

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
FOUR PENN CENTER – 1600 JOHN F. KENNEDY BLVD.
PHILADELPHIA, PENNSYLVANIA 19103**

	:	NOTICE OF VIOLATION
	:	
In the Matter of:	:	AND
	:	
United Refining Company	:	OPPORTUNITY TO CONFER
15 Bradley Street	:	
Warren, Pennsylvania 16365	:	EPA No. CAA-03-2023-0003

I. STATUTORY AUTHORITIES

1. This Notice of Violation and Opportunity to Confer (referred to hereinafter as “NOVOC”) is issued by the U.S. Environmental Protection Agency (the “Agency” or “EPA”) to United Refining Company (“URC”) pursuant to Section 113(a) of the Clean Air Act (“CAA” or the “Act”), as amended on November 15, 1990 by P.L. 101-549, 42 U.S.C. § 7413(a), and with further reference to Sections 3008(a) and (g) of the Solid Waste Disposal Act, commonly known as the Resource Conservation and Recovery Act of 1976, as amended by *inter alia*, by the Hazardous and Solid Waste Amendments of 1984 (collectively referred to hereinafter as “RCRA”).

2. This NOVOC is issued to URC for CAA and RCRA violations at URC’s petroleum refining facility located at 15 Bradley Street, Warren, Pennsylvania 16365 (the “Facility”), including violations of:

- a. Sections 111 and 112 of the CAA, 42 U.S.C. §§ 7411 and 7412, and its implementing regulations, including but not limited to 40 C.F.R. Part 60, Subpart A, Ja, Ka, VV, VVa, GGG, GGGa and QQQ (*Standards of Performance for New Stationary Sources*); 40 C.F.R. Part 61, Subpart FF (*National Emission Standards for Hazardous Air Pollutants*); and 40 C.F.R. Part 63, Subparts R, CC, SS, WW and XX (*National Emission Standards for Hazardous Air Pollutants for Source Categories*);
- b. requirements and provisions of the federally enforceable CAA Title V operating permit for the Facility (Title V Permit No. 62-00017, hereinafter, “Title V Permit”) issued by the Pennsylvania Department of Environmental Protection (“PADEP”) to the Facility pursuant to 25 Pa. Code §§ 127.501- 127.543, which constitute violations of Section 502(a) of the CAA, 42 U.S.C. §§ 7661a(a), and 25 Pa. Code Sections 127.25, 127.444 and 127.83 of the federally enforceable Pennsylvania State Implementation Plan (“PA SIP”); and
- c. requirements and provisions of the current EPA-authorized revised Pennsylvania Hazardous Waste Regulations (“PaHWR”) codified at 25 Pa. Code Chapters 260a-266a, 266b, and 268a-270a, which have become federally enforceable requirements of the RCRA pursuant to RCRA § 3008(a), 42 U.S.C. § 6928(a).

II. APPLICABLE STATUTORY & REGULATORY REQUIREMENTS

A. CAA Requirements

3. Section 110(a) of the Act, 42 U.S.C. § 7410(a), requires each state to adopt and submit to the Administrator of the EPA a plan which provides for implementation, maintenance, and enforcement, for each promulgated National Ambient Air Quality Standard (“NAAQS”), in each air quality control region (or portion thereof), known as a State Implementation Plan (“SIP”).

4. Each SIP must include enforceable emission limitations and other control measures, and regulation of the modification and construction of any stationary source within the areas covered by the plan, as necessary to assure that NAAQSs are maintained. Section 110(a)(2)(A) of the Act, 42 U.S.C. § 7410(a)(2)(A). Each SIP must also provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor, compile and analyze data on ambient air quality and upon request make such data available to the EPA. Section 110(a)(2)(B) of the Act, 42 U.S.C. § 7410(a)(2)(B).

5. Title V of the Act, at 42 U.S.C. §§ 7661-7661f, establishes an operating permit program for major sources of air pollution. Section 502(d) of the Act, 42 U.S.C. § 7661a(d), provides that each state must submit to the EPA Administrator a permit program meeting the requirements of CAA Title V.

6. Pursuant to Section 502(b) of the Act, 42 U.S.C. § 7661a(b), the EPA Administrator promulgated regulations providing for the establishment of Title V permitting programs at 40 C.F.R. Part 70.

7. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 70.7(b) provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except in compliance with a Title V permit.

8. Upon EPA approval, SIP requirements are federally enforceable under CAA Section 113.¹ Any permit limitation or condition contained within a permit issued under an EPA-approved program that is incorporated in a SIP is a requirement of the SIP and is federally enforceable under CAA Section 113.²

9. 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 EPA Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement of prohibition of an applicable SIP, the Administrator may issue an order requiring such person to comply with the requirements or prohibitions of such plan, issue an administrative penalty order in accordance with Section 113(d) of the Act, or bring a civil action in accordance with section 113(b) of the Act for injunctive relief or civil penalties.

10. Pursuant to sections 4(1) and 5 of the Air Pollution Control Act (APCA), Pennsylvania Statutes Title 35 [35 P.S.] §§ 4004-4005, and Section 110 of the CAA, 42 U.S.C. §§ 7410, the Commonwealth of Pennsylvania adopted regulations that comprise the State Implementation Plan for

¹ See, 42 U.S.C. § 7413(a) and (b).

² See, 40 C.F.R. § 52.23.

Pennsylvania (the “PA SIP”). The PA SIP regulations as approved by the EPA are set forth in 40 C.F.R. § 52.2020(c).

11. The PA SIP regulations governing construction, modification and reactivation plan approval requirements and operations permitting for stationary sources are currently codified at 25 Pa. Code Chapter 127 (Construction, Modification, Reactivation and Operation of Sources). Chapter 127 is included in the PA SIP approved by the EPA. *See* 40 C.F.R. § 52.2020(c). Subchapter G of Chapter 127, 25 Pa. Code §§ 127.501 – 127.543, contains Pennsylvania’s Title V Operating Permits program; Subchapter G was approved separately by EPA and is not in the PA SIP. *See* 61 Fed. Reg. 39597 (July 30, 1996).

12. A person may not operate a source unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by PADEP. 25 Pa. Code § 127.25.

13. A person may not cause or permit the operation of a source subject to the APCA unless the source and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the application and conditions in the plan approval and operating permit issued by PADEP; and, a person may not cause or permit the operation of an air contamination source in a manner inconsistent with good operating practices. 25 Pa. Code § 127.444.

14. URC’s Facility is subject to the compliance requirements of 25 Pa. Code § 127.25 (related to plan approvals) and 127.444 (related to operating permits) of Title 25 of the PA SIP.

B. CAA and RCRA Requirements Applicable to the Facility

15. The URC Facility is a major source of hazardous air pollutants (“HAPs”) and operates under a CAA Title V Permit (Permit No. 62-00017) issued by PADEP. The Title V Permit for the Facility [issued in accordance with the provisions of the APCA, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127] was issued on February 13, 2019, became effective (as revised) on February 6, 2020 and expires on January 31, 2024.³ The Title V Permit specifies emission limits, testing, monitoring, recordkeeping, reporting, and other specific operating requirements, as specified therein.

16. The Facility is also subject to regulation by 40 Code of Federal Regulations (“C.F.R.”) Part 60 [*Standards of Performance for New Stationary Sources*], Part 61 [*National Emission Standards for Hazardous Air Pollutants*] and Part 63 [*National Emission Standards for Hazardous Air Pollutants for Source Categories*].

17. EPA has promulgated National Emissions Standards for Hazardous Air Pollutants (“NESHAP”) to limit benzene emissions from several source categories. These source categories included benzene waste operations (40 C.F.R. Part 61, Subpart FF). The Facility is a large quantity generator of hazardous waste, including benzene waste (D018), and is subject to the requirements and provisions of the Benzene NESHAP.

³ The Title V Permit (Permit No. 62-00017) was previously issued to URC on December 14, 2012 and on July 9, 2015.

18. The NESHAP that applies to hazardous air pollutants from petroleum refineries is found at 40 C.F.R. Part 63, Subpart CC (“NESHAP CC”), and applies to petroleum refining process units and to related emissions points, including gasoline loading racks, that are located at a plant site that is a major source under the CAA. Group 1 gasoline loading racks classified under Standard Industrial Classification code 2911 and located within a contiguous area and under common control with a petroleum refinery are required to comply with the 40 C.F.R. Part 63, Subpart R (“NESHAP R”), NESHAP for gasoline distribution facilities, and applicable “Standards for Volatile Organic Compound (VOC) emissions from bulk gasoline terminals,” as set forth in 40 C.F.R. Part 63, Subpart XX (“NESHAP XX”). NESHAP CC requirements include leak detection and repair (“LDAR”) provisions applicable to organic HAPs and related emission points (e.g., pumps and valves), in combination, that are located at a single refinery plant site and are associated with a petroleum refinery or petroleum refining process units.

19. New Source Performance Standards (“NSPS”) implement CAA Section 111(b) and are issued for categories of sources which EPA has listed because they cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. These rules envision a best available technology in the form of cost-effective technology-based control standards for categories of new, reconstructed and modified stationary air pollution sources. URC operates flares at the Facility that are subject to the 40 C.F.R. Part 60, Subpart Ja (or “Subpart Ja”) “*Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007.*” Excess emissions from these sources are also subject to the general notification and record keeping (i.e., reporting) requirements of 40 C.F.R. Part 60, Subpart A.

20. EPA has also promulgated NSPS regulations addressing “*Standards of Performance for New Stationary Sources of Equipment Leaks of VOC Petroleum Refineries and Synthetic Organic Chemical Manufacturing Industry.*” EPA therein made changes to the Synthetic Organic Chemical Manufacturing Industry (“SOCMI”) standards located at 40 C.F.R. Part 60, Subpart VV, and added new “*Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries*” as 40 C.F.R. Part 60, Subpart GGG,” (applicable to affected facilities for which construction or modification commenced after January 4, 1983, and on or before November 7, 2006). On November 16, 2007, EPA promulgated amended standards of performance for equipment leaks of VOCs in the SOCMI and to the standards of performance for equipment leaks of VOC in petroleum refineries. These included final clarifying amendments, revisions and corrections to 40 C.F.R. Part 60, Subparts VV and GGG, a new Subpart VVa that applies to affected facilities in the SOCMI that are constructed, reconstructed, or modified after November 7, 2006, and a new Subpart GGGa that applies to affected facilities at petroleum refineries that are constructed, reconstructed, or modified after November 7, 2006. These amendments included new recordkeeping and reporting provisions to demonstrate compliance with new monitoring and repair provisions.

