



REGION 8

DENVER, CO 80202

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**U.S. EPA REGION 8
HEARING CLERK**

VIA EMAIL ONLY

Mr. Damien McMahan
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and

Mr. Damien McMahan
Production Supervisor
Lime Rock Resources V-A, L.P.
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Re: Notice of Violation to Lime Rock Resources V, L.P. and Lime Rock Resources V-A, L.P. CAA-08-2024-0008

Dear Mr. McMahan:

The U.S. Environmental Protection Agency is issuing Lime Rock Resources V, L.P. and Lime Rock Resources V-A, L.P. (Lime Rock) the enclosed Notice of Violation and offering an opportunity to confer regarding alleged violations of the Clean Air Act and its implementing regulations.

Specifically, the EPA alleges that Lime Rock has violated or is violating at an oil and gas production facility in the State of North Dakota:

1. The Standards of Performance 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, 40 C.F.R. Part 60, Subpart OOOOa; and
2. North Dakota Administrative Code, Title 33.1, Article 15, Chapter 7, Control of Organic Compounds, as incorporated into North Dakota's EPA-approved State Implementation Plan.

Re: *Notice of Violation to Lime Rock Resources V, L.P. and Lime Rock Resources V-A, L.P.*

Section 113(a)(3) of the Clean Air Act provides that whenever, based on information available to the Administrator of the EPA, the Administrator finds that any person has violated, or is in violation of an applicable implementation plan or requirement of the Act, the Administrator may issue an administrative compliance order, issue an administrative penalty order, or bring a civil judicial action. 42 U.S.C. § 7413(a)(3). This NOV also serves as notice to the State of North Dakota under Section 113(a)(1). 42 U.S.C. § 7413(a)(1). We are offering Lime Rock an opportunity to confer with the EPA about the violations alleged in the NOV. The conference will provide an opportunity to present information on the specific alleged violations and any efforts that Lime Rock has taken to comply or prevent future noncompliance.

To reach a timely conclusion of this matter, the EPA would like to hold an initial meeting on or before August 30, 2024. To schedule this meeting, please have your counsel call or email Nick DiMascio, Senior Assistant Regional Counsel for EPA Region 8, at (303) 312-6759 or dimascio.nicholas@epa.gov within 15 calendar days following receipt of this letter.

Sincerely,

Suzanne J. Bohan, Director
Enforcement and Compliance Assurance Division

Enclosure

cc (w/Encl.):

James L. Semerad, Director, Division of Air Quality, North Dakota Department of Environmental Quality, jsemerad@nd.gov

3. Section 109 of the Act, 42 U.S.C. § 7409, requires the EPA to establish national ambient air quality standards (NAAQS) for criteria pollutants. The primary standard must be set at a level “requisite to protect the public health” with an adequate margin of safety, and the secondary standard is intended to protect the “public welfare.”
4. Ground-level ozone is one of six criteria pollutants for which the EPA has promulgated national standards, due to its adverse effects on human health and the environment. Short-term exposures (1 to 3 hours) to ground-level ozone can cause acute health effects observed even at low concentrations, including temporary pulmonary inflammation. Long-term exposure (months to years) may cause permanent damage to lung tissue. Children and adults who are active outdoors are particularly susceptible to the adverse effects of exposure to ozone. *See National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436 (Mar. 27, 2008).*
5. Ozone is not emitted directly from sources of air pollution. Ozone is a photochemical oxidant, formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x) react in the presence of sunlight. NO_x and VOCs are known as “ozone precursors.” Sources that emit ozone precursors are regulated to reduce ground-level ozone. *See National Ambient Air Quality Standards for Ozone, 62 Fed. Reg. 38,856 (July 18, 1997).*
6. Section 110(a)(2)(C) of the Act requires that every state implementation plan for national primary and secondary ambient air quality standards include a program to regulate the construction and modification of stationary sources; this includes a permitting program as required by parts C and D of Title I of the Act. *See 42 U.S.C. § 7410(a)(2)(C).*
7. Section 111(b) of the Act authorizes the Administrator of the EPA to promulgate standards of performance applicable to “new sources” within categories of sources that cause “air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7411(b).

8. A “stationary source” is a building, structure, facility, or installation that emits or may emit any air pollutant. 42 U.S.C. § 7411(a)(3).
9. In 1979, the EPA listed “Crude Oil and Natural Gas Production” as a source category that contributes significantly to air pollution and for which standards of performance would be established. Priority List and Additions to the List of Categories of Stationary Sources, 44 Fed. Reg. 49,222 (Aug. 21, 1979).
10. It is unlawful for owners and operators of any new source to operate in violation of applicable standards of performance after the standards have gone into effect. 42 U.S.C. § 7411(e).

