



REGION 5

CHICAGO, IL 60604

VIA ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

Jim Locke, Air Quality Director
CNX Resources
1000 Horizon Vue Drive
Canonsburg, PA 15317
jimlocke@cnx.com

Re: Notice and Finding of Violation
CNX Resources Corporation
Canonsburg, Pennsylvania

Dear Jim Locke:

The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to CNX Resources Corporation ("CNX" or "you") under Section 113(a) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a). We find that you are violating the New Source Performance Standards (NSPS) for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 and on or Before December 6, 2022 (Subpart OOOOa), and the terms of your Ohio Permits to Install and Operate (PTIOs) at your Ohio facilities listed in Attachment A to the NOV/FOV.

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

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

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

The EPA contact in this matter is Jacob Herbers. You may email him at Herbers.Jacob@epa.gov to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

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

Sincerely,

Sarah Marshall
Supervisor, Air Enforcement and Compliance Assurance Section
(MI/WI)

cc:

Joshua Koch
Manager, Division of Air Pollution, OEPA
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Devan Roof
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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

CNX Resources Corporation

Pittsburgh, Pennsylvania

Proceedings Pursuant to
Section 113(a)(1) and (3) of the
the Clean Air Act, 42 U.S.C.
§ 7413(a)(1) and (3)

NOTICE AND FINDING OF VIOLATION

EPA-5-25-OH-3

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice and Finding of Violation (NOV/FOV) under Section 113(a)(1) and (3) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1) and (3). Based on available information and as explained below, the EPA finds that CNX Resources (CNX) is violating the Ohio State Implementation Plan (SIP) and Section 111(e) of the CAA, 42 U.S.C. § 7411(e), at its Ohio well pad facilities listed in Attachment A. Specifically, CNX is violating the New Source Performance Standards (NSPS) for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 and on or Before December 6, 2022, at 40 C.F.R. Part 60, Subpart OOOOa (Subpart OOOOa), and the terms of CNX's Ohio Permits to Install and Operate (PTIOs) issued under the Ohio SIP, as follows:

Statutory and Regulatory Authority

1. The CAA, and the regulations promulgated thereunder, establish a statutory and regulatory scheme designed to, among other things, protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. *See* 40 U.S.C. § 7401(b)(1).
2. Section 111(b) of the CAA, 42 U.S.C. § 7411(e), requires the EPA to promulgate emission standards for new stationary sources falling within industrial categories that significantly contribute to air pollution.

NSPS Subpart 0000a

3. Pursuant to Section 111(b) of the CAA, the EPA promulgated NSPS Subpart OOOOa, at 40 C.F.R. Part 60, Subpart OOOOa, which establishes emission standards for the control of emissions of volatile organic compounds (VOCs), sulfur dioxide, and greenhouse gases in the form of methane from affected facilities in the crude oil and natural gas production source category that commenced construction, modification, or reconstruction after September 18, 2015 and on or before December 6, 2022.

4. Subpart OOOOa, at 40 C.F.R. § 60.5365a, provides that owners and operators of one or more affected facilities that commenced construction, modification, or reconstruction after September 18, 2015 and on or before December 6, 2022, are subject to the applicable provisions of Subpart OOOOa.

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

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

7. Subpart OOOOa, at 40 C.F.R. § 60.5365a(e), provides that a storage vessel is a “storage vessel affected facility” if a properly performed emission determination indicates that the storage vessel has the potential for VOC emissions equal to or greater than six tons per year. The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to August 2, 2016, or within 60 days after startup (whichever was later). The determination may take into account requirements under a legally and practicably enforceable limit in an operating permit or other requirement established under a federal, state, local, or tribal authority.

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

9. Subpart OOOOa, at 40 C.F.R. § 60.5365a(h)(2), provides that a pneumatic pump affected facility at a well site is a single natural gas-driven diaphragm pump. A single gas-driven diaphragm pump that is in operation less than 90 days per calendar year is not a pneumatic pump affected facility, provided that the owner or operator keeps records of the days of operation each calendar year and submits such record to EPA upon request.

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

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

- a. The owner or operator of a storage vessel affected facility must either: (i) reduce VOC emissions from the storage vessel by 95.0 percent within 60 days after startup; or (ii)

maintain the uncontrolled actual VOC emissions from the storage vessel at less than four tons per year without considering control. See 40 C.F.R. § 60.5395a(a)(2)-(3).