21. URC is also a large quantity generator of hazardous waste at the Facility, which has been issued EPA ID No. PAD002105179. Hazardous waste streams generated on-site at the Facility include dissolved gas flotation (DGF) float (EPA hazardous waste No. K048), heat exchanger bundle cleaning sludge (K050), American Petroleum Institute (API) separator sludge (K051), clarified slurry oil tank sediment (K170), spent hydrotreating catalyst (K171), benzene waste (D018), mercury debris (D009), and ignitable and/or lead contaminated waste (D001 and/or D008). As a large quantity generator of hazardous waste at the Facility, Respondent is subject to the provisions of Pennsylvania’s current authorized revised PaHWR, codified at 25 Pa. Code Chapters 260a-266a, 266b, and 268a-270a,

which have become requirements of RCRA Subtitle C and are federally enforceable by EPA pursuant to RCRA § 3008(a), 42 U.S.C. § 6928(a).⁴

III. NOTICE & FINDING OF VIOLATIONS

22. EPA has investigated Respondent for compliance with: the CAA, 42 U.S.C. §§ 7401–7671q, and its implementing regulations; the Facility’s Title V Permit (Permit No. 62-00017) and the PA SIP permit regulations; RCRA Subtitle C, 42 U.S.C. §§ 6921-6939e; and federally-authorized PaHWR requirements, at Respondent’s Warren, Pennsylvania Facility, EPA ID No. PAD002105179. Based upon information currently available to the EPA, as summarized below in this NOVOC, Respondent is hereby notified of EPA’s determination that Respondent is in violation of: (a) Title V of the CAA, 42 U.S.C. §§ 7661-7661f, and provisions of the federally enforceable PA SIP, (b) requirements of the Facility’s Title V Permit⁵; (c) requirements of 40 C.F.R. Part 60, Subparts A, Ja, Ka, VV, VVa, GGG, GGGa and QQQ (*Standards of Performance for New Stationary Sources*); 40 C.F.R. Part 61, Subpart FF (*National Emission Standards for Hazardous Air Pollutants*); and 40 C.F.R. Part 63, Subparts R, CC, SS, WW and XX (*National Emission Standards for Hazardous Air Pollutants for Source Categories*), as further delineated and described, below; and (d) provisions of RCRA Subtitle C, 42 U.S.C. §§ 6921-6939e, and federally-authorized PaHWR requirements, at Respondent’s Warren, Pennsylvania Facility (EPA ID No. PAD002105179).

23. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), requires the Administrator of the EPA to notify a person in violation of any requirement or prohibition of an applicable implementation plan or permit, and the State in which the plan applies of such violation. This NOVOC is issued to Respondent for violations of: the requirements of the federally enforceable PA SIP and the Title V Permit.

24. Section 3008(a)(1) and (2) of RCRA, 42 U.S.C. § 6928(a)(1) and (2), further provides that upon prior notice to the Commonwealth of Pennsylvania (which is authorized to carry out a hazardous waste program under 42 U.S.C. § 6926), whenever on the basis of any information the Administrator determines that any person has violated or is in violation of any requirement of this subchapter, the Administrator may issue an order assessing a civil penalty for any past or current violation, requiring compliance immediately or within a specified time period, or both, or the Administrator may commence a civil action in the United States district court in the district in which the violation occurred for appropriate relief, including a temporary or permanent injunction. Section 3008(g) of RCRA, 42 U.S.C. § 6928(g), also authorizes the assessment of a civil penalty against any person who violates any requirement of Subtitle C of RCRA.

⁴ When EPA last authorized the Pennsylvania hazardous waste regulations on June 29, 2009, EPA approved Pennsylvania’s incorporation by reference of the federal regulations which were in effect as of October 12, 2005, including, among other things, incorporation of 40 C.F.R. § 262.34 (Accumulation Time, which lists the requirements for the generator permit exemption). As a result, 40 C.F.R. § 262.34 (2005) is the currently federally enforceable version of that RCRA regulation in Pennsylvania. On November 28, 2016, EPA re-codified the generator permit exemption, effective on May 30, 2017. The federal requirements previously found in 40 C.F.R. § 262.34 are now re-codified at 40 C.F.R. §§ 262.15 – 262.17. The Code of Federal Regulation RCRA citations used herein are to the 2005 Federal regulations.

⁵ The Title V Permit includes requirements of SO₂ PA Plan Approval 62-017G, which was issued to URC on April 26, 2003 and has been incorporated into the Title V Permit through administrative amendment. Its requirements are now in TV Permit Condition C-I-006 and -007 (at p. 28 of 556).

25. In accordance with Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2), EPA has notified the Commonwealth of Pennsylvania, through Melissa Gross, Chief, Compliance & Information Management Section, Hazardous Waste Management Division, Pennsylvania Department of Environmental Protection, of its intent to request that the U.S. Department of Justice bring a Civil Judicial Action against URC for the RCRA Subtitle C violations that are alleged herein against URC at the Facility.

26. The authority to issue Notices of Violation has been delegated to the Director of EPA Region III's Enforcement and Compliance Assurance Division. The geographical jurisdiction of EPA Region III includes the Commonwealth of Pennsylvania. Though not required by the Act, a description of the applicable regulatory background, relevant facts, and specific violations of those applicable federal regulations and of the federally enforceable Title V Permit provisions found by EPA are identified below.

27. By and through this NOVOC, the EPA is extending to you an opportunity to confer with the Agency, and to discuss, advise and provide the Agency with any further information you believe the EPA should consider with respect to the alleged facts and violations referenced above and identified below.

IV. GENERAL FACTUAL BACKGROUND

28. URC operates as an independent petroleum refiner, NAICS Code 324110, in Warren, Pennsylvania (EPA Registry Identification No. 110043815690). The Facility is a major source of HAPs. The Facility therefore operates under its Title V Permit, which specifies emission limits, testing, monitoring, recordkeeping, reporting, and other specific operating requirements.

29. The Facility is subject to regulation under Title 40 of the Code of Federal Regulations ("C.F.R.") and to conditions specified in the Title V Permit. Applicable regulations in 40 C.F.R. Part 60 (*Standards of Performance for New Stationary Sources*) include Subparts A, Ja, Ka, VV, VVa; GGG; GGGa; and QQQ. Applicable regulations in 40 C.F.R. Part 61 (*National Emission Standards for Hazardous Air Pollutants*) include Subpart FF and those in 40 C.F.R. Part 63 (*National Emission Standards for Hazardous Air Pollutants for Source Categories*) include Subparts R, CC, SS, WW, and XX. As a large quantity generator of hazardous waste at the Facility, URC is subject to the provisions of Pennsylvania's current authorized revised PaHWR, codified at 25 Pa. Code Chapters 260a-266a, 266b, and 268a-270a, which have become requirements of RCRA Subtitle C and are federally enforceable by EPA pursuant to RCRA § 3008, 42 U.S.C. § 6928.

30. From August 2-6, 2021, duly authorized representatives of EPA's National Enforcement Investigations Center ("NEIC") conducted a multimedia compliance investigation ("Inspection") of the Facility.

V. FINDING OF CAA VIOLATIONS

I. Failure to Operate Oil-Water Separator Components in Accordance with Applicable 40 C.F.R. Part 60, Subpart QQQ (Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems), and Title V Permit Wastewater Requirements

A. Regulatory Background and Title V Permit Conditions

31. Pursuant to 40 C.F.R. § 60.690(a)(1), the provisions of 40 C.F.R. Part 60, Subpart QQQ (*Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems*), at 40 C.F.R. §§ 60.690 – 699 (hereinafter, “Subpart QQQ”), apply to “affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.”

32. Pursuant to the definitions set forth at 40 C.F.R. § 60.2:

a. “*Affected facility*” means, with reference to a stationary source, any apparatus to which a standard is applicable.

b. “*Individual drain system*,” an “*oil-water separator*” and an “*aggregate facility*” is each a “separate affected facility.”

33. Pursuant to 40 C.F.R. § 60.690(b), the construction or installation of a new *individual drain system* constitutes a modification to an “*aggregate facility*.”

34. Pursuant to the definitions set forth at 40 C.F.R. § 60.691:

a. “*Individual drain system*” means all process drains connected to the first common downstream junction box and includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator;

b. “*Slop oil*” means the floating oil and solids that accumulate on the surface of an oil-water separator;

c. “*Oil-water separator*” means “wastewater treatment equipment used to separate oil from water consisting of a separation tank, which also includes the forebay and other separator basins, skimmers, weirs, grit chambers, and sludge hoppers. Slop oil facilities, including tanks, are included in this term along with storage vessels and auxiliary equipment located between individual drain systems and the oil-water separator. This term does not include storage vessels or auxiliary equipment which do not come in contact with or store oily wastewater”; and,

d. “*Aggregate facility*” means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

1. Regulatory Standards for Oil-Water Separators

35. 40 C.F.R. § 60.692-3 (*Standards: Oil-water separators*) provides, in relevant and applicable part and with exceptions not herein applicable, that:

(a) Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart shall be equipped and operated with a fixed roof, which meets the following specifications

(1) The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall.

* * *

(3) If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance.

(4) Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly.

* * *

(e) Slop oil from an oil-water separator tank and oily wastewater from slop oil handling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system. Once slop oil is returned to the process unit or is disposed of, it is no longer within the scope of this subpart. Equipment used in handling slop oil shall be equipped with a fixed roof meeting the requirements of paragraph (a) of this section.

2. Relevant and Applicable Title V Permit Work Practice Requirements

36. Title V (or “TV”) Permit Conditions E-I-001, E-II-002, E-III-003, E-IV-04, E-V-05 and -06, and E-VI-07 through -021 (TV Permit pp. 479 – 489 of 556) pertain to Wastewater Fugitive Emissions, Wastewater Separators and Wastewater Systems at the Facility and incorporate, among other requirements, the applicable Subpart QQQ requirements that apply to URC’s Facility.

37. TV Permit Condition E-VI-007 (at TV Permit p. 483 of 556) includes work practice requirements which provide and require that: “Each owner or operator subject to the provisions of this subpart shall comply with the requirements of 40 C.F.R. § 60.692-1 to 40 C.F.R. § 60.692-5 and with 40 C.F.R. § 60.693-1 and 40 C.F.R. § 60.693-2, except during periods of startup, shutdown, or malfunction.”

B. Factual Background

38. In 1994, URC expanded the Facility’s refining operations by adding the “DHT 2 Unit,” the “Hydrogen Process Unit,” and the “Prefractionator 2 Process Unit” and installing new individual drain systems within them to comply with the Subpart QQQ requirements.

39. During the Inspection, NEIC inspected the following wastewater treatment equipment at the Facility that met the 40 C.F.R. § 60.691 definition of “oil-water separator” and were subject to

the control requirements of Subpart QQQ and to the Title V Permit Wastewater Requirements: the “Combo Catch” Oil-Water Separator; the “API Oil-Water Separator”; the “API Skimmer Separator (TK418)”; Tank TK420; “Slop Oil Tank” (TK467); Stormwater Tank (TK423); and the “Oil Skimmer Sump Tank (D102)”.