A. New Source Performance Standards

1. NSPS OOOOa

11. A “new source” is any stationary source, the construction or modification of which is commenced after the promulgation of the standards of performance that will apply to such source. 42 U.S.C. § 7411(a)(2).
12. In 2016, the EPA promulgated “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources” under Section 111 of the Clean Air Act. 81 Fed. Reg. 35,824 (June 3, 2016). These standards are set forth in 40 C.F.R. part 60, subpart OOOOa. 40 C.F.R. §§ 60.5360a–5432a & Tables 1-3.¹
13. Each of these standards is a “standard of performance” within the meaning of Section 111(a)(1) of the Clean Air Act, 42 U.S.C. § 7411(a)(1), or a “design, equipment, work practice, or operational standard, or combination thereof” under Section 111(h) of the Clean Air Act, 42 U.S.C. § 7411(h).
14. NSPS OOOOa applies to “affected facilities” for which owners or operators commence construction, modification or reconstruction after September 18, 2015, and on or before December 6, 2022. 40 C.F.R. § 60.5365a.

¹ Following promulgation of the 2016 final rule, the EPA granted reconsideration of fugitive emission requirements at well sites and compressor stations, well-site pneumatic pump standards, and the requirements for professional engineer certification of closed vent systems. 82 Fed. Reg. 25,730 (June 5, 2017); 83 Fed. Reg. 52,056 (Oct. 15, 2018). This reconsideration does not affect the allegations in this Notice of Violation.

15. A “storage vessel affected facility” under NSPS OOOOa includes a single storage vessel that commenced construction, reconstruction, or modification after September 18, 2015, and on or before November 16, 2020, that has the potential for VOC emissions equal to or greater than 6 tons per year (tpy), as determined according to 40 C.F.R. § 60.5365a(e)(1).
16. “Modification” means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. 40 C.F.R. § 60.2.
17. “VOCs” include any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart. 40 C.F.R. § 60.2.
18. NSPS OOOOa requires “[a]t all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.” 40 C.F.R. § 60.5370a(b).
19. NSPS OOOOa requires storage vessel affected facilities that utilize a control device to be equipped with a cover that meets the requirements of 40 C.F.R. § 60.5411a(b) and is connected through a closed vent system that meets the requirements of § 60.5411a(c) and (d), and emissions must be routed to a control device that meets the conditions specified in § 60.5412a(c) or (d). 40 C.F.R. § 60.5395a(b)(1).
20. Owners and operators must comply with the following requirements for closed vent systems associated with storage vessel affected facilities under NSPS OOOOa:
 - a. Design the closed vent system to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the

- requirements specified in 40 C.F.R. § 60.5412a(c) and (d), or to a process. *Id.* § 60.5411a(c)(1)
- b. Design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections. 40 C.F.R. § 60.5411a(c)(2).
21. Owners and operators must comply with the following requirements for control devices to reduce emissions from storage vessel affected facilities under NSPS OOOOa:
- a. Install and operate a continuous burning pilot flame. 40 C.F.R. §§ 60.5412a(d)(1)(ii), 60.5413a(e)(2).
- b. Operate a flare in accordance with the requirements of 40 C.F.R. § 60.18. *Id.* § 60.5412a(d)(3). Flares shall be operated with a flame present at all times when emissions may be vented to them. *Id.* § 60.18(c)(2), (e).
- c. Operate each control device used to comply with NSPS OOOOa at all times when gases, vapors, and fumes are vented from storage vessel affected facilities through the closed vent system to the control device. 40 C.F.R. § 60.5412a(d)(4).
22. Each control device used to comply with the emission reduction standard in 40 C.F.R. § 60.5395a(a)(2) for a storage vessel affected facility must demonstrate continuous compliance according to § 60.5417a(h)(1)-(4). *Id.* § 60.5415a(e)(3)(ii)(B).
23. Each control device must be operated following the manufacturer's written operating instructions, procedures and maintenance schedules to ensure good air pollution control practices to reduce emissions. 40 C.F.R. § 60.5417a(h)(3).
- B. North Dakota Air Quality Regulations for the Oil & Gas Industry – Requirements for Organic Compounds Gas Disposal**
24. The EPA approved the State of North Dakota's Air Pollution Control Rules in its SIP. *See* Approval & Promulgation of Implementation Plans; North Dakota, 84 Fed. Reg. 1,610 (Feb. 5, 2019). The approved SIP incorporates North Dakota's requirements for flares at oil and gas facilities, as set forth in NDAC 33.1-15-07 for

Control of Organic Compounds. *See* 42 U.S.C. § 7413(a)(1) (authorizing EPA enforcement of requirements and prohibitions in EPA-approved SIPs after 30-day notice to the State).