- b. For a storage vessel electing to comply with the 95.0 percent emission reduction requirement in 40 C.F.R. § 60.5395a(a)(2), the required emission reduction must be achieved by control requirements that include, per 40 C.F.R. § 60.5395a(b):
 - i. equipping the storage vessel with a cover that meets the requirements of 40 C.F.R. § 60.5411a(b); and
 - ii. connecting the storage vessel to a closed vent system that meets the requirements of 40 C.F.R. § 60.5411a(c)-(d) and either routing the emissions to a control device that meets the conditions specified in 40 C.F.R. § 60.5412a(d) or routing the closed vent system to a process.

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

13. Where an owner or operator of a storage vessel affected facility is using a control device to control emissions or is routing emissions to a process, Subpart OOOOa, at 40 C.F.R. § 60.5411a(c), requires them to 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 of 40 C.F.R. § 60.5412a(c)-(d), or to a process, and to design and operate the closed vent system with no detectable emissions, as determined using olfactory, visual, and auditory (OVA) inspections.

14. Subpart OOOOa, at 40 C.F.R. § 60.5413a, contains performance test requirements for control devices used to demonstrate compliance at storage vessel affected facilities. 40 C.F.R. § 60.5413a(a)(7) exempts a control device from performance testing if the model can be demonstrated to meet the performance requirements of 40 C.F.R. § 60.5412a(a)(1) or (d)(1) through a performance test conducted by the manufacturer, as specified in 40 C.F.R. § 60.5413a(d).

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

- a. The inlet gas flow rate must be equal to or less than the maximum specified by the manufacturer. 40 C.F.R. § 60.5413a(e)(1).

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

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

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

18. Subpart OOOOa, at 40 C.F.R. § 60.5417a(h)(1), requires owners and operators of each combustion control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) to, among other things, conduct inspections at least once every calendar month (separated by at least 14 days) to confirm that the pilot is lit when vapors are being routed to the combustion device and that the continuous burning pilot flame is operating properly, monitor for visible emissions from the combustion device using section 11 of Method 22 at 40 C.F.R. Part 60, Appendix A–7, and conduct OVA inspections of all equipment associated with the combustion device. Owners and operators are exempt from this requirement if the owner and operator installs a control device model and meets all requirements in 40 C.F.R. § 60.5413a(d)(2)-(12), as well as the continuous compliance requirement in 40 C.F.R. § 60.5413a(e).

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

20. Subpart OOOOa, at 40 C.F.R. § 60.5420a(c), requires owners and operators of affected facilities to maintain all records required by the subpart for at least five years. These records include, but are not limited to, records related to pneumatic controllers, records related to pneumatic pumps, records of each VOC emissions determination for each storage vessel affected facility made under 40 C.F.R. § 60.5365a(e), including identification of the model or calculation methodology used to calculate the VOC emission rate, records of each closed vent system inspection, records of each cover inspection (including a record of each cover inspection and record of the corrective action taken to repair defects, including identification of the date of first attempt at repair of fugitive emissions component(s)), records of each closed vent system inspection, records of inspections using section 11 of Method 22 at 40 C.F.R. Part 60, Appendix A–7, the fugitive emissions monitoring plan, and records of each fugitive emissions monitoring survey. See 40 C.F.R. § 60.5420a(c)(5)(ii), (6), (7), (13), (15)(vi)-(vii).

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

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

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

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

- a. An initial monitoring survey conducted within 90 days of the startup of production for each collection of fugitive emissions components, and monitoring surveys conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least four months apart and no more than seven months apart. *See* 40 C.F.R. § 60.5397a(f)-(g); and
- b. A technique for determining fugitive emissions, which must be either Method 21 at 40 C.F.R. Part 60, Appendix A–7 to Subpart OOOOa meeting the requirements of 40 C.F.R. § 60.5397a(c)(8), or optical gas imaging (OGI) meeting the requirements of 40 C.F.R. § 60.5397a(c)(7)(i)-(vii). *See* 40 C.F.R. § 60.5397a(c)(2).

25. Subpart OOOOa, at 40 C.F.R. § 60.5397a(g), specifies required frequencies for monitoring surveys of each collection of fugitive emissions components at a well site.

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

27. Subpart OOOOa, at 40 C.F.R. § 60.5397a(i), requires records for each monitoring survey to be maintained as specified in 40 C.F.R. § 60.5420a(c)(15).