40. During the Inspection, NEIC observed that the Facility’s Combo Catch Oil-Water Separator receives wastewaters from the East side of the Facility, including the DHT 2 and Prefractionator 2 process units. The individual drain systems from the DHT 2 and Prefractionator 2 process units, together with the Combo Catch Oil-Water Separator, constitute a modified aggregate facility subject to Subpart QQQ under 40 C.F.R. §§ 60.690(b) and 60.691.

41. While the main separation tank of the Combo Catch Oil-Water Separator is equipped with a floating roof, its North Sump (“skimmer cell”) and South Sump (“injection cell”) sections are each equipped with a fixed roof and an access hatch that is not vented to a control device.

C. Alleged Violations

COUNT I – “Combo Catch” Oil-Water Separator – Failure to Comply with 40 CF.R. §§ 60.692-3(a)(1), (3), and (4) and the Title V Permit Wastewater Requirements.

42. During the Inspection, NEIC observed emissions from each of the Combo Catch Oil-Water Separator’s North Sump “skimmer cell” and South Sump “injection cell” access hatches, which had both been left in the open position. NEIC further observed and documented that the South Sump access hatch could not be closed because the hinges were weathered. NEIC measured the volatile organic compound (“VOC”) leaks from the both the North Sump and the South Sump access hatches using Method 21 monitoring equipment and techniques, and recorded that both open hatches were venting greater than 10,000 ppm VOCs.⁶ As demonstrated by these observations, URC failed to keep the access doors or openings on the roof of the Combo Catch Oil-Water separator closed at all times during operation of the separator system, in violation of 40 C.F.R. § 60.692-3(a)(3) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.⁷

43. Using an infrared camera, NEIC also observed gaps in the seams of the fixed roof portions of the Combo Catch Oil-Water Separator (*i.e.*, the North Sump and South Sump fixed roof), as well as emissions from the gaps.⁸ As demonstrated by these observations, URC failed to install a fixed roof to completely cover the separator tank or other auxiliary equipment, and operates the Combo Catch Oil-Water Separator with a fixed roof that completely covers the separator tank or other auxiliary equipment, in violation of 40 C.F.R. § 60.692-3(a)(1) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements⁹.

44. During the Inspection, NEIC requested URC’s Subpart QQQ inspection records. URC representatives stated that URC did not conduct Subpart QQQ inspections of the Combo Catch Oil-Water Separator and the Facility could not provide any related inspection records. As demonstrated by the URC representative’s statements, the absence of Subpart QQQ inspection records, and the fixed

⁶ See “NEIC CIVIL INVESTIGATION REPORT, United Refining Company, Warren, Pennsylvania 16365” prepared for U.S. EPA Region 3 and authorized for release on December 6, 2021 (hereinafter “Insp. Rpt.”) at p. 15.

⁷ See TV Permit Condition E-VI-007, Subparagraph a, of the Title V Permit Wastewater Requirements (at p. 483 of 556).

⁸ See Insp. Rpt. Appendix CAA D (FLIR Video No. 169).

⁹ See TV Permit Condition E-VI-007, Subparagraph a, of the Title V Permit Wastewater Requirements (at p. 483 of 556).

open position of the South Sump access hatch, URC failed to conduct semiannual visual inspection to ensure the access doors and other openings of the Combo Catch Oil-Water Separator fixed roof were closed and gasketed properly, in violation of 40 C.F.R. § 60.692-3(a)(4) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹⁰

COUNT II – API Oil-Water Separator – Failure to Comply with 40 C.F.R. §§ 60.692-3(a)(1), (3), and (4) and the Title V Permit Wastewater Requirements

45. During the Inspection, NEIC observed that the Facility’s API Oil-Water Separator received effluent from the Combo Catch Oil-Water Separator along with wastewater from the West half of the Facility. NEIC further observed that most of the API Oil-Water Separator was covered by a fixed roof that had seams, gaskets around penetrations, and several hatches.¹¹ Using an infrared camera, NEIC also observed and recorded the emission of vapors leaking from the API Oil-Water Separator hatches, seams, and a hole in the cover.¹² Using Method 21 monitoring, NEIC confirmed that all of the observed leaks were greater than 10,000 ppm. As demonstrated by these observations, URC failed to install on the API Oil-Water Separator a fixed roof that completely covers the separator tank and operates the API Oil-Water Separator without a fixed roof that completely covers the separator tank, in violation of 40 C.F.R. § 60.692-3(a)(1) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹³

46. NEIC’s observation and measurement of leaks from the API Oil-Water Separator hatches demonstrates that URC failed to keep roof access openings closed at all times during separator operation, in violation of 40 C.F.R. § 60.692-3(a)(3) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹⁴

47. During the Inspection, NEIC requested URC’s Subpart QQQ inspection records. URC representatives stated that URC did not conduct Subpart QQQ inspections of the API Oil-Water Separator, and the Facility could not provide any related inspection records. Based on URC representative’s statements and the absence of Subpart QQQ inspection records, URC failed to conduct semiannual visual inspections to ensure the access doors and other openings of the API Oil-Water Separator fixed roof were closed and gasketed properly, in violation of 40 C.F.R. § 60.692-3(a)(4) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.

COUNT III – Slop Oil Tank (TK467) – Failure to Comply with 40 C.F.R. § 60.692-3(e) and the Title V Permit Wastewater Requirements

48. The Slop Oil Tank (or “TK467”) receives slop oil that is designated for recovery and transferred back into the crude unit via vacuum truck. Vacuum trucks are not part of an “enclosed system” and VOCs are unavoidably vented to the atmosphere during the process of vacuum truck loading and unloading. Therefore, the collection and transport practices employed by URC at TK467 violate 40 C.F.R. § 60.692-3(e) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹⁵

¹⁰ See id.

¹¹ Insp. Rpt. at p. 15.

¹² See Insp. Rpt. Appendix CAA D (FLIR Video Nos. 163, 164, 489, and 490).

¹³ See id.

¹⁴ See id.

¹⁵ See id.

COUNT IV – Stormwater Tank (TK423) – Failure to Comply with 40 C.F.R. § 60.692-3(a)(1) and the Title V Permit Wastewater Requirements

49. The Stormwater Tank (or TK423) is a large, open-top tank without a cover or any other air pollution controls, that is used at the Facility to collect both stormwater and wastewater effluent from the API Oil-Water Separator. Slop oil that floats on the liquid surface of TK423 is subsequently recovered using a rope skimmer. TK423 is an “oil-water separator” tank. 40 C.F.R. § 60.691. URC failed to install a fixed roof that completely covers TK423 and operates TK423 without a fixed roof in violation of 40 C.F.R. § 60.692-3(a)(1) and Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹⁶

COUNT V – Oil Skimmer Sump Tank (D102) – Failure to Comply with 40 C.F.R. § 60.692-3(a)(1) and the Title V Permit Wastewater Requirements

50. The Facility’s Oil Skimmer Sump Tank (or D102) is a slop oil tank that receives the slop oil that is initially skimmed from the surface of the Stormwater Tank (TK423) prior to that slop oil being pumped to Tank TK420. D102 is covered by a fixed roof that vents directly to atmosphere. URC failed to install a fixed roof that completely covers D102, and operates D102 without a fixed roof in violation of 40 C.F.R. § 60.692-3(a)(1) and TV Permit Condition E-VI-007 of the Title V Permit Wastewater Requirements.¹⁷

II. Failure to Comply with 40 C.F.R. Part 61, Subpart FF (*National Emission Standard for Benzene Waste Operations*) Procedures Applicable to the Measurement of Facility Waste Concentrations

A. Regulatory Background and Title V Permit Conditions

51. Pursuant to 40 C.F.R. § 61.340(a), and with exceptions not herein applicable, the requirements and provisions of 40 C.F.R. Part 61, Subpart FF (*National Emission Standard for Benzene Waste Operations*) (hereinafter, “the Benzene NESHAP”) apply to owners and operators of petroleum refineries.

52. 40 C.F.R. § 61.355 (*Test Methods, Procedures, and Compliance Provisions*) provides, in relevant and applicable part and with exceptions not herein applicable, that:

(a) An owner or operator shall determine the total annual benzene quantity from facility waste by the following procedure:

(1) For each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in § 61.342(a), the owner or operator shall:

(i) Determine the annual waste quantity for each waste stream using the procedures specified in paragraph (b) of this section.

¹⁶ See id.

¹⁷ See id.

(ii) Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in paragraph (c) of this section.

(iii) Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.

(2) Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to paragraph (b)(4) of this section.

* * *

(c) For the purposes of the calculation required by §§ 61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (c)(1) of this section using either of the methods given in paragraphs (c)(2) and (c)(3) of this section.

* * *

(3) Measurements of the benzene concentration in the waste stream in accordance with the following procedures:

(i) Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.

(ii) For waste in enclosed pipes, the following procedures shall be used:

(A) Samples shall be collected prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.

(B) A static mixer shall be installed in the process line or in a by-pass line unless the owner or operator demonstrates that installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.

* * *

(E) After purging, the sample flow shall be directed to a sample container and the tip of the sampling tube shall be kept below the surface of the waste during sampling to minimize contact with the atmosphere.

(F) Samples shall be collected at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10 °C (50 °F).

* * *

53. 40 C.F.R. § 61.357(c) requires that for a facility with a total annual benzene (“TAB”) quantity from facility waste less than 10 Mg/yr but equal to or greater than 1 Mg/yr, the owner or operator must submit to EPA an annual report that includes the total annual benzene quantity from the facility waste determined in accordance with 40 C.F.R. § 61.355(a), and specific information about each waste stream, including whether each waste stream will be controlled for benzene emissions, and for waste streams that are not controlled for benzene emissions, the annual average flow-weighted benzene concentration for the waste stream.

2. Relevant and Applicable Title V Permit Requirements

54. TV Permit Condition C-III-011 (p. 29 of 566) incorporates the Benzene NESHAP monitoring of operations requirements of 40 C.F.R. § 61.354. TV Permit Condition C-V-024 (p. 38 of 566) further incorporates the Benzene NESHAP reporting requirements of 40 C.F.R. § 61.357. TV Permit Conditions C-VII-090 through -102 (TV Permit pp. 117 – 138 of 556) (hereinafter, “Title V Permit TAB Requirements”) thereafter identify, list, and incorporate the 40 C.F.R. §§ 61.342 – 353 and 355 test methods, procedures, compliance requirements and other provisions set forth therein. These TV Permit Conditions further incorporate the reporting requirements of 40 C.F.R. § 61.357. *See*, TV Permit Condition C-VII-102 at ¶ (a)(5)(i).¹⁸

B. Factual Background

55. The Facility is a large quantity generator of hazardous waste, including benzene waste (D018), and is subject to the requirements and provisions of the Benzene NESHAP.