25. No person may cause or permit the emission of organic compounds gases and vapors, except from an emergency vapor blowdown system or emergency relief system, unless these gases and vapors are burned by flares, or an equally effective control device as approved by the department. Minor sources, as determined by the department and not subject to New Source Performance Standards (NSPS), may be granted exemptions to this subsection. NDAC 33.1-15-07-02.1.
26. Each flare required under this section must be equipped and operated with an automatic igniter or a continuous burning pilot. NDAC 33.1-15-07-02.3.
27. “Emission” means a release of air contaminants into the ambient air. NDAC 33.1-15-01-04.9.
28. “Person” means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof and any legal successor, representative agent, or agency of the foregoing. NDAC 33.1-15-01-04.29.

II. FACTUAL BACKGROUND & FINDINGS OF VIOLATION

A. Factual Background

29. Lime Rock is a limited partnership formed in the State of Delaware and at all relevant times to this NOV is doing business in the State of North Dakota.
30. Lime Rock is a “person” within the meaning of Section 302(e) of the Clean Air Act, 42 U.S.C. § 7602(e), and within the meaning of North Dakota Administrative Code 33.1-15-01-04.29.
31. Lime Rock owns and operates the oil and natural gas facility in Tables 1 and 2.
32. As a person operating in the State of North Dakota, Lime Rock is subject to the Requirements for Organic Compounds Gas Disposal under NDAC 33.1-15-07-02, at the facility in Tables 1 and 2.

33. Oil and water produced from the facility in Tables 1 and 2 are stored in produced oil and produced water storage tanks. Produced oil and produced water storage tanks are kept at or near atmospheric pressure.
34. When pressurized oil is transferred from higher-pressure separators or heater treaters to lower-pressure atmospheric storage tanks, some of the hydrocarbons in the oil, including VOCs and hazardous air pollutants, vaporize in a process known as “flashing.” After flashing occurs, the oil continues to emit vapors due to liquid level changes and temperature fluctuations (commonly known “working,” “standing,” or “breathing” losses).
35. Vapors from storage tanks are captured and controlled through a series of pipes or vent lines, often referred to as a closed vent system or CVS, that route vapors to a combustion device.
36. Lime Rock provided the information in Table 1 in registration and other documents to the North Dakota Department of Environmental Quality (NDDEQ).

Table 1

Site Name	Associated NDIC Well Numbers	Site First Production Date	Site Post-Control VOC from Tanks (TPY)
Lillibridge West Pad	25606, 25607, 25608, 25609	11/26/2013	32.71

37. In June 2019, four new wells were completed at the Lillibridge West Pad: Lillibridge 20-17-16H (NDIC Permit No. 35113); Lillibridge 20-17-15H (NDIC Permit No. 35112); Lillibridge 20-17-14H (NDIC Permit No. 35111); Lillibridge 20-17-13H (NDIC Permit No. 35110).
38. Upon completion, additional production from the new wells was routed to the storage tanks at the facility, which resulted in physical changes in, and changes to

the method of operation of, the storage tanks that increased VOC emissions from the tanks by approximately 49.5 tpy.

- 39. In October 2023, EPA’s contractor, Toeroek Associates, Inc. (Toeroek)/ChampionX Emissions Technologies Group (ChampionX) performed aerial monitoring surveys of oil and gas facility operations in North Dakota. The aerial surveys were conducted using a helicopter operating at approximately 250 feet above ground level and an Optical Gas Imaging (OGI) camera.
- 40. On October 28, 2023, Toeroek/Champion X observed hydrocarbon emissions from an unlit flare at the Lime Rock facility in Tables 1 and 2.
- 41. On November 15, 2023, after reviewing the information provided by Toeroek/Champion X, EPA contacted Lime Rock representatives to inform them of the unlit flare at the facility in Tables 1 and 2, which was identified in the aerial survey on October 28, 2023.
- 42. Based on the first production dates for the site listed in Table 1, modifications to the storage vessels at the facility in 2019, information provided by Lime Rock to NDDEQ in registration and other documents, and well production data reported by Lime Rock to the North Dakota Oil and Gas Division, EPA believes that storage vessels and associated emissions control equipment at the facility in Table 1 are subject to requirements for storage vessel affected facilities in the New Source Performance Standards, as shown in Table 2.