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

during periods of startup, shutdown and malfunctions provided for in 40 C.F.R. § 60.8(c) do not apply to Subpart OOOOa.

The Ohio SIP

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

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

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

32. The EPA has approved various provisions of the Ohio Administrative Code (Ohio Admin. Code) as part of the Ohio SIP, including Ohio Admin. Code §§ 3745-31-02 and 3745-31-29. 78 Fed. Reg. 11,748 (Feb. 20, 2013); 80 Fed. Reg. 36,477 (June 25, 2015); 40 C.F.R. § 52.1870(c).

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

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

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

35. On January 31, 2012, OEPA finalized a model general PTIO for oil and gas well production operations (GP 12). In April 2014, OEPA revised the GP 12 to create two different versions of the model permit: GP 12.1 for oil and gas well production operations with a small flare, and GP 12.2 oil and gas well production operations with a large flare.¹

36. GP PTIO 12.2, at Condition A. 1., states:

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission

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

limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

37. GP PTIO 12.2, at Condition B. 11., states:

Emission units and any required control and monitoring equipment shall be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[40 CFR 63.764(j)], [40 CFR 60.4243(b)], and [40 CFR 60.4211(g)]

38. GP PTIO 12.2 contains provisions for an enclosed or open flare/combustion device at Section C. 4, which states, at Condition C. 4. a) (1), that all of the provisions of Section C. 4. are federally enforceable for the purpose of a permit-to-install.

39. GP PTIO 12.2, at Condition C. 4. d) (2), states, in pertinent part:

The permittee shall: ... continuously monitor the presence of the flame [for each flare/combustion device]; ... record all periods during which the automatic flare ignition system (pilot flame or electronic arc ignition system) or thermocouple was not working and gas was being vented to the flare/combustion device; and ... record all periods of time during which gas was being vented to the flare/combustion device and there was no flame.

40. GP PTIO 12.2, at Condition C. 4. d) (3), states:

The permittee shall maintain a record of all periods of time (date and number of hours) during which the flare/combustion device is burning collected gases at a heat input greater than 10 MMBtu per hour, along with a description of the emergency and/or the reason the heat input was greater than 10 MMBtu/hr.

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

42. GP PTIO 12.2, at Condition C. 5. c) (2), states, in pertinent part:

The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment covered by this permit, including each pump, compressor, pressure relief device, connector, valve, flange, vent, cover, any bypass in the closed vent system, and each storage vessel. . . . Leaks shall be detected by the use of either a "Forward Looking Infra Red" (FLIR) camera or an analyzer meeting U.S. EPA Method 21 of 40 CFR Part 60, Appendix A. . . . The program shall require the first attempt at repair within five (5) calendar days of determining a leak The program shall require that the leaking component is repaired within 30 calendar days after the leak is detected. . . . The program shall [follow] the Monitoring and Record Keeping requirements described in paragraph 5.d) of this permit.

43. GP PTIO 12.2, at Condition C. 5. d) (1) b., states:

The following records shall be maintained for each natural gas-driven pneumatic controller installed at the facility after 8/23/11:

- i. records of the date installed or reconstructed, the location and/or equipment each controller is servicing, and the manufacturer specifications;*
- ii. if applicable, the records needed to demonstrate why the operations require the use of a pneumatic controller with a bleed rate greater than 6 scf/hr and the functional basis for requiring the higher bleed rate; or*
- iii. if installed on or after 10/15/13, records of the manufacturer's specification indicating that the pneumatic controller is designed to have a natural gas bleed rate less than or equal to 6 scf/hr; or*
- iv. if the pneumatic controller has been installed on or after 8/23/11 and before 10/15/13, the manufacturer's designed bleed rate; and*
- v. where a higher bleed rate has not been demonstrated to be needed, the records of any deviations from the 6 scf/hr bleed rate for each pneumatic controller installed on or after 10/15/13.*

44. GP PTIO 12.2, at Conditions C. 5. d) (2) b., states:

The following information shall be recorded during each leak inspection:

- i. the date the inspection was conducted;*
- ii. the name of the employee conducting the leak check;*
- iii. the identification of any component that was determined to be leaking;*
- iv. the date the first attempt to repair the component was made;*
- v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);*
- vi. the date the component was repaired and determined to no longer be leaking;*
- vii. the total number of components that are leaking; and*
- viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.*

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

46. GP PTIO 12.2, at Condition C. 6. b) (2) e., states:

Unless meeting the requirements of 40 CFR 60.5395(d)(2), where the uncontrolled actual VOC emissions can be demonstrated to be less than 4 tons per year, or where it has been demonstrated that the potential VOC emissions are less than 6 TPY, the VOC emissions from each storage vessel affected facility shall be reduced by 95.0 percent by April 15, 2014.