C. Alleged Violations

COUNT VI – Benzene NESHAP Sample Collection Procedures – Failure to Comply with 40 C.F.R. §§ 61.355(c)(3)(ii)(A), (B), (E) and (F) and Facility Title V Permit

56. During the Inspection, NEIC reviewed analytical results from samples of several benzene-containing waste streams that were subject to Benzene NESHAP sampling requirements including results of samples taken from enclosed pipes.¹⁹

57. During the Inspection, NEIC also requested that URC provide copies of any standard operating procedures (“SOPs”) employed at the Facility for collecting samples in accordance with the Benzene NESHAP provisions. URC’s Facility Environmental Manager for Clean Air Act matters (“CAA Env. Mgr.”) informed NEIC that URC did not have a written SOP for its Facility Benzene NESHAP sampling and verbally described the URC’s sampling procedures for collecting enclosed pipe waste stream samples for benzene concentration analyses. *Id.* The CAA Env. Mgr. told NEIC that: (1) such samples were not collected through a cooling coil or a static mixer, and (2) that sample vials were filled, capped, and placed in a cooler with ice; and (3) that no particular instruction or procedure was in place to ensure that the tip of the sample collection tubes were kept below the surface of the waste during each of these sample collection activities or that any other steps were employed to minimize contact with the atmosphere.²⁰ NEIC also did not receive any information from Facility personnel demonstrating that installation of a static mixer in the lines sampled by Facility personnel was unnecessary for purposes of accurately determining the benzene concentration of the associated waste streams.²¹

58. Based on the above information about URC’s collection of samples of waste in enclosed pipes for benzene concentration measurements, URC failed to: (i) ensure samples were collected prior to waste being exposed to the atmosphere, in violation of 40 C.F.R. § 61.355(c)(3)(ii)(A); (ii) install a static mixer in process or by-pass lines (without demonstrating that

¹⁸ TV Permit at p. 131 of 556.

¹⁹ Insp. Rpt. at p. 22.

²⁰ *Id.*

²¹ *Id.*

such installation is not necessary to accurately determine the benzene concentration of the waste stream), in violation of 40 C.F.R. § 61.355(c)(3)(ii)(B); (iii) ensure that sample collection tube tips were kept below the surface of the waste during sampling activities in order to minimize contact with the atmosphere, in violation of 40 C.F.R. § 61.355(c)(3)(ii)(E); and (iv) collect samples at a flow rate or in a manner that would ensure the maintenance of a waste temperature less than 10 °C (50 °F) (as URC had no cooling coil in its waste stream sample collection lines), in violation of 40 C.F.R. § 61.355(c)(3)(ii)(F) and TV Permit Condition C-III-011 (p. 29 of 566).²²

COUNT VII – Benzene NESHAP Total Annual Benzene (TAB) Quantity Determination – Failure to Comply with 40 C.F.R. § 61.355(a) and the Title V Permit TAB Requirements

59. Based on its review of URC’s TAB reports submitted in 2018 through 2020 and other information provided by URC, NEIC identified several aqueous waste streams with water content greater than 10%, for which the Benzene NESHAP required URC to determine the flow-weighted annual average benzene concentration and include in the Facility’s total annual benzene (TAB) quantity under 40 C.F.R. § 61.355(a)(2), including:

- a. Spent caustic waste, which is the product of caustic used to treat light naptha and is then separated from the light naptha in an oil-water separator and sold offsite.
- b. Spent acid waste, which is the product of spent acid generated in the alkyl reactor and then separated from organics in an emulsion separator and then shipped offsite for sale.

60. URC failed to determine the flow-weighted annual average benzene concentration from at least 2018 through 2020 of the spent caustic waste stream and of the spent acid waste stream, and to include those concentrations in the Facility TAB quantity from 2018 to 2020, in violation of 40 C.F.R. 40 C.F.R. § 61.355(a) and TV Permit Conditions C-III-102²³ and C-V-024.

COUNT VIII – Benzene NESHAP Total Annual Benzene (TAB) Quantity Determination – Failure to Report as Required by 40 C.F.R. § 61.357 and the Title V Permit TAB Requirements

61. URC’s submitted 2018 through 2020 annual TAB reports, claim that the total annual benzene quantity from the Facility is greater than 1 Mg/yr but less than 10 Mg/yr.

62. Because URC’s claimed total annual benzene quantity is greater than 1 Mg/yr but less than 10 Mg/yr, URC is required to comply with the annual reporting requirement in 40 C.F.R. § 61.357(c).

63. During the Inspection, NEIC reviewed process flow diagrams provided by URC and identified several waste streams that should have been – but were not -- included in each of the 2018

²² TV Permit Condition C-III-011, at ¶ (a)(1) (p. 29 of 566)], instructs the Permittee to: “Measure the benzene concentration of the waste stream exiting the treatment process complying with §61.348(a)(1)(i) at least once per month by collecting and analyzing one or more samples using the procedures specified in §61.355(c)(3).”

²³ TV Permit Condition C-III-102, ¶ (c) (TV Permit p. 131 of 556), provides, in relevant and applicable part, that: “For the purposes of the calculation required by §§61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (c)(1) of this section using either of the methods given in paragraphs (c)(2) and (c)(3) of this section.” . . .

through 2020 TAB Reports submitted by URC or properly identified by their correct points of waste generation. *See*, Insp. Rpt. Appendix CAA I. Such waste streams include, but may not be limited to: (i) a *spent caustic waste* that URC uses to treat a light naptha stream, with the treated light naptha and spent caustic separated in a caustic settler (*i.e.*, an oil-water separator) and the spent caustic is stored in a tank prior to subsequent sale and off-site transport; and (ii) a *spent acid waste* that is generated in the Facility's alky unit, separated from the organics in the emulsion separator (*i.e.*, another oil-water separator) and then shipped off-site for sale.²⁴

64. Because URC failed to: (a) sample benzene containing waste streams in accordance with 40 C.F.R. § 61.355(c); (b) determine the flow-weighted annual average benzene concentration of the spent caustic waste stream and of the spent acid waste stream from 2018 through 2020, and (c) include its respective benzene concentrations in the Facility TAB quantity from 2018 to 2020, URC failed to provide accurate total benzene quantity and waste stream information in violation of 40 C.F.R. 40 C.F.R. § 61.357(c) and TV Permit Condition C-V-024.

III. Failure to Comply with 40 C.F.R. Part 63, Subpart CC Requirements for Gasoline Loading Racks, Including Requirements of 40 C.F.R. Part 63, Subpart R (*National Emissions Standards for Gasoline Distribution Facilities [Bulk Gasoline Terminals and Pipeline Breakout Stations]*) and 40 C.F.R. Part 60, Subpart XX (*Standards of Performance for Bulk Gasoline Terminals*) and the Title V Permit

A. Regulatory Background

65. 40 C.F.R. § 63.640(a) provides that the requirements and provisions of 40 C.F.R. Part 63, Subpart CC ("NESHAP CC") apply to petroleum refining process units and to related emissions points that are specified in paragraphs 40 C.F.R. §§ 63.640(c)(1) through (9), including gasoline loading racks, that are located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act, and that emit, or have equipment containing or contacting, one or more of the HAPs listed in Table 1 of NESHAP CC, including benzene.

66. 40 C.F.R. § 63.650(a) (*Gasoline Loading Rack Provisions*) provides, in relevant and applicable part and with exceptions not herein applicable, that ". . . each owner or operator of a Group 1 gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R of this part [*i.e.*, 40 C.F.R. Part 63, Subpart R, *National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)*], §§ 63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (e) through (i), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).

67. Pursuant to the 40 C.F.R. Part 63, Subpart R ("NESHAP R"), definitions set forth at 40 C.F.R. § 63.421:

- a. "*Thermal oxidation system*" means "a combustion device used to mix and ignite fuel, air pollutants, and air to provide a flame to heat and oxidize hazardous air

²⁴ Because the spent caustic and the spent acid streams are each a *waste* (even if subsequently sold), they should each should be included in the reported TAB quantity.

pollutants. Auxiliary fuel may be used to heat air pollutants to combustion temperatures.”

b. “*Flare*” means “a thermal oxidation system using an open (without enclosure) flame”.

68. 40 C.F.R. § 63.422 (*Standards: Loading Racks*), located in NESHAP R, provides, with exceptions not herein applicable:

(a) Each owner or operator of loading racks at a bulk gasoline terminal subject to the provisions of [NESHAP R] shall comply with the requirements in § 60.502 of this chapter except for paragraphs (b), (c), and (j) of that section. For purposes of this section, the term “affected facility” used in § 60.502 of this chapter means the loading racks that load gasoline cargo tanks at the bulk gasoline terminals subject to the provisions of this subpart.

(b) Emissions to the atmosphere from the vapor collection and processing systems due to the loading of gasoline cargo tanks shall not exceed 10 milligrams of total organic compounds per liter of gasoline loaded.

69. 40 C.F.R. § 63.425(a)(1) (*Test Methods and procedures*), located in NESHAP R, requires each owner or operator subject to the emission standard in § 63.422(b) to conduct a performance test on the vapor processing and collection systems.

70. 40 C.F.R. § 63.425(b) (*Test Methods and procedures*), located in NESHAP R, requires that during the performance test required by 40 C.F.R. § 63.425(b), “the owner or operator shall determine a monitored operating parameter value for the vapor processing system using the following procedure:

(1) During the performance test, continuously record the operating parameter under § 63.427(a);

(2) Determine an operating parameter value based on the parameter data monitored during the performance test, supplemented by engineering assessments and the manufacturer’s recommendations; and

(3) Provide for the Administrator’s approval the rationale for the selected operating parameter value, and monitoring frequency and averaging time, including data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the standard in § 63.422(b). . . .

71. With exceptions not herein applicable, 40 C.F.R. § 63.427 (*Continuous monitoring*), located in NESHAP R, provides that:

(a) Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) as specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section

* * *

(3) Where a thermal oxidation system other than a flare is used, a CPMS [*Continuous Parameter Monitoring System*] capable of measuring temperature must be installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs.

* * *

(b) Each owner and operator of a bulk gasoline terminal subject to the provisions of this subchapter shall operate the vapor processing system in a manner not to exceed the operating parameter value for the parameter described in paragraph (a)(3) of this section, and established using the procedures in § 63.425(b). . . . Operation of the vapor processing system in a manner exceeding or going below the operating parameter value, as specified above, shall constitute a violation of the emission standard in § 63.422(b).

* * *

72. 40 C.F.R. § 60.502 (*Definitions*), located in 40 C.F.R. Part 60, Subpart XX (hereinafter, “Subpart XX”), defines “vapor collection system” as “any equipment used for containing total organic compounds vapors displaced during the loading of gasoline tank trucks.”

