

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

Civil Action No. 2:24-cv-1467

UNITED STATES OF AMERICA and
COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF ENVIRONMENTAL
PROTECTION,

Plaintiffs,

v.

XTO ENERGY INC.,

Defendant.

COMPLAINT

Plaintiffs, the United States of America, by authority of the Attorney General of the United States and acting at the request of the Administrator of the United States Environmental Protection Agency (“EPA”), and the Commonwealth of Pennsylvania, Department of Environmental Protection (“PADEP”) (collectively “Plaintiffs”) allege:

NATURE OF ACTION

1. This is a civil action against XTO Energy Inc. (“XTO” or “Defendant”) pursuant to Section 113(b) of the Clean Air Act (the “Act”), 42 U.S.C. § 7413(b), and Section 4(1), (10) of the Pennsylvania Air Pollution Control Act, Act of January 8, 1960, P.L. 2119 (1959), *as amended*, 35 P.S. § 4004(1), (10).

2. Plaintiffs seek injunctive relief and civil penalties for violations of the Act and the Standards of Performance for Crude Oil and Natural Gas Facilities set forth at 40 C.F.R. Part 60,

Subparts OOOO (“NSPS OOOO”) and OOOOa (“NSPS OOOOa”).

JURISDICTION AND VENUE

3. This Court has jurisdiction over the subject matter of this action pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and pursuant to 28 U.S.C. §§ 1331 (Federal Question), 1345 (United States as Plaintiff), and 1355 (Fine, Penalty, or Forfeiture).

4. This Court has supplemental jurisdiction over the state law claims asserted by PADEP pursuant to 28 U.S.C. § 1367.

5. Venue is proper in this District under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations that are the basis of this Complaint occurred in this District and the well pads at issue are operated by XTO in this District.

NOTICES

6. Notice has been given to XTO and the appropriate air pollution control agency in the Commonwealth of Pennsylvania in accordance with Section 113 of the Act, 42 U.S.C. § 7413.

DEFENDANT

7. XTO is an oil and natural gas exploration and production company incorporated in the State of Delaware. XTO’s corporate headquarters are located in Spring, Texas.

8. XTO owns and operates wells in the Appalachian Basin in western Pennsylvania that extract condensate (a type of oil) and natural gas from the Marcellus and Utica shale formations.

9. XTO is a “person” as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).

STATUTORY AND REGULATORY BACKGROUND

The Clean Air Act

10. The Clean Air Act establishes a regulatory scheme to protect and enhance the quality of the nation's air to promote the public health and welfare and the productive capacity of its population. 42 U.S.C. § 7401(b)(1).

New Source Performance Standards

11. The Act requires EPA to establish performance standards for certain categories of new stationary sources of air pollution. 42 U.S.C. § 7411(b)(1). These standards are known as “new source performance standards.”

12. EPA has established new source performance standards for crude oil and natural gas production facilities. *See* 40 C.F.R. Part 60, Subparts OOOO and OOOOa. These standards apply to specified facilities (referred to as “affected facilities”), including storage vessels, that are, in the case of NSPS OOOO, constructed or modified after August 23, 2011 and on or before September 18, 2015, or, in the case of NSPS OOOOa, constructed or modified after September 18, 2015 and on or before December 6, 2022.

13. The NSPS OOOO standards provide, in relevant part:

- a. Each owner or operator must reduce VOC emissions by 95 percent unless, following at least 12 consecutive months of operation, uncontrolled actual VOC emissions are less than 4 tons per year without considering controls. 40 C.F.R. § 60.5395(d).
- b. Each owner or operator using a control device to reduce emissions from a storage vessel affected facility “must equip the storage vessel with a cover that meets the requirements of § 60.5411(b) and is connected through a

closed vent system that meets the requirements of § 60.5411(c), and . . . route emissions to a control device that meets the conditions specified in § 60.5412(c) and (d).” 40 C.F.R. § 60.5395(e)(1).