[40 CFR 60.5395] and [40 CFR 60.5415(e)(3)]

Relevant Factual Background and Conclusions of Law

47. CNX is a limited liability company incorporated in the Commonwealth of Pennsylvania and operating in the State of Ohio.
48. CNX is a “person” within the meaning of Section 302(e) of the CAA, 42 U.S.C. § 7602(e).
49. CNX owns and operates many oil and natural gas well pads in Monroe County, Ohio.
50. On October 4, 2023, EPA staff inspected 10 Ohio well pads owned and operated by CNX (October 2023 Inspections). These well pads are listed in Attachment A, and are referred to collectively as “CNX’s well pads.”
51. Each of CNX’s well pads were issued a GP 12.2 PTIO under OEPA’s General Permit program.
52. On December 18, 2023, the EPA issued to CNX an Information Request under Section 114 of the CAA covering all well pads owned and operated by CNX in Ohio at that time.
53. On February 15, 2024 and May 16, 2024, CNX responded to the December 2023 Information Request (CNX’s Response).
54. On November 22, 2024 CNX provided supplemental information in response to the EPA’s Information Request (November 22, 2024 letter).

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

55. Each of CNX’s well pads have storage vessels that contain an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, and/or produced water and are constructed primarily of non-earthen materials. Therefore, each vessel is a “storage vessel” as that term is defined in Subpart OOOOa, at 40 C.F.R. § 60.5430a.
56. All storage vessels at CNX’s well pads were constructed, reconstructed, and/or modified after September 18, 2015 and before November 16, 2020.
57. In its Information Request, the EPA requested calculations of the potential VOC emissions from each storage vessel and annual reports required under Subpart OOOOa for each well pad owned and operated by CNX in Ohio at that time.
58. In its Response, CNX initially provided potential VOC emissions calculations from the well pads’ permit applications, which occurred before the first 30 days of production.
59. In follow-up responses, CNX provided the EPA with spreadsheets containing new potential VOC emissions calculations for each well pad that were created in 2024. Instead of using the first 30 days of production, the new calculations were based on the first quarter of production, and also improperly divided the production of the entire well pad by the sum of all individual well operating days in the quarter, therefore overcounting on days where multiple wells were operating. CNX also erroneously represented 30-day VOC emissions values as annual emissions values in the “400-bbl PW Tanks” tabs of its “Emissions Calculations” spreadsheets by setting the values of “VOC Working &

Breathing Losses” and “VOC Flashing Losses” equal to the “30-Day Emissions, Tons/30-days” calculated values.

60. In a letter dated November 22, 2024, CNX stated that for its potential VOC emissions calculations, flashing, working, and breathing emissions at atmospheric storage vessels were calculated using the compilation of air pollutant emission factors as written in AP-42 Ch. 7.1.

61. AP-42 Ch. 7.1.2.1 and 7.1.3.5 each state that “estimating flashing losses” is “beyond the scope of this section.”

62. In the November 22, 2024 letter, CNX stated that when calculating potential VOC emissions, storage tank working, standing, and flashing emissions are speciated on a per tank basis. Consistent with that practice, CNX’s potential VOC emissions calculations estimated potential emissions of each storage vessel by dividing the total VOC emissions values for all storage vessels at a well pad by the number of storage vessels at that well pad.

63. Based on its Response and observations during the October 2023 Inspections, the storage vessels at CNX’s well pads are all uncontrolled and are not routed to a process, except for the storage vessels at Switz6, where storage vessel emissions are routed to a control device.

64. In the November 22, 2024 letter, CNX stated that the produced water storage vessels at well pads without control devices are not manifolded together. However, at the October 2023 Inspections, EPA inspectors observed that the produced water storage tanks at each of CNX’s uncontrolled well pads were manifolded together.

65. Based on the information reviewed by EPA, all storage vessels at CNX’s Switz6 well pad have the potential for VOC emissions equal to or greater than six tons per year, and the PTIOs issued to these well pads do not include any legally or practicably enforceable limits to restrict the potential VOC emissions from each storage vessel to less than six tons per year. Vapor recovery units are not used to recover emissions from storage vessels at any of CNX’s well pads. Therefore, the storage vessels at CNX’s Switz6 well pad are “storage vessel affected facilities” under Subpart OOOOa.