73. 40 C.F.R. § 60.502 (*Standard for Volatile Organic Compound (VOC) emissions from bulk gasoline terminals*), located Subpart XX, further provides, in relevant part, that:

(a) Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.

* * *

(e) Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks

* * *

(j) Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

74. TV Permit Condition C-VII-123 “[40 C.F.R. Part 63 NESHAPS for Source Categories § 40 CFR 63.650] - Subpart CC - National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Gasoline loading rack provisions” (hereinafter “Title V Permit Gasoline Loading Rack Provisions”) (at TV Permit pp.172-173 of 556) provides in relevant part, with exceptions not herein applicable, that: “each owner or operator of a Group 1 gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R of this part, §§ 63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (e) through (i), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).”

75. The “Title V Permit Bulk Gasoline Terminals Testing Requirement”²⁵ incorporates 40 C.F.R. § 63.425 of NESHAP R, and provides in relevant and applicable part that for each performance test of a vapor processing system, the owner or operator shall:

- (1) During the performance test, continuously record the operating parameter under 40 CFR 63.427(a);
- (2) Determine the operating parameter value based on the parameter data monitored during the performance test supplemented by engineering assessments and the manufacturer’s recommendations; and,
- (3) Provide for the Administrator’s approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time demonstrate continuous compliance with the emission standard in 40 CFR 63.422(b) or 40 CFR 63.122b(a)(3)(ii) of this chapter.

76. The “Title V Permit “Bulk gasoline terminals” requirements²⁶ provide, in relevant and applicable part, that:

- b) A person may not cause or permit the loading of gasoline into a vehicular tank from a bulk gasoline terminal unless the gasoline loading racks are equipped with a loading arm with a vapor collection adaptor and pneumatic, hydraulic or other mechanical means to force a vapor-tight seal between the adaptor and the hatch of the tank. A means shall be provided to prevent gasoline drainage from the loading device when it is not connected to the hatch, and to accomplish complete drainage before the removal. When loading is affected through means other than hatches, loading and vapor lines shall be equipped with fittings which make vapor tight connections and which will be closed upon disconnection.
- c) An owner or operator of a bulk gasoline plant shall maintain records of daily throughput. These records shall be retained for at least 5 years and shall be made available to the Department on request.

B. Alleged Violations

Count IX – *Standard for Bulk Gasoline Terminals – Failure to Comply with the NESHAP R Bulk Gasoline Terminal Requirement for Vapor Tight Fittings and Title V Permit.*

77. During the Inspection, NEIC observed and recorded, with an infrared camera, visible emissions at the tank truck connections to the vapor return lines located at five (5) of the gasoline loading rack’s six (6) loading bays.²⁷

78. The recorded observations demonstrate that the Facility’s bulk gasoline terminal vapor recovery lines were not being operated with fittings that would make vapor-tight connections that would remain closed upon disconnection and which would collect the **total organic compounds** vapors displaced from **tank** trucks during product loading, in violation of the NESHAP R loading rack

²⁵ TV Permit Condition D-VII-010 [40 CFR Part 63 NESHAPS for Source Categories § 40 CFR 63.425] at p. 384 or 556.

²⁶ Title V Permit Condition D -V-004 [25 Pa. Code 129.59] – “Bulk gasoline terminals”, at TV Permit pp. 382-383 of 556.

²⁷ See Insp. Rpt. Appendix CAA D (FLIR Video Nos. 173-179).

standard requirements of 40 C.F.R. § 63.422 (through failure to comply with the incorporated VOC emissions from bulk gasoline terminal requirements of 40 C.F.R. §§ 60.502(a) and (e)) and of TV Permit (“Bulk gasoline terminals”) Condition D-VII-004²⁸ [25 Pa. Code 129.59(b)].

COUNT X – Requirements Applicable to Gasoline Loading Racks - Failure to Establish and Operate in Compliance with the Applicable Operating Parameter Limit, in Violation of 40 C.F.R §§ 63.425(b) and 63.427(b) and the Title V Permit Gasoline Loading Rack Provisions.

79. Based on information provided by URC and pursuant to NESHAP CC, the gasoline loading rack at the Facility is subject to the requirements of NESHAP R (*National Emission Standards for Gasoline Distribution Facilities [Bulk Gasoline Terminals and Pipeline Breakout Stations]*).²⁹ Pursuant to NESHAP R regulations³⁰, URC’s gasoline loading rack is subject to the provisions of 40 C.F.R. §§ 60.502(a), located in Subpart XX (*Standards of Performance for Bulk Gasoline Terminals*).

80. 40 C.F.R. §§ 60.502(a), located in Subpart XX, requires that: “(a) [e]ach affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.”

81. During the Inspection, NEIC observed that that the Facility was utilizing a Vapor Combustion Unit (or “VCU”) as the “vapor collection system” required to comply with Subpart R and Subpart XX.³¹ Because the VCU was enclosed within a stack, it did not meet the Subpart R definition of a “flare,” but instead fell within the Subpart R definition of a “thermal oxidation system.”

82. For thermal oxidation systems like the VCU, NESHAP R requires continuous monitoring of the temperature of the firebox or the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs. *See* 40 C.F.R. § 63.427.

83. URC conducted a performance test of the VCU in 1999 but did not (a) continuously monitor the temperature of the firebox or the downstream ductwork, (b) establish an operating parameter value for the temperature of the firebox or the downstream ductwork, or (c) provide for EPA’s approval of the rationale for the selected operating parameter value, and monitoring frequency and averaging time, in violation of 40 C.F.R. § 63.425(b), the Title V Permit Gasoline Loading Rack Provisions of TV Permit Condition C-VII-123 (at TV Permit pp. 172-173 of 556), and the Title V Permit Bulk Gasoline Terminals Testing and Pipeline Breakout Stations requirements of TV Permit Condition D-II-010 (at TV Permit pp. 384 - 386 of 556).

84. Because URC failed to establish the required temperature operating parameter value, URC also failed to operate the VCU in a manner not to exceed or not to go below the operating

²⁸ *See* TV Permit at pp. 382-383 of 556.

²⁹ NESHAP CC provides, in the Gasoline loading rack provisions of 40 C.F.R. § 63.650(a), that with exceptions not herein applicable, that “. . . each owner or operator of a Group 1 gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R of this part, §§ 63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (e) through (i), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).”

³⁰ *See*, “Standards: Loading racks,” at 40 C.F.R. § 63.422.

³¹ *See also*, TV Permit Section H, at ¶ (c)(7), which provides that: “(c) For the purpose of this permit (from Notification of Compliance Status Report): . . . 7. Gasoline Loading Rack Provisions - Using a Vapor Combustion Unit to comply with 40 CFR 63.422(b). [PA 62-312-014A] “(TV Permit p. 553 of 556).

parameter value, in violation of 40 C.F.R. § 63.427(b) and the Title V Permit Gasoline Loading Rack Provisions of TV Permit Condition C-VII-123 (at TV Permit pp. 172-173 of 556).

IV. Failure to Comply with 40 NESHAP CC Requirements for Storage Vessels, Including Requirements of Subpart WW and the Facility's Title V Permit

85. 40 C.F.R. § 63.640 provides that the requirements and provisions of NESHAP CC apply to petroleum refining process units and to related emissions points that are specified in paragraphs 40 C.F.R. §§ 63.640(c)(1) through (9), including storage vessels, that are located at a plant site that is a major source as defined in section 112(a) of the Act, and that emit, or have equipment containing or contacting, one or more of the HAPs listed in Table 1 of NESHAP CC.

86. 40 C.F.R. § 63.642(n) provides that “[a]t all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved...”

87. In relevant and applicable part, pursuant to the “Storage vessel provisions” of 40 C.F.R. § 63.660, “[o]n and after the applicable compliance date for a Group 1 storage vessel located at a new or existing source as specified in § 63.640(h) [which include Existing Group 1 floating roof storage vessels meeting the applicability criteria in item 1 of the definition of Group 1 storage vessel pursuant to 40 C.F.R. § 63.640(h)(2)], the owner or operator of a Group 1 storage vessel storing liquid with a maximum true vapor pressure less than 76.6 kilopascals (11.1 pounds per square inch) that is part of a new or existing source shall comply with either the requirements in [40 C.F.R. Part 63,] 40 C.F.R. subpart WW . . . of this part according to the requirements in paragraphs (a) through (i) of this section.”

88. 40 C.F.R. Part 63, Subpart WW (*National Emission Standards for Storage Vessels [Tanks] - Control Level 2*) (“NESHAP WW”), includes the Floating roof inspection frequency requirements set forth at 40 C.F.R. § 63.1063(c), which provide, in relevant and applicable part, that: “(1) Internal floating roofs. Internal floating roofs shall be inspected as specified in paragraph (d)(1) of this section before the initial filling of the storage vessel. Subsequent inspections shall be performed as specified in paragraph (c)(1)(i) . . . of this section. (i) Internal floating roofs shall be inspected as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section. . . . (B) Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in paragraph (d)(1) of this section.

89. 40 C.F.R. § 63.1063(d)(1) further provides, in relevant part, that: “(d) Inspection procedure requirements. Floating roof inspections shall be conducted as specified in paragraphs (d)(1) through (d)(3) of this section, as applicable. If a floating roof fails an inspection, the owner or operator shall comply with the repair requirements of paragraph (e) of this section. (1) Floating roof (IFR and EFR) inspections shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seals from within the storage vessel. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck components specified in paragraph (a) of this section.”³²

³² See also, TV Permit Condition C-VII-105 [at pp. 141 - 142].

90. 40 C.F.R. § 63.1063(c) and (d) are incorporated into the Title V Permit at TV Permit Condition C-VII-105 (at TV Permit pp. 141-142 of 556).

D. Alleged Violations

91. Because the Facility is a petroleum refinery that is a major source under CAA Section 112(a), the Facility's petroleum refining process units and related emission units, including certain storage vessels that emit or have equipment containing or contacting one or more hazardous air pollutants are subject to NESHAP CC.

COUNT XI – Standards Applicable to Storage Vessels - Failure to Operate and Maintain Facility Gasoline Storage Tank 245 in a Manner Consistent with Safety and Good Air Pollution Control Practices Under NESHAP CC

92. Pursuant to the Facility's Tank Inventory,³³ Facility Gasoline Storage Tank 245 ("Tank 245") is subject to the 40 C.F.R. Part 63, Subpart CC, *NESHAP for Source Categories*.

93. As a *Group 1 storage vessel* subject to NESHAP CC (*NESHAP for Source Categories*) requirements, Tank 245 is also subject to the requirements and provisions of 40 C.F.R. 63.642(n).

