

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NORTH DAKOTA
WESTERN DIVISION

Civil Action No.

UNITED STATES OF AMERICA,

Plaintiff,

v.

XTO ENERGY INC.,

Defendant.

COMPLAINT

Plaintiff, 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”), files this Complaint and alleges as follows:

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).
2. The United States seeks injunctive relief and civil penalties for violations of the Act and the Federal Implementation Plan for Oil and Natural Gas Well Production Facilities, Fort Berthold Indian Reservation (“Fort Berthold FIP”).
3. XTO owns and operates wells on the Fort Berthold Indian Reservation in North Dakota that extract oil and natural gas from the Bakken, Three Forks, and/or Sanish Formations (collectively the “Bakken Pool”).

4. These wells produce a mixture of oil, natural gas, and water.

5. This mixture is separated into its constituent parts near the well-head. Following separation, the oil is transferred to storage tanks. As the oil is transferred, the pressure drops and vapors, including volatile organic compounds (“VOC”) and other air pollutants, are released or “flushed” into a gaseous state. Additional vapors are released from the oil due to liquid level changes and temperature fluctuations.

6. The Fort Berthold FIP requires XTO to capture all vapors from its storage tanks on the Fort Berthold Indian Reservation and route them through a closed-vent system to a control device.

7. In June of 2014 and March of 2015, EPA inspected a number of XTO well pads on the Fort Berthold Indian Reservation and found venting of storage tank vapors from openings on the storage tanks called “thief hatches,” not routed through the required pollution control equipment, in violation of the Fort Berthold FIP.

JURISDICTION AND VENUE

8. 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).

9. 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.

DEFENDANT

10. XTO is a Delaware corporation engaged in oil and gas production and exploration

throughout the United States.

11. XTO owns and operates oil and natural gas production facilities on the Fort Berthold Indian Reservation that remove oil, natural gas, and other liquids from subsurface rock formations, separate the natural gas from the liquids, and then store the separated liquids in tanks until being transported by pipeline or picked up by truck for sale (produced oil) or disposal (produced water).

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

STATUTORY AND REGULATORY BACKGROUND

13. As set forth in Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1), the purpose of the Clean Air Act is to protect and enhance the quality of the nation’s air, so as to promote the public health and welfare and the productive capacity of its population.

A. National Ambient Air Quality Standards for Ozone

14. Section 108 of the Act, 42 U.S.C. § 7408, directs 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.”

15. Ground-level ozone, commonly known as “smog,” is one of six criteria pollutants for which EPA has promulgated national standards, due to its adverse effects on human health and the environment.

16. Ozone is not emitted directly from sources of air pollution. Ozone is a photochemical oxidant, formed when certain chemicals in the ambient air react in the presence of sunlight. These chemicals – VOC and nitrogen oxides (“NOx”) – are called “ozone precursors.” Sources that emit ozone precursors are regulated to reduce ground-level ozone. See 62 Fed. Reg.

38,856 (July 18, 1997).

B. Fort Berthold FIP

17. In 2013, EPA finalized a Federal Implementation Plan (“FIP”) for the Fort Berthold Indian Reservation. The Fort Berthold FIP includes basic air quality regulations for the protection of public health and the environment. Among other things, the Fort Berthold FIP requires owners and operators of oil and natural gas production facilities to reduce VOC emissions from production and storage operations.

18. 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.” 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) An operating system designed to recover and inject the natural gas emissions into a natural gas gathering pipeline system for sale or other beneficial purpose; or (ii) An enclosed combustor or utility flare capable of reducing the mass content of VOC . . . by at least 98.0 percent.” 40 C.F.R. § 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.” 40 C.F.R. § 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.” 40 C.F.R. § 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].” 40 C.F.R. § 49.4165(a)(2).
- f. “Each thief hatch cover shall be weighted and properly seated.” 40 C.F.R. § 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 vapor recovery system, the enclosed combustor, or the utility flare under normal operating conditions.” 40 C.F.R. § 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)].” 40 C.F.R. § 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.” 40 C.F.R. § 49.4165(b)(2).
- j. “Each closed-vent system must be designed to operate with no detectable natural gas emissions.” 40 C.F.R. § 49.4165(b)(3).

FACTUAL BACKGROUND

A. The Bakken

19. The Bakken, Three Forks, and Sanish Formations are rock formations within the Williston Basin that underlie large portions of northwestern North Dakota, northeastern Montana, southern Saskatchewan, and southwestern Manitoba.

20. The Fort Berthold Indian Reservation is located within the Williston Basin.

B. XTO Well Pads

21. 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.