66. In its Response, CNX provided uncontrolled actual VOC emissions values from its permit applications, which were written prior to any actual emissions occurring. CNX also provided spreadsheets with rolling emissions for each well pad from 2019-2023, with monthly VOC emissions values that were based on a single daily VOC emissions value for each year, multiplied by the number of days in the month of the year, instead of actual emissions data from each month in a period of 12 consecutive months.

67. Because CNX did not provide any documentation demonstrating that any storage vessels at its Switz6 well pad had uncontrolled actual VOC emissions of less than four tons per year, as determined monthly for 12 consecutive months based on the average throughput for the month calculated using a generally accepted model or calculation methodology, CNX is required by Subpart OOOOa and the PTIOs to achieve 95.0 percent reduction of VOC emissions from each storage vessel affected facility at its Switz6 well pad.

Storage Vessel Covers, Closed Vent Systems, and Fugitive Emissions

68. Each of CNX's well pads is subject to the leak detection and repair (LDAR) provisions in its respective PTIO, including but not limited to C. 5. c) (2), C. 5. c) (3), C. 5. d) (2), and C. 6. c) (3).

69. Each of the storage vessels at CNX's Switz6 well pad is a "storage vessel affected facility" per 40 C.F.R. § 60.5365a(e) and is therefore subject to the requirements for storage vessel affected facilities in Subpart OOOOa.

70. Each of CNX's well pads is a surface site constructed for oil and/or gas drilling that includes components that have the potential to emit fugitive emissions of VOC at a well site or compressor station. Therefore, at each well pad, CNX owns and operates the "collection of fugitive emissions components" at a "well site" pursuant to Subpart OOOOa, making the well pad subject to the requirements of 40 C.F.R. § 60.5397a.

71. During the October 2023 Inspections, EPA inspectors detected VOC emissions using an OGI camera from pressure/vacuum relief devices and vents attached to storage vessels at all of CNX's well pads.

72. During the October 2023 Inspections, EPA inspectors detected VOC emissions using an OGI camera from the emergency shutdown at the Switz9 well pad.

73. During the October 2023 Inspections, no one was adding or removing material from the storage vessels at any of the well pads; no one was inspecting or sampling the material in the storage vessels at any of the well pads; and no one was inspecting, maintaining, repairing, or replacing equipment in the storage vessels at any of the well pads.

74. In its Information Request, the EPA requested records of all inspections, including OVA, Method 21 at 40 C.F.R. Part 60, Appendix A-7, and OGI inspections, and associated repairs performed at each of CNX's well pads from January 2019 to the date of receipt of the Information Request.

75. CNX's Response included records of OVA inspections conducted at closed-vent systems associated with storage vessels at the Switz6 well pad, but were missing OVA inspection records for August through November 2020, January 2021, April 2021, and October 2021.

76. CNX's Response included records of quarterly or semiannual OGI inspections conducted at each of CNX's well pads, including leaks discovered and associated repair records, but some were missing dates of first attempt at repair and/or final repair, or reported repair dates that occurred prior to the inspection dates. Summaries of these records are listed in Attachment B.

77. In CNX's Response, CNX provided records showing that at some inspections, CNX detected one or more leaks from compressors, connectors, valves, flanges, vents, filters, level controllers, covers, closed vent systems, regulators, collections of fugitive emissions components, process equipment, and storage vessels that CNX did not repair within 30 calendar days of the first attempt at repair. Summaries of these records are listed in Attachment B.

78. CNX's 2024 Subpart OOOOa annual report showed that OGI and LDAR inspections were not conducted at Switz6.

Pneumatic Pumps

79. In its Information Request, the EPA requested the date of the most recent installation, reconstruction, or modification of each natural gas-driven pneumatic pump at CNX's well pads since January 2019.

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

81. In CNX's Response, CNX provided Rolling Emissions Spreadsheets showing that at the Switz5, Switz6, Switz9, Switz16, and Switz27 well pads, at least one gas-driven pneumatic pump was operating for at least 90 days and had methane emissions in at least one of the past five calendar years. Therefore, each of these well pads contain or have contained in the past five years a "pneumatic pump affected facility" as that term is defined in Subpart OOOOa, at 40 C.F.R. § 60.5365a(h)(2).