94. Tank 245 is equipped with an aluminum skin and pontoon internal floating roof ("IFR") and a single mechanical shoe rim seal.³⁴ The aluminum skin of the pontoon design was originally constructed in 1994 and installed in 1995.³⁵

95. Tank 245 underwent an out-service Facility inspection less than a month before the Inspection. The Facility's associated July 23, 2021 out-of-service inspection report states that "[t]here were existing floating roof patches which were repaired on the internal floating roof deck from damage found at the previous out-of-service inspection" and that "[t]he access hatch well was found to have minor damage" that ". . . does not warrant repair."³⁶

96. During the Inspection, NEIC inspected Tank 245, including its perimeter roof vents and associated air pollution control equipment inspection records. Using an infrared camera in AUTO mode,³⁷ NEIC observed emissions from perimeter eyebrow vents near this Tank's fixed roof, on the West side, that were greater than emissions from perimeter roof vents on other IFR tanks that store gasoline or similar products that NEIC also surveyed (using the same infrared camera and camera settings) at the Facility that same afternoon.³⁸

97. The emissions observed by NEIC from Tank 245, as compared with other similarly controlled petroleum product storage tanks at the Facility, indicate poor control of organic vapors by Tank 245's IFR. Such a condition may lead to a buildup of organic vapors which could potentially exceed LEL ("lower explosive limits"), resulting in a potentially explosive atmosphere inside Tank 245's vapor space (between the floating roof and fixed roof) and elevated emissions to the atmosphere.

³³ Insp. Rpt. Appendix CAA M.

³⁴ See Insp. Rpt. Appendix CAA M at p. 1.

³⁵ Id.

³⁶ See Insp. Rpt. Appendix CAA N at p.4.

³⁷ Insp. Rpt. Appendix CAA D: FLIR Videos, Nos. 485, 487, and 488.

³⁸ See Insp. Rpt. Appendix CAA D (FLIR Video Nos. 485, 487, and 488)

98. NEIC's recorded Infrared Camera observations and the contents of the July 23, 2021 Tank 245 out-of-service inspection report demonstrate that URC did not operate and maintain Tank 245, including associated air pollution control equipment and monitoring equipment, in a manner consistent with applicable safety and good air pollution control practices for minimizing emissions, in violation of 40 C.F.R. § 63.642(n).

Count XII – Standards Applicable to Storage Vessels - Failure to Operate and Maintain Facility Tank 240 in a Manner Consistent with Safety and Good Air Pollution Control Practices under NESHAP CC

99. Pursuant to the Facility's Tank Inventory³⁹, Facility Gasoline Storage Tank 240 ("Tank 240") is subject to NESHAP CC (*NESHAP for Source Categories*) requirements.

100. As a *Group 1 storage vessel* subject to the 40 C.F.R. Part 63, Subpart CC, *NESHAP for Source Categories*, Tank 240 is also subject to the NESHAP CC requirements and provisions of 40 C.F.R. 63.642(n).

101. At the time of the Inspection, Tank 240 was being used to store petroleum liquid and was equipped with an external floating roof and a closure device consisting of two seals.⁴⁰

102. During the Inspection, NEIC observed from the observation deck at the top of Tank 240 that several hatch covers located on the floating roof of Tank 240 appeared to be in the closed position. Using an Infrared Camera, NEIC further observed and recorded visible emissions emanating from several of the hatch covers located on the Tank 240 floating roof⁴¹, thereby demonstrating URC's failure to operate and maintain Tank 240 in a manner consistent with applicable safety and good air pollution control practices for minimizing emissions, in violation of 40 C.F.R. § 63.642(n).

COUNT XIII – Standards Applicable to Storage Vessels – Failure to Operate and Maintain Facility Gasoline Storage Tank 431 in a Manner Consistent with Safety and Good Air Pollution Control Practices Under NESHAP CC and to Comply with the NESHAP WW, Internal Floating Roof (or "IFR") Inspection Frequency Requirements of 40 C.F.R. § 63.1063(c) and with the Title V Permit's NESHAP WW Requirements

103. Pursuant to the Facility's Tank Inventory⁴² and TV Permit Condition C-VII-105 (TV Permit at p. 141 of 556), Isomate Storage Tank 431 ("Tank 431") is a "Group 1 storage vessel" subject to NESHAP CC control level 2 floating roof requirements.

104. As a Group 1 storage vessel subject to the NESHAP CC (for Source Categories), Tank 431 is also subject to the requirements and provisions of 40 C.F.R. 63.642(n).

105. In accord with the internal floating roof requirements of 40 C.F.R. § 63.1063(c)(1)(i)(B), TV Permit Condition C-VII-105 ([40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1063], Subpart WW - National Emission Standards for Storage Vessels (Tanks)-Control Level 2, Floating roof requirements]⁴³ similarly provides, at paragraph (c)(1)(i)(B),

³⁹ Insp. Rpt. Appendix CAA M

⁴⁰ Insp. Rpt. at pp 27 – 28; *See also*, Insp. Rpt. Appendix CAA L.

⁴¹ *See* Insp. Rpt. Appendix CAA D (FLIR Video No. 157).

⁴² Insp. Rpt. Appendix CAA M

⁴³ TV Permit at p. 141 of 556.

that: “Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in paragraph (d)(1) of this section.”

106. Tank 431 is equipped with an aluminum skin and pontoon internal floating roof installed in 1987 and a single “foam log” rim seal⁴⁴. During the Inspection, NEIC inspected Tank 431, including associated air pollution control equipment and monitoring equipment.

107. During the Inspection, NEIC further observed Tank 431 both from ground level and from Tank 431’s fixed roof platform. From each of those vantage points, NEIC noted that Tank 431 was equipped with a fixed roof conservation vent and, using an Infrared Camera, NEIC further observed and recorded hydrocarbon emissions emanating from that vent. From Tank 431’s fixed roof platform vantage point, NEIC also observed and recorded significant emissions coming from the fixed roof’s bolted access hatch.⁴⁵

108. NEIC also reviewed Tank 431’s daily vapor pressure data for the month of July 2021. That data showed that the Reid vapor pressure of the isomate stored in Tank 431 was greater than 12 pounds per square inch.⁴⁶

109. The combination of a high vapor pressure and emissions being observed from both Tank 431’s conservation vent and bolted access hatch are indicative of a tank with poorly functioning controls and, therefore, a greater potential for excess emissions. These observations additionally demonstrate that URC is not operating or maintaining Tank 431, including associated air pollution control and monitoring equipment, in a manner consistent with applicable safety and good air pollution control practices for minimizing emissions, in violation of applicable 40 C.F.R. § 63.642(n) requirements.

110. During the Inspection, URC provided NEIC with information that Tank 431 last had its IFR inspected in the manner specified in 40 C.F.R. § 63.1063(d)(1) on April 11, 2011.⁴⁷

111. Based upon the information above, EPA finds that URC failed to perform a required visual inspection of Tank 431’s IFR, in the manner specified in 40 C.F.R. § 63.1063(d)(1), within the maximum allowable 10-year time period subsequent to its last such inspection, in violation of applicable 40 C.F.R. § 63.1063(c)(1)(i)(B) and of the Title V Permit’s NESHAP WW requirements.⁴⁸

V. Failure to Comply with the 40 C.F.R. Part 60, Subpart Ja, Standards of Performance for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After May 14, 2007 and With Applicable 40 C.F.R. Part 60, Subpart A, Semi-Annual Reporting Requirements

A. Regulatory Background

112. Pursuant to the relevant and applicable notification and record keeping provisions of 40 C.F.R. Part 60, Subpart A, as set forth at 40 C.F.R. §§ 60.7(b), (c) and (d) and with exceptions not herein applicable:

⁴⁴ See Insp. Rpt. Appendix CAA M at p. 1.

⁴⁵ See Insp. Rpt. Appendix CAA D (FLIR Video Nos. 180, 181 and 499).

⁴⁶ See Insp. Rpt. Appendix CAA P at p. 1.

⁴⁷ See, Insp. Rpt. at p. 32.

⁴⁸ TV Permit Condition C-VII-105 at ¶ (c)(1)(i)(B)(TV Permit at p. 141 of 556).

(b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report . . . and-or summary report form [pursuant to] . . . paragraph (d) of this [40 C.F.R.] section [60.7] to the Administrator semiannually All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with § 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

113. Pursuant to 40 C.F.R. §§ 60.100a(a) and (b):

a. “(a) The provisions of [40 C.F.R. Part 60, Subpart Ja] apply to the following affected facilities in petroleum refineries: . . . flares and sulfur recovery plants...”; and

b. “(b) Except for flares and delayed coking units, the provisions of this subpart apply only to affected facilities under paragraph (a) of this section which either commence construction, modification or reconstruction after May 14, 2007, or elect to comply with the provisions of this subpart in lieu of complying with the provisions in subpart J of this part. For flares, the provisions of this subpart apply only to flares which commence construction, modification or reconstruction after June 24, 2008. . . .”

114. Pursuant to the definitions in 40 C.F.R. § 60.101a:

c. “Flare” means “a combustion device that uses an uncontrolled volume of air to burn gases. The flare includes the foundation, flare tip, structural support, burner, igniter, flare controls, including air injection or steam injection systems, flame arrestors and the flare gas header system. In the case of an interconnected flare gas header system, the flare includes each individual flare serviced by the interconnected flare gas header system and the interconnected flare gas header system.”

d. “Fuel gas” means “any gas which is generated at a petroleum refinery and which is combusted. Fuel gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Fuel gas does not include gases generated by catalytic cracking unit catalyst regenerators, coke calciners (used to make premium grade coke) and fluid coking burners but does include gases from flexicoking unit gasifiers and other gasifiers. Fuel gas does not include vapors that are collected and combusted in a thermal oxidizer or flare installed to control emissions from wastewater treatment units other than those processing sour water, marine tank vessel loading operations or asphalt processing units (*i.e.*, asphalt blowing stills).”

115. The “Design, equipment, work practice or operational standards” of 40 C.F.R. § 60.103a(h) thereafter provide that: “Each owner or operator shall not burn in any affected flare any fuel gas that contains H₂S [hydrogen sulfide] in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.”⁴⁹

116. The 40 C.F.R. § 60.107a monitoring of emissions and operations provisions applicable to flares further provides, in applicable part at 40 C.F.R. § 60.107a(a)(2), that “The owner or operator of . . . a *flare* that is subject to the H₂S concentration requirement in [40 C.F.R.] § 60.103a(h) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H₂S in the fuel gases before being burned in any fuel gas combustion device or flare.”

117. The “excess emissions” provisions of 40 C.F.R. § 60.107a(i) further provide, in applicable part, that “(i) For the purpose of reports required by § 60.7(c), periods of excess emissions for . . . flares subject to the concentration requirement in § 60.103a(h) are defined as specified in paragraphs (i)(1) through (5) of this section. Determine a rolling 3-hour or a rolling daily average as the arithmetic average of the applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-hour averages). Determine a rolling 30-day or a rolling 365-day average as the arithmetic average of the applicable daily averages (e.g., a rolling 30-day average is the arithmetic average of 30 contiguous daily averages).”