- c. “The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel or wet seal fluid degassing system.” 40 C.F.R. § 60.5411(b)(1).
- d. “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, inspect or repair equipment, or vent vapors through a closed vent system to a control device].” 40 C.F.R. § 60.5411(b)(2).
- e. “Each storage vessel thief hatch shall be equipped, maintained and operated with a weighted mechanism or equivalent, to ensure that the lid remains properly seated.” 40 C.F.R. § 60.5411(b)(3).
- f. Each owner or operator “must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the requirements specified in § 60.5412(c) and (d), or to a process.” 40 C.F.R. § 60.5411(c)(1).
- g. Each owner or operator “must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections.” 40 C.F.R. § 60.5411(c)(2).

- h. Each owner or operator must conduct monthly olfactory, visual, and auditory inspections for each cover and closed vent system. 40 C.F.R. §§ 60.5416(c)(1) and (2).
 - i. “At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.” 40 C.F.R. § 60.5370(b).
- 14. The NSPS OOOOa standards provide, in relevant part:
 - a. Each owner or operator must reduce VOC emissions by 95 percent unless, following at least 12 consecutive months of operation, uncontrolled actual VOC emissions are less than 4 tons per year without considering controls. 40 C.F.R. § 60.5395a(a).
 - b. Each owner or operator using a control device to reduce VOC emissions “must equip the storage vessel with a cover that meets the requirements of § 60.5411a(b) and is connected through a closed vent system that meets the requirements of § 60.5411a(c) and (d), and . . . route emissions to a control device that meets the conditions specified in § 60.5412a(c) or (d).” 40 C.F.R. § 60.5395a(b)(1).
 - c. “The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief devices and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel or wet seal fluid degassing system.” 40 C.F.R. § 60.5411a(b)(1).

- d. “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, inspect or repair equipment, or vent vapors through a closed vent system to a control device].” 40 C.F.R. § 60.5411a(b)(2).
- e. “Each storage vessel thief hatch shall 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).
- f. Each owner or operator “must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the requirements specified in § 60.5412a(c) and (d), or to a process.” 40 C.F.R. § 60.5411a(c)(1).
- g. Each owner or operator “must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual, and auditory inspections or optical gas imaging inspections as specified in § 60.5416a(c).” 40 C.F.R. § 60.5411a(c)(2).
- h. Each owner or operator “must conduct an assessment that the closed vent system is of sufficient design and capacity to ensure that all emissions from the affected facility are routed to the control device and that the control device is of sufficient design and capacity to accommodate all

emissions from the affected facility, and have it certified by a qualified professional engineer or an in-house engineer with expertise on the design and operation of the closed vent system in accordance with paragraphs [§§ 60.5411a(d)(1)(i) and (ii)].” 40 C.F.R. § 60.5411a(d).

- i. Each owner or operator must conduct either monthly olfactory, visual, and auditory inspections or semi-annual OGI inspections for each cover and closed vent system. 40 C.F.R. § 60.5416a(c)(1) and (2); *see also* 40 C.F.R. § 60.5397a(g)(1) (requiring semi-annual monitoring).
- j. “At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.” 40 C.F.R. § 60.5370a(b).

15. It is unlawful to operate a source in violation of an applicable new source performance standard. 42 U.S.C. § 7411(e).

16. The Commonwealth of Pennsylvania has been delegated authority to implement and enforce NSPS OOOO and NSPS OOOOa. 50 Fed. Reg. 34,140, 34,142 (Aug. 23, 1985). EPA also has the authority to enforce NSPS OOOO and NSPS OOOOa whenever it deems such enforcement necessary to carry out the purposes of the Act. *Id. See also* 42 U.S.C. § 7411(c)(2).

Title V Operating Permits

17. Title V of the Act, 42 U.S.C. §§ 7661-7661f, establishes an operating permit program for certain sources, including “major sources.” The purpose of Title V is to ensure that all “applicable requirements” for compliance with the Act are collected in one place.