82. In CNX's Response, CNX provided specific data and information about four natural gas-driven pneumatic pumps at the Switz9, Switz11, and Switz18 well pads, but did not provide the specific locations of the pneumatic pumps, and stated that the pneumatic pumps are not routed to a control device.

83. In CNX's 2021 Subpart OOOOa annual report, CNX provided information about a natural gas-driven pneumatic pump at the Switz6 well pad, and claimed that routing it to a control device or process was technically infeasible. CNX reported a deviation for this pneumatic pump from 2015-2021, stating that the reporting requirements in 40 C.F.R. § 60.5420a(b) were not met.

84. In CNX's Response, CNX did not provide any engineering assessments that show that routing any of its pneumatic pumps to a control device and/or process is technically infeasible.

Pneumatic Controllers

85. In the EPA's Information Request, the EPA requested information about CNX's natural gas-driven pneumatic controllers at each of its well pads, including manufacturer specifications, including designed bleed rate, for each pneumatic controller.

86. In CNX's Response, CNX stated that each of CNX's well pads has one or more gas-driven pneumatic controllers. However, CNX did not provide manufacturer specifications for any pneumatic controllers.

Control Devices

87. In the EPA's Information Request, the EPA requested, for each of CNX's well pads, a list of emission units and associated air pollution control equipment, air emission tests, expected control efficiencies of the air pollution control equipment, maximum flow rates under which the expected control efficiencies can be achieved, visible emission records, inspection records, analyses to

determine whether the control devices are sufficiently designed to handle peak flow, and continuous flow rate monitoring records.

88. In CNX's Response, CNX stated that the Switz6 well pad uses a vapor destruction unit (VDU) as a control device for emissions from its storage tanks. CNX provided manufacturer's specifications for the VDU.

89. In CNX's Response, CNX did not provide records demonstrating that an initial EPA Method 22 compliance determination was performed for the VDU at Switz6.

90. CNX did not provide records for the VDU at Switz6 before August 2021 demonstrating that CNX was conducting monthly visible emissions monitoring in accordance with section 11 of EPA Method 22 at 40 C.F.R. Part 60, Appendix A-7, monthly OVA inspections of all equipment associated with the combustion device, continuous monitoring for the ignition of the pilot flame, monthly visual inspections to confirm that the pilot is lit and the continuous burning pilot flame is operating properly, monitoring to demonstrate that the control devices operated and maintained in conformance with their designs (e.g., inlet gas flow rate monitoring to demonstrate whether the inlet gas flow rate was equal to or less than the maximum specified by the manufacturer), and documentation of all periods of time during which gas was being vented to the control device and there was no flame.

Permit Applications

91. In its Information Request, the EPA requested all air permit applications submitted to OEPA, either by CNX or any previous owner or operator, for each of CNX's well pads.

92. In CNX's Response, CNX provided copies of permit applications for all of CNX's well pads.

93. CNX's permit application for the Switz6 well pad stated that the storage vessels at this well pad had 0.42 lb/hr of VOC "[e]missions before controls." CNX's Response stated that the storage vessels at the Switz6 well pad have 11.01 tpy of VOC emissions before controls.

94. CNX's permit application for the Switz27 well pad stated that it had fewer storage vessels than the number observed by the EPA during the October 2023 Inspections.

Violations

Potential to Emit VOCs from Storage Vessels

95. By failing to properly calculate potential VOC emissions using the maximum average daily throughput determined for the 30-day period prior to 30 days after startup of production of the well using a generally accepted model or calculation methodology at each of CNX's well pads, as described in Paragraphs 57-62, CNX failed to comply with the requirement to calculate its potential for VOC emissions in accordance with, and in violation of, Subpart OOOOa, at 40 C.F.R. § 60.5365a(e).

Storage Vessel Covers, Closed Vent System, and Fugitive Emissions

96. Based on emissions observed by the EPA inspectors using OGI at CNX's Switz6 well pad, as described in Paragraph 71, CNX failed to ensure that the covers and all openings of the storage vessels at these well pads form a continuous impermeable barrier over the entire surface area of the liquid in

the vessel, and that each cover opening is secured in a closed, sealed position except during the specific activities allowed by Subpart OOOOa, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5411a(b).