118. The 40 C.F.R. § 60.107a(i)(2) “H₂S concentration limits for flares” further provides that “(i) Each rolling 3-hour period during which the average concentration of H₂S as measured by the H₂S continuous monitoring system required under paragraph (a)(2) of this section exceeds 162 ppmv.”⁵⁰

119. In relevant part and with exceptions not herein applicable, the 40 C.F.R. Part 60, Subpart A, general provisions provides, at 40 C.F.R. § 60.7(c), that “Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually All reports shall be postmarked by the 30th day following the end of each six-month period.”⁵¹

⁴⁹ See also, Facility Title V Permit Condition C-VII-039 (TV Permit pp. 47 – 52).

⁵⁰ See also, Title V Permit Condition C-VII-045 (TV Permit pp. 61 – 67 of 556; at p. 67).

⁵¹ See also, Title V Permit Condition C-VII-088 (TV Permit pp. 110 – 112 of 556; at p. 111).

C. Factual Background

120. URC operates two plant blowdown flares at the Facility: the Combo Flare and the FCC Flare. The Combo Flare and the FCC Flare operate independent of each other and each Flare burns fuel gas that contains hydrogen sulfide (“H₂S”). URC’s most recent Flare Management Plan (dated May 1, 2019) acknowledges that both the Combo Flare and the FCC Flare are subject to the 40 C.F.R. Part 60, Subpart Ja (or “Subpart Ja”) “Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007.”⁵² Excess emission from these sources are also subject to the general notification and record keeping (*i.e.*, reporting) requirements of 40 C.F.R. Part 60, Subpart A.

D. Alleged Violations

COUNT XIV – Operational Standards Limiting the Short-Term Concentration of H₂S Emissions from Refinery Flares – Failure to Comply with the Applicable Rolling 3-Hour Average 162 ppmv H₂S Emissions Concentration Limit at the Combo Flare and FCC Flare in Violation of Subpart Ja and TV Permit Condition C-VII-039.

121. The Combo Flare and the FCC Flare each burn fuel gas that contains H₂S and each flare is limited to burning fuel gas with a maximum H₂S concentration of 162 ppmv on a 3-hour average, pursuant to Subpart Ja requirements. 40 C.F.R. § 60.103a(h).

122. URC submitted operational data for both its Combo Flare and its FCC Flare to EPA. That data covered the period of January 1, 2017 through August 5, 2021 and included both 1-hour and 3-hour average H₂S concentrations (in ppmv) for each Flare during that time period.⁵³ According to that data, URC consistently exceeded the 162 ppmv H₂S 3-hour rolling average limit at both its Combo Flare and FCC Flare from January 1, 2017 through August 5, 2021 in violation of 40 C.F.R. § 60.103a(h) and TV Permit Condition C-VII-039⁵⁴, as illustrated in the chart, immediately below.

	Combo Flare		FCC Flare	
	Number of Exceedances	Percent of Total Time in Quarter That Limit Was Exceeded	Number of Exceedances	Percent of Total Time in Quarter That Limit Was Exceeded
Q1 2017	2158	99.91%	2158	99.91%
Q2 2017	2184	100.00%	2160	98.90%
Q3 2017	2038	92.30%	1965	88.99%
Q4 2017	2208	100.00%	2195	99.41%
Q1 2018	2137	98.94%	2100	97.22%
Q2 2018	1917	87.77%	822	37.64%
Q3 2018	2175	98.51%	1324	59.96%
Q4 2018	2208	100.00%	926	41.94%
Q1 2018	2160	100.00%	958	44.35%
Q2 2019	2006	91.85%	1825	83.56%
Q3 2019	2208	100.00%	1088	49.28%
Q4 2019	2018	91.39%	1803	49.28%

⁵² Insp. Rpt. Appendix CAA S at p. 1; *See also*, accompanying May 14, 2019 cover letter to EPA.

⁵³ *See*, Insp. Rpt. Appendix CAA T.

⁵⁴ TV Permit pp. 47 – 52 of 556.

Q1 2020	2126	97.34%	1372	62.87%
Q2 2020	2161	98.95%	1510	69.14%
Q3 2020	2134	96.65%	93	4.21%
Q4 2020	2170	98.28%	124	5.62%
Q1 2021	2024	94%	69	3%
Q2 2021 through August 5, 2021	2784	91%	388	13%

COUNT XV – Notification and Record Keeping Requirements - Failure to Comply with 40 C.F.R. Part 60, Subpart A, and Facility Title V Permit Notification Requirements

123. Based upon EPA’s review of URC’s submitted semi-annual NSPS monitoring reports,⁵⁵ URC failed to report the 3-hour rolling average H₂S limit exceedances that occurred at its Combo Flare and at its FCC Flare in required semi-annual reports for each of the four (4) semi-annual reporting periods extending from the second half of calendar year 2019 through the first half of calendar year 2021, in violation of 40 C.F.R. § 60.7(c) and the TV Permit “Notification and record keeping” requirements of TV Permit Condition C-VII-088.⁵⁶

VI. Failure to Comply with Facility Title V Permit SO_x Emission Restrictions at the Facility’s Blowdown System Flares

A. Applicable Title V Permit Conditions

124. Facility TV Permit Condition D-I-004⁵⁷ provides, in relevant part, that pursuant to 25 Pa. Code § 127.12b and SO₂ PA Plan Approval 62-017G, Condition 4:

The emissions from the combo flare shall not exceed the following:

* * *

f) The SO_x emissions shall not exceed 0.4 lbs./hr.

The emissions from the FCC flare shall not exceed the following:

* * *

f) The SO_x emissions shall not exceed 0.1 lbs./hr.

125. This Title V Permit Condition⁵⁸ further provides that “[Compliance with the SO_x emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO₂ PA: 62-017E condition 4]”. These same Permit/Plan Approval limits and conditions are also requirements of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC, which therein specifies, at *Condition 3.a.*, that: “[t]o comply with the 2010 1-hour SO₂ NAAQS, United Refining shall be subject to the following conditions...Blowdown System – Combo Flare... 0.40 lb/hr... Blowdown System – FCC Flare... 0.10 lb/hr....”

⁵⁵ See Insp. Rpt. Appendix CAA U.

⁵⁶ See TV Permit Condition C-VII-088 at ¶¶ (c) and (d). (TV Permit p. 111 of 556).

⁵⁷ See TV Permit at p. 327 of 586.

⁵⁸ *i.e.*, TV Permit Condition D-I-004 (TV Permit at p. 327 of 586).

B. Alleged Violations

COUNT XVI – *Combo Flare SO_x Emission Restriction* – Failure to Comply with a requirement of the Facility Title V Permit by exceeding, on a near continuous basis, the applicable 0.4 lbs/hr SO_x emissions limit at the Facility’s Combo Flare.

126. The Facility’s Combo Flare is subject to a maximum hourly limit of 0.4 lb/hr for SO₂ emissions under the Facility TV Permit Condition D-I-004 (*[25 Pa. Code §127.12b]*- Plan approval terms and conditions; [Plan Approval 62-017G]) and Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC. TV Permit at p. 327 of 586.

127. During the Inspection, URC provided NEIC with Combo Flare operational data for the period of January 1, 2017 through August 5, 2021. The Combo Flare operational data included 1-hour and 3-hour average H₂S concentrations (in ppmv) and hourly total gas flow rates to the Combo Flare.

128. Based upon URC’s own measured H₂S concentrations of the fuel gas to the Combo Flare and its own measured flow rates during the period of July 2020 through July 2021,⁵⁹ and applying a 98% H₂S-to-SO₂ conversion rate, NEIC calculated the 1-hour SO₂ emissions from the Combo Flare during the period of July 1, 2020 through July 31, 2021 and determined that the Combo Flare routinely exceeded and violated the 0.4 lbs./hr limit set forth in TV Permit Condition D-I-004 and the requirements of 25 Pa. Code §127.12b and Plan Approval 62-017G (in violation of the PA SIP 25 Pa. Code §127.25), and of Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC. Specifically, NEIC calculated:

- a. 2207 SO₂ hourly emission exceedances (or 99.95%) during the period of July 1, 2020 through September 30, 2020;
- b. 2205 SO₂ hourly emission exceedances (or 99.86%) during the period of October 1, 2020 through December 31, 2020;
- c. 2160 SO₂ hourly emission exceedances (or 100%) during the period of January 1, 2021 through March 31, 2021; and
- d. 2645 SO₂ hourly emission exceedances (or 90.33%) during the period of April 1, 2021 through July 31, 2021.⁶⁰

129. Based upon NEIC’s calculations of the 1-hour SO₂ emissions from the Combo Flare (using URC’s measured H₂S concentrations of the fuel gas to the Combo Flare and URC’s measured flow rates), during the period of July 2020 through July 2021 URC exceeded the applicable maximum hourly limit of 0.4 lb/hr for SO₂ emissions at the Facility’s Combo Flare, on a near continuous basis, in violation of Facility TV Permit Condition D-I-004 (*[25 Pa. Code §127.12b]*- Plan approval terms and conditions; [Plan Approval 62-017G]) (and Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC).

⁵⁹ See, Insp. Rpt. Appendix CAA T.

⁶⁰ Id.

COUNT XVII – FCC Flare SO_x Emission Restriction – Failure to Comply with a requirement of Facility Title V Permit by exceeding, on a near continuous basis, the applicable 0.1 lbs./hr. SO_x emissions limit at the Facility’s FCC Flare.

130. The Facility’s FCC Flare is subject to a maximum hourly limit of 0.1 lb/hr for SO_x emissions under the Facility TV Permit Condition D-I-004)⁶¹ and Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC.

131. During the Inspection, URC personnel provided NEIC with FCC Flare operational data for the same time period of January 1, 2017 through August 5, 2021.⁶² The FCC Flare operational data included 1-hour and 3-hour average H₂S concentrations in ppmv and hourly total gas flow rates to the Combo Flare. Using that operational data and applying a 98% H₂S-to-SO₂ conversion rate, NEIC calculated the 1-hour SO₂ emissions from the FCC Flare during the period of July 1, 2020 through July 31, 2021, and determined that the FCC Flare routinely exceeded and violated the 0.1 lbs./hr. limit set forth in TV Permit Condition D-I-004 and the requirements of 25 Pa. Code §127.12b and Plan Approval 62-017G (and the PA SIP at 25 Pa. Code §127.25), and of Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC. Specifically, NEIC calculated:

- a. 2208 SO₂ hourly emission exceedances (or 100%) during the period of July 1, 2020 through September 30, 2020;
- b. 2208 SO₂ hourly emission exceedances (or 100%) during the period of October 1, 2020 through December 31, 2020;
- c. 2160 SO₂ hourly emission exceedances (or 100%) during the period of January 1, 2021 through March 31, 2021; and
- d. 2884 SO₂ hourly emission exceedances (or 98.50%) during the period of April 1, 2021 through July 31, 2021.