18. Pursuant to Section 502(a) of the Act, 42 U.S.C. § 7661a(a), it is unlawful for a major source to operate without or in violation of a permit issued pursuant to Title V of the Act, 42 U.S.C. § 7661 *et seq.* See also 40 C.F.R. § 70.7(b).

19. The Pennsylvania Title V operating permit program was approved by EPA on July 30, 1996. See 61 Fed. Reg. 39,597 (July 30, 1996). These regulations are currently codified at 25 Pa. Code § 127.501-127.543.

FACTUAL BACKGROUND

A. Marcellus and Utica Formation

20. The Marcellus and Utica shale formations are rock formations within the Appalachian Basin that underlie large portions of Pennsylvania, Ohio, and West Virginia. The Marcellus formation lies at various depths from the surface to approximately 8,000 feet. The Utica formation is located below the Marcellus formation. In Pennsylvania, the Marcellus and Utica formations contain trillions of cubic feet of natural gas and millions of barrels of natural gas liquids, known as “condensate.”

B. XTO Well Pads

21. XTO is one of many companies that extract natural gas and condensate from the Marcellus and Utica shale formations via extraction wells.

22. The surface site from which a well is drilled is known as a “well pad.” XTO often drills multiple wells from the same well pad.

23. XTO owns and operates dozens of well pads in western Pennsylvania serving more than a hundred wells.

24. XTO’s wells produce a mixture of condensate, natural gas, and produced water. This mixture flows up the well under pressure – typically around 200 pounds per square inch – to

the well-head at the surface and then either to a two-phase or three-phase separator.

25. The two-phase separators separate the gas from the liquids (condensate and produced water). The liquids go to a produced water tank, where the condensate and produced water settle and separate. The produced water is then removed from the bottom of the tank and the condensate is transferred to a condensate tank.

26. The three-phase separators separate the gas, condensate, and produced water from each other. The gas goes to a sales pipeline. The produced water goes to a produced water storage tank. And the condensate goes to a condensate storage tank. This case focuses on the produced water and condensate streams.

27. The storage tanks are kept near atmospheric pressure and hence are often referred to as atmospheric storage tanks.

28. When pressurized condensate and produced water is transferred from a separator to an atmospheric storage tank, the pressure drops quickly. This causes some of the hydrocarbons in the liquids, including VOC, Hazardous Air Pollutants (“HAP”), and methane, to vaporize in a phenomenon known as “flashing.” After flashing occurs, the condensate and produced water (which still contains some condensate, even after initial separation) continue to emit vapors due to liquid level changes and temperature fluctuations. These are known as “working” and “breathing” losses.

29. XTO is required to capture and control the vapors from “affected” storage tanks. XTO does this by routing the vapors through a series of pipes or vent lines to a control device.

30. The terms “vapor control system” and “closed vent system” are used herein interchangeably to refer to the vent lines from a storage tank or group of connected storage tanks to a control device, and all connections, fittings, pressure relief devices (including thief hatches

on the storage tanks), and any other appurtenance used to contain and collect storage tank vapors, and to transport or convey the vapors to a control device.

C. Storage Tank Thief Hatches

31. The tops of storage tanks have openings called “thief hatches.” Thief hatches are equipped with gaskets that are supposed to seal tight when closed.

32. Thief hatches serve two primary purposes. First, they provide access to the contents of a storage tank for taking samples and measuring the liquid level in the tank (known as “gauging”). Second, they provide a means of (a) relieving pressure from a storage tank to prevent over pressurization and (b) eliminating excessive vacuum.

33. To prevent over pressurization, thief hatches are designed to open (i.e. vent) when the pressure inside the tank exceeds the pressure setting of the thief hatch.

34. XTO uses “spring loaded” thief hatches. The pressure setting is determined by the stiffness of the pressure spring.

35. When the pressure inside a storage tank approaches the pressure setting of the thief hatch, the spring begins to compress, causing the thief hatch to open. When the pressure drops below the pressure setting, the spring expands causing the thief hatch to close.