97. CNX failed to conduct monthly OVA inspections of the covers and closed vent systems associated with each storage vessel at CNX's Switz6 well pad and/or failed to maintain records documenting those inspections, as described in Paragraph 75, for seven nonconsecutive months, in violation of Subpart OOOOa, at 40 C.F.R. §§ 60.5416a(c) and 60.5420a(c)(6)-(7).

98. CNX failed to complete repair of identified sources of fugitive emissions within 30 calendar days after the first attempt at repair, as described in Paragraph 77 and Attachment B, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5397a(h)(1) and (2); and GP 12.2 Conditions C. 5. c) (2)-(3).

99. CNX failed to design the closed vent systems at CNX's Switz6 well pad to route all gases, vapors, and fumes emitted from the material in the storage vessels to a control device, and to design and operate closed vent systems at CNX's Switz6 well pad with no detectable emissions, as described in Paragraph 71, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5411a(c).

100. By failing to comply with emissions capture and control requirements of Subpart OOOOa related to storage vessel covers, closed vent systems, and associated control devices at its Switz6 well pad, CNX failed to comply with the 95.0 percent emission reduction requirement at the well pad, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5395a(a)(2).

Continuous Compliance

101. CNX has failed to demonstrate continuous compliance at its storage vessel affected facilities because it has not reduced VOC emissions at the storage vessels at its Switz6 well pads by 95.0 percent, or alternatively, maintained the uncontrolled actual VOC emissions from the storage vessels to less than four tons per year, and because it has not ensured that all control devices, covers, and closed vent systems meet the applicable requirements, as described in Paragraphs 71-78, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5415a(e).

Pneumatic Controllers

102. CNX failed to record pneumatic controller information and/or maintain records of this information at all of its well pads, as described in Paragraph 86, violating Subpart OOOOa, at 40 C.F.R. § 60.5420a(c)(4); and GP 12.2 Condition C. 5. d) (1) b).

Pneumatic Pumps

103. CNX failed to reduce natural gas emissions from each pneumatic pump affected facility by 95.0% at each well pad, and failed to comply with pneumatic pump recordkeeping/reporting requirements, as described in Paragraphs 81-84, in violation of Subpart OOOOa at 40 C.F.R. §§ 60.5393a(b)-(c), 60.5420a(b)(8), and 60.5420a(c)(16).

Control Devices

104. By failing to perform and/or maintain records of initial and monthly visible emission monitoring using Method 22 at 40 C.F.R. Part 60, Appendix A–7, monthly visual inspections to confirm that the pilot is lit and the continuous burning pilot flame is operating properly, and monthly OVA inspections of all equipment associated with the combustion device, and by failing to document all periods of time during which gas was being vented to the combustion device and there was no flame until August 2021, as described in Paragraphs 89-90, CNX did not demonstrate that the VDU at Switz6 operates with no visible emissions, in violation of Subpart OOOOa, at 40 C.F.R. §§ 60.5413a, 60.5417a(h)(1), and 60.5420a(c)(13); and GP 12.2 Condition C. 4. d).

Permits and Applications

105. Because CNX's permit application for the Switz6 well pad stated that the storage vessels at the well pad have VOC emissions of 0.42 lb/hr, but the emissions from those storage vessels are in fact greater than 0.42 lb/hr, as described in Paragraph 93, CNX failed to operate that well pad in accordance with the application(s) submitted, in violation of GP 12.2 Condition A. 1.

106. Because CNX's Switz27 well pad had more storage vessels than are represented in the permit applications for that well pad, as described in Paragraph 94, CNX failed to operate the well pad in accordance with the application(s) submitted, in violation of GP 12.2 Condition A. 1.

107. Because CNX violated various conditions of its permits, as summarized above, CNX failed to operate all well pads in accordance with all the terms and conditions contained in the PTIO(s), in violation of GP 12.2 Condition A. 1.

Good Air Pollution Control Practices

108. Because CNX did not maintain uncontrolled emissions at the storage vessels to less than four tons per year or reduce VOC emissions at the storage vessels by 95.0 percent at the well pads where 95.0 emission reduction was required, failed to repair leaks on time, and had uncontrolled emissions from the storage vessels, closed vent systems, pneumatic pumps, and/or other components at all of its well pads, as described in Paragraphs 55-94, CNX failed to operate its well pads in a manner consistent with good air pollution control practice for minimizing emissions, in violation of Subpart OOOOa, at 40 C.F.R. § 60.5370a(b); and GP 12.2 Condition B. 11.

Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division

Attachment A: Well Pad Info and Individual Permit Citations

Well Pad Facility	GPS Coordinates	GP 12.2 Permit #	Permit Date
Switz 5	39.838868, -80.937828	P0121600	10/11/16
Switz 6	39.831380, -80.913955	P0118981	06/05/15
Switz 7	39.841450, -80.916439	P0122557	04/20/17
Switz 9	39.846753, -80.843896	P0123093	07/26/17
Switz 11	39.824582, -80.945142	P0122001	12/21/16
Switz 16	39.825497, -80.924365	P0121599	10/11/16
Switz 18	39.848286, -80.894427	P0122714	06/02/17
Switz 26	39.823154, -80.964242	P0122002	12/21/16
Switz 27	39.803216, -80.856743	P0123079	07/26/17
Switz 28	39.823247, -80.942373	P0122001	12/21/16

Attachment B: Leak Repair Records

Well Pad	Leaking Component	Leak Detect Date	First Attempt at Repair Date	Final Repair Date	Reference for Violation(s)
Switz5	GPU B Regulator	04/23/20	08/26/19 - Invalid	09/12/19 - Invalid	"Switz5 2020 to 2021" Spreadsheet
Switz5	GPU Fitting	02/12/21	01/22/21 - Invalid	01/28/21 - Invalid	"Switz5 2020 to 2021" Spreadsheet
Switz6	Tank 12 Enardo	02/11/20	02/11/20	03/18/20 - Late	"Switz6 2021 PERs" PDF
Switz6	Tank 12 Cashco Lid	04/23/20	08/26/19 - Invalid	09/15/19 - Invalid	"Switz6 2020 to 2021" Spreadsheet
Switz6	Tank header PRV	07/29/20	Not Provided	10/08/20 - DOR	"Switz6 2020 to 2021" Spreadsheet
Switz6	Tank 12 Vapor Header	01/25/21	01/19/21 - Invalid	01/20/21 - Invalid	"Switz6 2020 to 2021" Spreadsheet
Switz6	Tank 11 Thief Hatch	01/25/21	01/19/21 - Invalid	01/20/21 - Invalid	"Switz6 2020 to 2021" Spreadsheet
Switz11	GPU N	04/22/20	08/26/19 - Invalid	09/12/19 - Invalid	"Switz11 2020 to 2021" Spreadsheet
Switz11	Leak #3	10/02/23	Not Provided	Not Provided	"Switz11_LDAR_2022_to_2024" Doc
Switz16	Filter Dryer Regulator	04/23/20	08/26/19 - Invalid	09/12/19 - Invalid	"Switz16 2020 to 2021" Spreadsheet
Switz18	GPU J Regulator	02/11/20	02/11/20	03/18/20 - Late	"Switz18 2020 PERs" PDF
Switz26	Regulator	04/23/20	08/26/19 - Invalid	09/12/19 - Invalid	"Switz26 2020 to 2021" Spreadsheet
Switz26	Motor Valve	04/23/20	08/26/19 - Invalid	09/12/19 - Invalid	"Switz26 2020 to 2021" Spreadsheet
Switz26	GPU B Regulator Vent	07/29/20	07/29/20	09/22/20 - Late	"Switz26 (5-15-21) PERs" PDF
Switz26	GPU B Reg Diaphragm	07/29/20	07/29/20	08/31/20 - Late	"Switz26 (5-15-21) PERs" PDF
Switz27	F Well ESD	01/25/21	01/19/21 - Invalid	02/28/21 - Late	"Switz27 2021 PERs" PDF and "Switz27 2020 to 2021" Spreadsheet
Switz27	GPU G Regulator	01/25/21	01/19/21 - Invalid	02/28/21 - Late	"Switz27 2021 PERs" PDF and "Switz27 2020 to 2021" Spreadsheet
Switz27	G Well ESD	01/25/21	01/19/21 - Invalid	02/28/21 - Late	"Switz27 2021 PERs" PDF and "Switz27 2020 to 2021" Spreadsheet
Switz28	GPU B sump controller	02/11/20	02/11/20	03/18/20 - Late	"Switz6 2021 PERs" PDF and "Switz27 2020 to 2021" Spreadsheet
Switz28	GPU B Dessicant	07/29/20	07/31/20	08/31/20 - Late	"Switz26 (5-15-21) PERs" PDF and "Switz27 2020 to 2021" Spreadsheet