Table 2

Site Name	NSPS to which Site is Subject
Lillibridge West Pad (including Lillibridge 20-17-16H; Lillibridge 20-17-15H; Lillibridge 20-17-14H; Lillibridge 20-17-13H)	OOOOa

B. Alleged Violations

1. NSPS OOOOa

43. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated requirements under 40 C.F.R. § 60.5370a(b) to maintain and operate at all times, including periods of startup, shutdown, and malfunction, storage vessel affected facilities and the associated flare air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere.
44. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated the requirement under 40 C.F.R. § 60.5395a(b)(1) to equip storage vessel affected facilities 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 that routes emissions to a control device that meets the conditions specified in § 60.5412a(c) or (d), because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere.
45. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated requirements under 40 C.F.R. §§ 60.5395a(b)(1) and 60.5411a(c)(1)-(2) 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 and to operate storage vessel closed vent system(s) with no detectable emissions, as determined using olfactory, visual, and auditory inspections, because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere.
46. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated requirements under 40 C.F.R. §§ 60.5412a(d)(1)(ii) and 60.5413a(e)(2) to install and operate a continuous burning pilot flame in the flare, because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere.

47. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated requirements under 40 C.F.R. §§ 60.5412a(d)(3)-(4) and 60.18(c)(2) and (e) to operate each flare control device at all times when emissions are vented from the storage vessel affected facility through the closed vent system to the control device, because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere.
48. Based on aerial survey findings at the NSPS OOOOa-subject facility in Tables 1 and 2, Lime Rock violated 40 C.F.R. § 60.5415a(e)(3)(ii)(B) by failing to demonstrate continuous compliance according to § 60.5417a(h)(1)-(4) for each control device used to comply with the emission reduction standard in § 60.5395a(a)(2). Specifically, Lime Rock failed to operate each control device following the manufacturer's written operating instructions, procedures and maintenance schedules to ensure good air pollution control practices to reduce emissions, because the flare was unlit and venting uncontrolled VOC emissions to the atmosphere. *Id.* § 60.5417a(h)(3).
49. Each of the violations alleged above are violations of Section 111 of the Clean Air Act, 42 U.S.C. § 7411(e).

2. North Dakota Air Quality Regulations for the Oil & Gas

Industry – Requirements for Organic Compounds Gas Disposal

50. Based on aerial survey findings at the facility in Tables 1 and 2, Lime Rock violated requirements under NDAC 33.1-15-07-02.1 by causing or permitting the emission of organic compounds gases and vapors which were not burned by flares or an equally effective control device approved by the North Dakota Department of Environmental Quality. NDAC 33.1-15-07-02.1.
51. Based on aerial survey findings at the facility in Tables 1 and 2, Lime Rock violated requirements under 33.1-15-07-02.3 to equip and operate each flare with an automatic igniter or a continuous burning pilot. NDAC 33.1-15-07-02.3.

III. ENFORCEMENT AUTHORITY

52. Section 113(a) of the Act authorizes the Administrator of the EPA, after notification is provided, to issue an order requiring any person who has violated or violates any requirement or prohibition of an applicable State implementation plan or permit to: (a) issue an order requiring such person to comply with the requirements or prohibitions of such plan or permit; (b) issue an administrative order to comply with Section 113(d) of the Act; or (c) bring a civil action in accordance with Section 113(b) of the Act. *See* 42 U.S.C. § 7413(a)(1).
53. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of the Clean Air Act, the Administrator may issue an order requiring such person comply with the requirements or prohibition of the Act, issue an administrative penalty order in accordance with section 113(d) of the Act, or bring a civil action in accordance with section 113(b) of the Act for injunctive relief or civil penalties.
54. The issuance of this Notice of Violation does not in any way limit or preclude the EPA from pursuing additional enforcement options concerning inspections or review referenced in this Notice of Violation. Also, this Notice of Violation does not preclude enforcement action for violations not specifically addressed in this Notice of Violation.

Issued: June 28, 2024

Suzanne J. Bohan, Director
Enforcement & Compliance Assurance Division
Environmental Protection Agency, Region 8