

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

April 7, 2020
10:25 AM

Received by

IN THE MATTER OF:

**WPX Energy, Inc.
3500 One Williams Center
Tulsa, Oklahoma
74172**

NOTICE OF VIOLATION

EPA Region VIII

Docket No. CAA-08-2020-0006 Hearing Clerk

Proceedings Pursuant to
the Clean Air Act,
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 Federal Implementation Plan for Oil and Natural Gas Well Production Facilities; Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota (Fort Berthold FIP), 40 C.F.R. §§ 49.4161–4168, at oil and natural gas production facilities located on the Fort Berthold Indian Reservation (Fort Berthold). EPA also allege that WPX has violated or is violating 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 located on the Fort Berthold.

I. STATUTORY AND REGULATORY BACKGROUND

1. The Clean Air 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. The Act directs the EPA to identify air 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.” 42 U.S.C. § 7408.

3. The Act requires the EPA to establish national ambient air quality standards (NAAQS) for criteria pollutants. 42 U.S.C. § 7409.

4. Ground-level ozone, is one of six criteria pollutants for which the EPA has promulgated NAAQS, due to its adverse effects on human health and the environment.

5. Ozone is not emitted directly from sources of air pollution. Ozone is a photochemical oxidant, formed when volatile organic compounds (VOC) 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. The Administrator may under Section 301(a) and 301(d)(4) of the Act, 42 U.S.C. §§ 7601(a), (d)(4), promulgate a Federal implementation plan to protect tribal air resources. *See also* 40 C.F.R. 49.11(a).

40 C.F.R. Part 49, Subpart K—Fort Berthold FIP

7. 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. 78 Fed. Reg. 17,836 (Mar. 22, 2013).

8. 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).

9. 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.* § 49.4161(c).

10. 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.* § 49.4163(a)(11).

11. 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).

12. The Fort Berthold FIP also requires each owner or operator of an oil and natural gas production facility to submit an annual report to the EPA on August 15th of every year. *Id.* § 49.4168(b). The report must include “[a] summary of cases where construction or operation was not performed in compliance with the requirements specified in §49.4164, §49.4165, or §49.4166 for each oil and natural gas well at each oil and natural gas production facility, and the corrective measures taken.” *Id.* § 49.4168(b)(4)(iii).

New Source Performance Standards

13. 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).

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

15. 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).

16. 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).

17. 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).

40 C.F.R. Part 60, Subpart OOOOa

18. 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).¹

19. 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).

20. 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.

21. A “storage vessel affected facility” under NSPS OOOOa includes a single storage vessel that has the potential for VOC emissions equal to or greater than 6 tons per year (“tpy”) as

¹ Following promulgation of the 2016 final rule, the EPA granted reconsideration of fugitive emission requirements at well sites and compressor stations, well-site pneumatic pump standards, and the requirements for professional engineer certification of closed vent systems. 82 Fed. Reg. 25,730 (June 5, 2017); 83 Fed. Reg. 52,056 (Oct. 15, 2018).

calculated in accordance with 40 C.F.R. § 60.5365a(e).

22. 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).

23. 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). 40 C.F.R. § 60.5395a(b)(1).

24. 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. 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). 40 C.F.R. § 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. 40 C.F.R. § 60.5411a(b)(3).

25. 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. 40 C.F.R. § 60.5411a(c)(1).

b. Design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections. 40 C.F.R. § 60.5411a(c)(2).

26. 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%. 40 C.F.R. § 60.5395a(a)(2).

b. Ensure each enclosed combustion device is maintained in a leak free condition. 40 C.F.R. §§ 60.5412a(d)(1)(i), 60.5413a(e)(7).

c. Install and operate a continuous burning pilot flame. 40 C.F.R. §§ 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. 40 C.F.R. §§ 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. 40 C.F.R. §§ 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. 40 C.F.R. § 5412a(d)(4).

27. 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 40 C.F.R. §§60.520(b)(6)(i)-(vii).

II. FACTUAL BACKGROUND & FINDINGS OF VIOLATION

Factual Background

28. WPX owns or operates 315 oil and natural gas wells (104 oil and natural gas production facilities) on the Fort Berthold in North Dakota, according to WPX's 2018 Fort Berthold FIP Annual Report submitted to the EPA, dated August 12, 2019.

29. 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.

30. When pressurized oil is transferred to atmospheric storage tanks, 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.

31. Vapors from storage tanks are captured and controlled through a series of pipes or vent lines that route vapors to a combustion device. For purposes of this Notice of Violation, the term "vapor control system" refers to the 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.

Fort Berthold FIP Annual Reports

32. In its annual Fort Berthold FIP report for calendar year 2015 (dated August 8, 2016), WPX reported cases where operation was not performed in compliance with the requirements specified in 40 C.F.R. §§ 49.4164 -.1465 and § 49.4165 at oil and natural gas production facilities .

33. In its annual Fort Berthold FIP report for calendar year 2016 (dated August 1, 2017), WPX reported cases where operation was not performed in compliance with the requirements specified in 40 C.F.R. §§ 49.4164 -.1465 at oil and natural gas production facilities.

34. In its annual Fort Berthold FIP report for calendar year 2017 (dated August 10, 2018), WPX reported cases where operation was not performed in compliance with the requirements specified in 40 C.F.R. §§ 49.4164 -.1465 at oil and natural gas production facilities.