D. EPA Inspections and Follow-Up Investigation

36. In October 2018, EPA inspected 16 XTO well pads in Butler County, Pennsylvania. Using an optical gas-imaging infra-red camera (“IR camera”), EPA observed that storage tanks at 13 of the 16 well pads (AK Steel B, AK Steel D, Clouse, Dreher, Guiher Lutherlyn, Kyne, Landgraf, Lesney, Marburger Dairy, Mountain Gathering, Mourer, Salvatora, and Stein) were emitting vapors to the atmosphere from thief hatches or other openings on the tanks, bypassing the required control device.

37. In November 2019, EPA inspected an additional 13 XTO well pads in Butler County, Pennsylvania, including many of the same well pads inspected in 2018. Using an IR camera, EPA observed that storage tanks at 10 of the 13 well pads (AK Steel A, AK Steel B, AK Steel C, AK Steel D, Guiher Lutherlyn, Isaacs, Kyne, Lesney, Salvatora, and Stein) were emitting vapors to the atmosphere from thief hatches or other openings on the tanks, bypassing the required control devices.

38. Further investigation indicated that XTO had failed to conduct a formal engineering analysis to ensure that each of its vapor control systems was adequately designed and sized to route all storage tank vapors to an emissions control device. On information and belief, in some cases, storage tanks were connected to systems that were not adequate to route all vapors from the storage tanks to emissions controls, forcing vapors to be emitted directly to the atmosphere from thief hatches on the tanks rather than being conveyed to a control device as required by NSPS OOOO and NSPS OOOOa.

GENERAL ALLEGATIONS

39. At all times relevant to the Complaint, XTO conducted oil and natural gas production operations in the Appalachian Basin in Pennsylvania.

40. XTO owns and/or operates the well pads identified in Table A, below.

41. Each of the well pads in Table A is located in Butler County, Pennsylvania.

42. Each of the well pads in Table A is in the “crude oil and natural gas source category” within the meaning of NSPS OOOO, 40 C.F.R. §60.5430, and NSPS OOOOa, 40 C.F.R. § 60.5430a.

43. Each of the well pads in Table A has one or more storage vessels constructed or modified after August 23, 2011 that has (or had) the potential for VOC emissions equal to or

greater than six tons per year.

44. Each storage vessel located at a well pad listed in Table A that (a) was constructed or modified after August 23, 2011 and (b) has (or had) the potential for VOC emissions equal to or greater than six tons per year is subject to either NSPS OOOO (in the case of facilities constructed or modified after August 23, 2011 and on or before September 18, 2015) or NSPS OOOOa (in the case of facilities constructed or modified after September 18, 2015 and on or before December 6, 2022).

Table A. XTO Well Pads

Facility Name	Facility ID	Street Address	Latitude	Longitude
AK Steel A	PA000838972	236 Schaffner Rd., Butler, PA	40.846578	-79.935133
AK Steel D	PA000830538	367 McCalmont Rd., Renfrow, PA	40.822283	-79.940106
Clouse	PA000830501	140 Hoffman Rd., Chicora, PA	40.91605	-79.823397
Dreher	PA000830518	16 Keel Lane, Butler, PA	40.851761	-79.823442
Guiher Lutherlyn	PA000830486	1100 Whitestown Rd., Butler, PA	40.874738	-80.01398
Isaacs	PA000838974	146 Heinz Rd., Center Township, PA	40.895197	-79.971217
Kyne	PA000830489	515 Dick Rd., Butler, PA	40.885152	-80.8008408
Lesney	PA000830490	647 New Castle Rd., Butler, PA	40.880467	-79.978133

Facility Name	Facility ID	Street Address	Latitude	Longitude
Marburger Farm Dairy	PA000830532	1526 Mars-Evans Rd., Evans City, PA	40.757428	-80.045967
Mountain Gathering	PA000830539	200 Hicks Rd., Renfrew, PA	40.807411	-79.948336
Stein	PA000830499	123 Stein Rd., Butler, PA	40.918153	-80.001997

FIRST CLAIM FOR RELIEF

(Title V Violations)

45. Paragraphs 1 through 44 are incorporated herein by reference.

46. The well pads identified in Table B below are or were “major sources” of VOC for purposes of the Title V operating permit program.