22. XTO operates 20 well pads on the Fort Berthold Indian Reservation serving roughly 70 wells.

23. XTO’s wells produce a mixture of oil, natural gas, and water. This mixture flows under pressure to the well-head at the surface and then to a device called an inlet (or two-phase) separator. The inlet separator separates the gas from the liquids (oil and water). From there, the liquids go to a three-phase separator (often called a “heater treater” or simply “treater”).

24. The treater has a pressure setting to optimize production, typically between 25

and 60 pounds per square inch gauge (“psig”).

25. The purpose of a treater is to separate the oil, water, and remaining gas.

26. Once separated, the gas goes to a sales pipeline or is burned in a high-pressure flare. The water goes to a produced water storage tank. And the oil goes to a produced oil storage tank.

27. The storage tanks are kept near atmospheric pressure, at a positive pressure of generally not more than 0.5 psig (8 oz/in²), and hence are often referred to as atmospheric storage tanks.

28. When pressurized oil is transferred from a treater to an atmospheric storage tank, the pressure of the oil drops quickly. This causes some of the hydrocarbons in the oil, including VOC and other pollutants, to vaporize in a phenomenon known as “flashing.” After flashing, the oil continues 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 its storage tanks. XTO does this by routing the vapors through a series of pipes or vent lines to a combustion device.

30. The term “vapor control system” is used herein to refer 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 on the storage tanks), and any other appurtenance used to contain and collect storage tank vapors and transport them 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 relieving pressure and 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.

D. EPA Inspections and Follow-Up Investigation

34. In June of 2014, EPA inspected five XTO well pads on the Fort Berthold Indian Reservation. Using an optical gas-imaging infra-red camera (“IR camera”), EPA observed that a storage tank at one of the five well pads (FBIR Ironwoman/Yellowwolf) was emitting vapors to the atmosphere from a thief hatch on the tank, and not routing them through the required control device.

35. In March 2015, EPA inspected an additional six XTO well pads on the Fort Berthold Indian Reservation. Using an IR camera, EPA observed that storage tanks at three of the six well pads were emitting vapors to the atmosphere from thief hatches on the tanks, and not routing them through the required control devices.

36. Further investigation indicated that some of XTO’s storage tanks were connected to vapor control 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 the control device.

GENERAL ALLEGATIONS

37. At all times relevant to the Complaint, XTO conducted oil and natural gas production operations in the Bakken Pool in North Dakota.

38. XTO owns and/or operates the well pads listed in Table A, below.

39. Each of the well pads in Table A is located on the Fort Berthold Indian Reservation.

40. Each of the well pads in Table A is an “oil and natural gas production facility” within the meaning of the Fort Berthold FIP, 40 C.F.R. § 49.4163(11).

41. Each of the well pads in Table A produces oil and/or natural gas from the Bakken, Three Forks, or Sanish Formations in North Dakota (i.e. the Bakken Pool).

42. Each of the well pads in Table A has one or more oil and natural gas wells that was completed or recompleted after August 12, 2007.

43. As oil and natural gas production facilities located on the Fort Berthold Indian Reservation, with one or more wells completed or recompleted after August 12, 2007, and producing from the Bakken Pool, the well pads listed in Table A are subject to the requirements of the Fort Berthold FIP.

Table A. XTO Well Pads

Well Pad	Well Name	API Number	Location	Latitude	Longitude
FBIR Smith	FBIR Smith 11X-10	3302501229	NWNW 10-149-92	47.745382	-102.446553
	FBIR Smith 11X-10A	3302501825		47.745237	-102.446666
	FBIR Smith 11X-10E	3302501823		47.745454	-102.446492
	FBIR Smith 11X-10F	3302501824		47.745311	-102.446609
FBIR Beaks/HuntsMedicine	FBIR Beaks 24X-8A	3302501854	SESW 8-149-91	47.732474	-102.356434
	FBIR Beaks 24X-8B	3302501195		47.732513	-102.35632
	FBIR Beaks 24X-8E	3302501881		47.732474	-102.356556
	FBIR HuntsMedicine 24X-8B	3302501196		47.732514	-102.355954

Well Pad	Well Name	API Number	Location	Latitude	Longitude
	FBIR HuntsMedicine 24X-8E	3302501853		47.732475	-102.35619
FBIR Baker/Walker	FBIR Baker 34X-25	3302501142	SWSE 25-149-92	47.689228	-102.392703
	FBIR Baker 34X-25A	3302501821		47.689225	-102.392943
	FBIR Baker 34X-25E	3302501822		47.689228	-102.393183
	FBIR Baker 34X-25F	3302501820		47.689225	-102.392821
	FBIR Walker 34X-25	3302501143		47.689228	-102.393069
FBIR GuyBlackHawk	FBIR GuyBlackHawk 24X-27A	3302502342	SESW 27-149-92	47.690367	-102.439229
	FBIR GuyBlackHawk 24X-27B	3302501262		47.690387	-102.438993
	FBIR GuyBlackHawk 24X-27ER	3302502430		47.690342	-102.439468
	FBIR GuyBlackHawk 24X-27F	3302502341		47.690378	-102.439107
FBIR Ironwoman/YellowWolf	FBIR Ironwoman 21X-10	3302501220	NENW 10-148-92	47.659965	-102.38789
	FBIR YellowWolf 21X-10	3302501219		47.659963	-102.387524

