/18/2020 |
| 15 | Otter Woman Drilling Pad | 232.16 | 7/1/2018 | Not Submitted |
| 16 | Minot Grady 26-35H Pad | 228.09 | 5/1/2019 | Not Submitted |
| 17 | Good Voice 34-27H Pad | 209.17 | 12/1/2018 | 11/23/2020 |
| 18 | Behr Pad | 205.97 | 6/1/2018 | Not Submitted |
| 19 | Mary R Smith 5-8H Pad | 172.10 | 12/1/2013 | Not Submitted |
| 20 | Rubia 16-24H Pad | 160.51 | 2/1/2020 | 2/23/2022 |
| 21 | Lawrence Bull Pad | 160.21 | 12/1/2018 | 8/8/2020 |
| 22 | Beaver 22-21H Pad | 148.21 | 10/1/2019 | Not Submitted |
| 23 | North Mabel 2-35H Pad | 147.92 | 3/1/2019 | Not Submitted |
| 24 | Joseph Eagle 19-18H Pad | 144.50 | 5/1/2018 | 9/18/2021 |
| 25 | Skunk Creek 23-14H Pad | 142.93 | 1/1/2020 | 3/3/2022 |
| 26 | Pheasant 33-28H Pad | 142.29 | 1/1/2020 | 10/6/2021 |

| Table 8. Actual VOC Emissions from Storage Tanks and Treater Flare During the First 12-Months of Production | | | | |
|---|---|---|---|---|
| **Well Pad Number** | **Well Pad Name** | **Actual Emission Estimates of Well Pad** | **First Date Of Production (New or Modified Production)** | **Title V Application Date** |
| 27 | Bison 27-34H Pad | 136.28 | 10/1/2019 | Not Submitted |
| 28 | Alfred Old Dog Pad | 134.65 | 3/1/2014 | Not Submitted |
| 29 | White Owl 32-29H Pad | 129.06 | 10/1/2019 | 8/18/2021 |
| 30 | Nancy Dancing Bull 1-36H Pad | 126.44 | 11/1/2019 | 4/7/2022 |
| 31 | Spotted Horn 26-35H Pad | 125.81 | 7/1/2019 | 10/12/2021 |

115. As provided in Table 8, above, WPX owns and operates Well Pads with actual emissions or PTE with greater than 100 tons per year of VOC.

116. Section 302 of the Act, 42 U.S.C. § 7602, defines "major stationary source" as any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator).

117. As provided in Table 8, above, WPX owns and operates 31 Well Pads with actual emissions or with the potential to emit greater than 100 tons per year of VOC.

118. Under 40 C.F.R. § 71.5(a)(1), a timely and complete application must be submitted within 12 months after the source becomes subject to the permit program.

119. To date, WPX has not filed an application with the EPA for Title V permits at 11 of the Well Pads identified in Table 8, above, as identified in the "Title V Application Date" column as "Not Submitted."

120. WPX failed to submit 20 Title V Permits to the EPA within 12 months after the sources became subject to the permit program.

121. WPX failed to file a timely application for a Title V permit for all 31 Well Pads identified in Table 8, and therefore, violated or continues to violate Sections 502(a), 503(c), and 504(a) of the Act, 42 U.S.C. §§ 7661a(a), 7661b(c), and 7661c(a), and the Title V implementing regulations at 40 C.F.R. part 71.

## III. ENFORCEMENT AUTHORITY

122. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement of prohibition of an applicable implementation plan, the Administrator may issue an order requiring such person comply with the requirements or prohibition of such plan, issue an administrative penalty order in accordance

with section 113(d) of the Act, or bring a civil action in accordance with section 113(b) of the Act for injunctive relief or civil penalties.

123. The issuance of this Notice of Violation does not in any way limit or preclude the EPA from pursuing additional enforcement options concerning inspections or review referenced in this Notice of Violation. This Notice of Violation does not preclude enforcement action for violations not specifically addressed in this Notice of Violation.

SUZANNE BOHAN

Digitally signed by SUZANNE BOHAN
Date: 2022.07.22 10:07:55 -06'00'

Date Issued: ____July 22, 2022_____

Suzanne J. Bohan, Director
Enforcement and Compliance Assurance Division