Table B. Major Source Facilities

Facility Name	Facility ID	Latitude	Longitude
AK Steel A	PA000838972	40.846578	-79.935133
Isaacs	PA000838974	40.895197	-79.971217
Kyne	PA000830489	40.885152	-80.8008408
Lesney	PA000830490	40.880467	-79.978133
Mourer	PA000830502	40.94324	-79.71498
Stein	PA000830499	40.918153	-80.001997

47. XTO failed to obtain Title V operating permits for the well pads identified in Table B, in violation of Section 502(a) of the Act, 42 U.S.C. § 7661a, and 25 Pa. Code §§

127.402(a) and 127.501.

48. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), XTO is liable for injunctive relief and civil penalties up to the statutory maximum per day for each violation. *See* 88 Fed. Reg. 89,309, 89,312 (Dec. 27, 2023).

SECOND CLAIM FOR RELIEF

(NSPS Subpart OOOO and OOOOa Storage Vessel Violations)

49. Paragraphs 1 through 44 are incorporated herein by reference.

50. One or more of the storage vessels at the well pads identified in Table A are storage vessel affected facilities as that term is defined in NSPS Subparts OOOO and OOOOa.

51. At the well pads identified in Table A, XTO violated one or more of the following requirements of NSPS Subpart OOOO or OOOOa, as applicable:

- a. the requirements applicable to storage vessel covers in 40 C.F.R. § 60.5411(b) or 60.5411a(b);
- b. the requirements applicable to closed vent systems in 40 C.F.R. § 60.5411(c) or 60.5411a(c);
- c. the requirements for controlling VOC emissions from storage vessel affected facilities in 40 C.F.R. § 60.5395(d)(1) and (e)(1) or 40 C.F.R. § 60.5395a(a)(2) and (b)(1);
- d. the continuous compliance requirements referenced in 40 C.F.R. § 60.5395(g)(2) and 60.5415(e)(3) or 40 C.F.R. § 60.5395a(d)(2) and 60.5415a(e)(3);
- e. the inspection requirements for covers and closed vent systems specified in 40 C.F.R. § 60.5416(c)(1) and (2) or 40 C.F.R. § 60.5416a(c)(1) and (2);
- f. the emissions determination requirement referenced in 40 C.F.R. § 60.5365(e) or 40 C.F.R. § 60.5365a(e);

- g. the recordkeeping requirements specified in 40 C.F.R. § 60.5420a(c)(15)(i)-(viii) for fugitive emissions components at a well site;
- h. the annual reporting requirements specified in 40 C.F.R. § 60.5420(b)(1) and (6) or 40 C.F.R. § 60.5420a(b)(1) and (6); and
- i. the good air pollution control practice requirements in 40 C.F.R. § 60.5370(b) or 40 C.F.R. § 60.5370a(b).

52. Each of the violations alleged in Paragraph 51 is a violation of Section 111(e) of the Act, 42 U.S.C. § 7411(e).

53. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), XTO is liable for injunctive relief and civil penalties up to the statutory maximum per day for each violation. *See* 88 Fed. Reg. 89,309, 89,312 (Dec. 27, 2023).

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that this Court:

- A. Permanently enjoin Defendant from further violating the Act, NSPS OOOO and NSPS OOOOa;
- B. Order Defendant to take appropriate actions to remedy, mitigate, and offset the harm to public health and the environment caused by its violations of the Act, NSPS OOOO, and NSPS OOOOa;
- C. Assess a civil penalty against Defendant for each violation of the applicable provisions of the Act and NSPS OOOO and NSPS OOOOa up to the statutory maximum per day for each violation;
- D. Award Plaintiffs their costs of this action; and
- E. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted,

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(Signed by Filing Attorney with consent)

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