CLAIM FOR RELIEF

44. Paragraphs 1 through 43 are re-alleged and incorporated herein by reference.

45. On information and belief, XTO constructed the well pads identified in Table A without first performing a formal engineering design analysis to determine if the vapor control systems would route all storage tank vapors to an emissions control device.

46. When the capacity of a vapor control system is exceeded, vapors from the associated storage tanks, including VOC, are emitted directly to the atmosphere through thief

hatches.

47. These vapors can also be illegally emitted if the vapor control system is not properly operated and maintained. For example, vapors can be emitted if the thief hatch gasket is worn or otherwise not properly maintained or if the thief hatch is not properly sealed.

48. The vapor control systems at the well pads identified in Table A did not convey all of the vapors from the storage tanks to control devices. Some or all of the vapors were, instead, emitted directly to the atmosphere through thief hatches and/or other points on the vapor control systems.

49. At the well pads identified in Table A, XTO has violated one or more of the following requirements of the Fort Berthold FIP:

a. All liquid and gas collection, storage, processing, and handling operations, regardless of size, must be operated and maintained 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, all standing, working, breathing, and flashing losses from produced oil storage tanks and any produced water storage tanks interconnected with produced oil storage tanks must be routed through a closed-vent system to an 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 an enclosed combustor or utility flare capable of reducing the mass content of VOC by at least 98.0 percent [40 C.F.R. § 49.4164(d)(2)];

c. All openings on produced oil storage tanks and any produced water storage tanks interconnected with produced oil storage tanks must be equipped 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 [40 C.F.R. § 49.4165(a)];

d. All covers and openings on covers (e.g. access hatches, sampling ports, pressure relief valves (PRV), and gauge wells) must form a continuous impermeable barrier over the entire surface area of the produced oil and produced water in the storage tank [40 C.F.R. § 49.4165(a)(1)];

e. All cover openings must 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 [40 C.F.R. § 49.4165(a)(2)];

f. All thief hatch covers must be weighted and properly seated [40 C.F.R. § 49.4165(a)(3)];

g. All PRVs must be set to release at a pressure that will ensure that natural gas emissions are routed through the closed-vent system to a control device under normal operating conditions [40 C.F.R. § 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 the FIP [40 C.F.R. § 49.4165(b)(1)];

i. All vent lines, connections, fittings, valves, relief valves, and any other appurtenance employed to contain and collect natural gas, vapor, and fumes must be maintained and operated properly at all times [40 C.F.R. § 49.4165(b)(2)]; and

j. Each closed-vent system must be designed to operate with no detectable natural gas emissions [40 C.F.R. § 49.4165(b)(3)].

50. Unless restrained by an order of the Court, XTO's violations of the Act and the

Fort Berthold FIP, as set forth in this Claim for Relief, are likely to continue.

51. Pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), XTO is liable for injunctive relief and civil penalties of up to \$37,500 per day for each violation occurring on or before November 2, 2015 and \$95,284 per day for each violation occurring after November 2, 2015. See 82 Fed. Reg. 3633, 3636 (Jan. 12, 2017).

PRAYER FOR RELIEF

WHEREFORE, based on the allegations contained in paragraphs 1 through 51 above, the United States requests that this Court:

- A. Permanently enjoin Defendant from further violating the Act and the Fort Berthold FIP;
- B. Order Defendant to take appropriate actions to remedy, mitigate, and offset the harm to public health and the environment caused by violations of the Act and the Fort Berthold FIP;
- C. Assess a civil penalty against Defendant for each violation of the applicable provisions of the Act and the Fort Berthold FIP of up to \$37,500 per day for each violation occurring on or before November 2, 2015 and \$95,284 per day for each violation occurring after November 2, 2015;
- D. Award Plaintiff its costs of this action; and
- E. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted,

JEFFREY H. WOOD
Acting Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

/s/Mark C. Elmer
MARK C. ELMER
Senior Counsel
U.S. Department of Justice
Environmental Enforcement Section
999 18th Street, South Terrace, Suite 370
Denver, Colorado 80202
(303) 844-1352 (PHONE)
(303) 844-1350 (FAX)
Mark.Elmer@usdoj.gov

OF COUNSEL:

LAUREN HAMMOND
Legal Enforcement Program
Office of Enforcement, Compliance and
Environmental Justice
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202