35. In its annual Fort Berthold FIP report for calendar year 2018 (dated August 12, 2019), WPX reported cases where operation was not performed in compliance with the requirements specified in 40 C.F.R. §§ 49.4164 -.1465 at oil and natural gas production facilities.

36. On October 8, 2019, the EPA conducted onsite inspections for compliance with the Fort Berthold FIP at ten WPX oil and natural gas production facilities. Using an IR camera, the EPA observed vapor control systems at seven of the ten facilities were emitting vapors directly to the atmosphere. Oil and natural gas production facilities where emissions were observed are listed on Appendix A- Table 1.

37. The oil and natural gas production facilities the EPA inspected in October 2019, are associated with one or more oil and natural gas wells for which completion or recompletion operations were performed after August 12, 2007, and are therefore subject to the requirements of the Fort Berthold FIP.

38. The EPA issued WPX a Partial Compliance Evaluation Report dated October 29, 2019, for findings observed during the October 8th inspection.

39. The EPA received a written Response to the Partial Compliance Evaluation from WPX on January 24, 2020.

Alleged Violations of the Fort Berthold FIP

40. Based on the Fort Berthold FIP annual reports referenced in Paragraphs 32-35, above, the EPA alleges WPX violated the following regulatory requirements at oil and natural gas production facilities for the following years:

| Regulatory Requirement | Annual Report for Calendar Year 2015 (Dated August 8, 2016) | Annual Report for Calendar Year 2016 (Dated August 1, 2017) | Annual Report for Calendar Year 2017 (Dated August 10, 2018) | Annual Report for Calendar Year 2018 (Dated August 12, 2019) |
|----------------------------------|--|--|--|--|
| 40 C.F.R. § 49.4165(a)(1)-(b)(3) | Total number and name(s) of oil and natural gas production facilities not specified by WPX | Total number and name(s) of oil and natural gas production facilities not specified by WPX | Total number and name(s) of oil and natural gas production facilities not specified by WPX | Three oil and natural gas production facilities: 1. Arikara 15-22H Pad; 2. Hidatsa North Pad; and 3. Raptor 13-24 Pad |
| 40 C.F.R. § 49.4165(c)(6)(vii) | 76 flares at oil and natural gas production facility locations not specified by WPX | 61 flares at oil and natural gas production facility locations not specified by WPX | 16 flares at oil and natural gas production facility locations not specified by WPX | 9 flares at oil and natural gas production facility locations not specified by WPX |

41. Based on the inspections described in Paragraph 36, the EPA alleges that WPX has violated or is violating one or more of the following requirements of the Fort Berthold FIP at one or more of the oil and natural gas production facilities identified in Table 1, of Appendix A:

- 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.” 40 C.F.R. § 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).

NSPS OOOOa Annual Reports

42. In its annual NSPS OOOOa report dated October 30, 2017, for the period of August 2, 2016 to August 1, 2017, WPX reported 16 events where repairs were not made within 30 days in compliance with requirements specified in 40 C.F.R. § 60.5397a(h)(1) for the affected facility. *See* Table 3, Appendix A.

43. In its annual NSPS OOOOa report dated October 30, 2018, for the period of August 2, 2017 to August 1, 2018, WPX reported three cases where repairs were not made within 30 days in compliance with requirements specified in 40 C.F.R. § 60.5397a(h)(1) for the affected facility. *See* Table 4, Appendix A.

44. In its annual NSPS OOOOa report dated October 30, 2019, for the period of August 2, 2018 to August 1, 2019, WPX reported cases where repairs were not made within 30 days and operation was not performed in compliance with requirements specified in 40 C.F.R. § 60.5397a(h)(1) and 60.5411a(c)(1) for the affected facility. *See* Table 5, Appendix A.

45. Based on the NSPS OOOOa annual reports referenced in Paragraphs 41-43, above, the EPA alleges WPX violated the following regulatory requirements at applicable facilities for the following years:

| Regulatory Requirement | Annual Report for August 2016 to August 2017 (Dated October 30, 2017) | Annual Report for August 2017 to August 2018 (Dated October 30, 2018) | Annual Report for August 2018 to August 2019 (Dated October 30, 2019) |
|-------------------------------|--|--|--|
| 40 C.F.R. § 60.5397a(h)(1) | 4 | 3 | 41 |
| 40 C.F.R. § 60.5411a(c)(1) | Not Reported | Not Reported | 8 |

46. Based on the inspections performed by WPX and reported in the October 3, 2019, annual NSPS OOOOa report, described in Paragraph 44, the EPA alleges that WPX has violated or is violating one or more of the following requirements of NSPS OOOOa at one or more of the oil and natural gas production facilities identified on Appendix A- Table 2:

- 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). 40 C.F.R. § 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. 40 C.F.R. § 60.5411a(b)(3).
- d) 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. 40 C.F.R. § 60.5411a(c)(1).

- e) Design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections. 40 C.F.R. § 60.5411a(c)(2).

III. ENFORCEMENT AUTHORITY

1. 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.

2. 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.

Date Issued: April 7, 2020

Suzanne J. Bohan, Director
Enforcement and Compliance Assurance
Division