132. Based upon NEIC’s calculations of the 1-hour SO₂ emissions from the FCC Flare (using URC’s measured H₂S concentrations of the fuel gas to the Combo Flare and URC’s measured flow rates), during the period of July 2020 through July 2021 URC exceeded the applicable maximum hourly limit of 0.1 lb/hr for SO₂ emissions at the Facility’s FCC Flare, on a near continuous basis, in violation of Facility TV Permit Condition D-I-004 ([25 Pa. Code §127.12b]- Plan approval terms and conditions; [Plan Approval 62-017G]) (and Condition 3.a of the September 29, 2017 *Consent Order and Agreement* between PADEP and URC).

⁶¹ See TV Permit Condition D-I-004 (TV Permit at p. 327 of 586); See also SO₂ PA Plan Approval 62-017G, Condition 4.

⁶² See, Insp. Rpt at CAA Appendix T.

VII. Failure to Comply with Applicable VOC Emission Leak Detection and Repair Standards Pertaining to the Inspection, Monitoring and Repair of Pumps in Light Liquid Service and Valves in Gas/Vapor and Light Liquid Service.

A. Background: VOC Petroleum Refinery Equipment Leak Standards – Regulatory Background & Overview

133. On May 30, 1984 (49 *Fed. Reg.* 22598), EPA promulgated “*Standards of Performance for New Stationary Sources of Equipment Leaks of VOC Petroleum Refineries and Synthetic Organic Chemical Manufacturing Industry.*” EPA therein made changes to the Synthetic Organic Chemical Manufacturing Industry (“SOCMI”) standards located at 40 C.F.R. Part 60, Subpart VV, and added new “*Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries*” as 40 C.F.R. Part 60, Subpart GGG,” with performance standards that became effective upon promulgation, but applied to affected facilities for which construction or modification commenced after January 4, 1983, and on or before November 7, 2006.

134. On November 16, 2007 (72 *Fed. Reg.* 64860), EPA promulgated amended standards of performance for equipment leaks of VOCs in the SOCMI and to the standards of performance for equipment leaks of VOC in petroleum refineries. These included final clarifying amendments, revisions and corrections to 40 C.F.R. Part 60, Subparts VV and GGG, a new Subpart VVa that applies to affected facilities in the SOCMI that are constructed, reconstructed, or modified after November 7, 2006, and a new Subpart GGGa that applies to affected facilities at petroleum refineries that are constructed, reconstructed, or modified after November 7, 2006. These amendments and new standards were based on the results of EPA’s review of the existing regulations, as required by CAA Section 111(b)(1)(B). They included new recordkeeping and reporting provisions that require certain specific information necessary to demonstrate compliance with new monitoring and repair provisions and the demonstration of compliance with calibration drift assessment requirements.

135. Subparts GGG and GGGa define “petroleum refineries” as “any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual oils, lubricants, or other products through the distillation, cracking, or reforming of unfinished petroleum derivatives.” *See*, 40 C.F.R. §§ 60.591, 60.591a. They further define the term “process unit” to mean “the components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.” *See*, 40 C.F.R. §§ 60.590(e), 60.590a(e). They further define “equipment” to mean “each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service.” *See*, 40 C.F.R. §§ 60.591, 60.591a.

136. The Subpart GGG and GGGa regulations address all process unit equipment (e.g., pumps, valves) that are “*in light liquid service*” (i.e., “the piece of equipment contains a liquid that meets the conditions specified in 40 C.F.R. § 60.593(c) [/ 60.593a(c)]”) and certain equipment (e.g., valves) that are in “*in gas/vapor service*” (i.e., “the piece of equipment contains process fluid that is in the gaseous state at operating conditions”). The Subpart GGG regulations also incorporate the requirements of 40 C.F.R. Part 60, Subpart VV,⁶³ while the Subpart GGGa regulations

⁶³ The “Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006.”

correspondingly incorporate the requirements of 40 C.F.R. Part 60, Subpart VVa.⁶⁴ As previously noted, the NESHAP CC regulations incorporate the requirements of 40 C.F.R. Part 60, Subpart VV, or of the SOCMi “HON” rule.

137. The newer Subpart GGGa and VVa standards generally parallel those in the amended subparts GGG and VV (with certain exceptions). They also allow an owner or operator of an affected facility subject to Subpart GGGa to elect to comply with certain alternative regulatory requirements and they include lower leak definitions than in Subparts GGG and VV, thereby revising the leak definition for pumps in light liquid service to 2,000 parts per million (ppm) (instead of 10,000 ppm) and the leak definition for valves in gas/vapor service or light liquid service to 500 ppm (instead of 10,000 ppm). They also include additional recordkeeping and instrument calibration requirements.

1. Subpart GGG/VV – Relevant Equipment Leak Requirements, Standards and Provisions

138. Pursuant to 40 C.F.R. § 60.592(a), as soon as practicable, but no later than 180 days after initial startup, each owner or operator subject to the provisions of Subpart GGG (*i.e.*, owners/operators of petroleum refineries constructed, reconstructed, or modified after January 4, 1983, and on or before November 7, 2006) is required to comply with the Subpart VV requirements of 40 C.F.R. §§ 60.482-1 to 60.482-10.

139. Owners and operators of petroleum refineries thus subject to Subpart VV are required to monitor pumps in light liquid service (40 C.F.R. § 60.482-2), sampling connection systems (§ 60.482-5), valves in gas/vapor or light liquid service (40 C.F.R. § 60.482-7), pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors (§ 60.482-8), delay of repair (of equipment) (§ 60.482-9) and closed vent systems and control devices (§ 60.482-10). Pursuant to 40 C.F.R. § 60.485(b), such owners and operators must determine compliance with applicable standards using Method 21 (introduced by EPA in 1981 and requiring the use of a specialized VOC analyzer to determine whether leaks are present).

140. 40 C.F.R. § 60.592(b) of Subpart GGG further provides that, for a given process unit, an owner or operator may elect to comply with the Subpart GGG requirements of 40 C.F.R. § 60.592(b)(1), (2), or (3) as an alternative to the 40 C.F.R. § 60.482-7 requirements in Subpart VV. In this respect: 40 C.F.R. § 60.592(b)(1) allows for an election to comply with 40 C.F.R. § 60.483-1; 40 C.F.R. § 60.592(b)(2) allows for an election to comply with 40 C.F.R. § 60.483-2; and 40 C.F.R. § 60.592(b)(3) allows for an election to comply with the Phase III provisions in 40 C.F.R. 63.168, except that an owner or operator may elect to follow the provisions in 40 C.F.R. § 60.482-7(f) instead of 40 C.F.R. § 63.168 for any valve that is designated as being leakless.

141. 40 C.F.R. §§ 60.592(d) and (e) of Subpart GGG also provide that each owner or operator subject to the provisions of Subpart GGG must comply with the Subpart VV “*Test methods and procedures*” of 40 C.F.R. § 60.485 (except as provided in 40 C.F.R. § 60.593) and the “*Recordkeeping and Reporting*” requirements of 40 C.F.R. §§ 60.486 and 60.487, respectively.

142. The Subpart VV record-keeping requirements for leaking components, set forth at 40 C.F.R. § 60.486(c) provide, in relevant and applicable part, that “[w]hen each leak is detected . . . , the

⁶⁴ The “Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006.”

following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location: . . . (1) The instrument and operator identification numbers and the equipment identification number; (2) The date the leak was detected and the dates of each attempt to repair the leak.; (3) Repair methods applied in each attempt to repair the leak; (4) “Above 10,000” if the maximum instrument reading measured by the methods specified in [40 C.F.R.] § 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm; (5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; (6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown; (7) The expected date of successful repair of the leak if a leak is not repaired within 15 days; (8) Dates of process unit shutdowns that occur while the equipment is unrepaired; and (9) The date of successful repair of the leak.

2. Subpart GGGa / VVa - Relevant Equipment Leak Requirements, Standards and Provisions

143. Pursuant to 40 C.F.R. § 60.592a(a), each owner or operator that is subject to the provisions of Subpart GGGa (*i.e.*, owners/operators of petroleum refineries that are constructed, reconstructed, or modified after January 4, 1983, and on or before November 7, 2006) is similarly required to comply with the requirements of 40 C.F.R. §§ 60.482a-1 to 60.482-10a of Subpart VVa.

144. Owners and operators of facilities thus subject to Subpart VVa are required to monitor pumps in light liquid service (40 C.F.R. § 60.482-2a), compressors (§ 60.482-3a), pressure relief devices in gas/vapor service (§ 60.482-4a), sampling connection systems (§ 60.482-5a), open-ended valves or lines (§ 60.482-6a), valves in gas/vapor or light liquid service (40 C.F.R. § 60.482-7a), pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors (§ 60.482-8a), delay of repair (of equipment) (§ 60.482-9a) and closed vent systems and control devices (§ 60.482-10a). Pursuant to 40 C.F.R. § 60.485a(b), such owners and operators must again determine compliance with applicable standards using Method 21.

145. 40 C.F.R. § 60.592a(b) of Subpart GGGa further provides that, for a given process unit, an owner or operator may elect to comply with the Subpart GGGa requirements of 40 C.F.R. § 60.592a(b)(1), (2), or (3) as an alternative to the 40 C.F.R. § 60.482-7a requirements in Subpart VVa. In this respect: 40 C.F.R. § 60.592a(b)(1) allows for an election to comply with 40 C.F.R. § 60.483-1a; 40 C.F.R. § 60.592a(b)(2) allows for an election to comply with 40 C.F.R. § 60.483-2a; and 40 C.F.R. § 60.592a(b)(3) allows for an election to comply with the Phase III provisions in 40 C.F.R. 63.168, except that an owner or operator may elect to follow the provisions in 40 C.F.R. § 60.482-7a(f) instead of 40 C.F.R. § 63.168 for any valve that is designated as being leakless.

146. 40 C.F.R. §§ 60.592a(d) and (e) of Subpart GGGa also provide that each owner or operator subject to the provisions of Subpart GGGa must comply with the Subpart VVa “*Test methods and procedures*” of 40 C.F.R. § 60.485a (except as provided in 40 C.F.R. § 60.593a) and the “*Recordkeeping and Reporting*” requirements of 40 C.F.R. §§ 60.486a and 60.487a, respectively.

147. The Subpart VVa record-keeping requirements for leaking components, set forth at 40 C.F.R. § 60.486a(c), mirror their Subpart VV counter-part provisions of 40 C.F.R. §§ 60.486(c)(1) through (3) and (5) through (9), but replace the Subpart VV recordkeeping provision of 40 C.F.R. § 60.486(c)(4) with the following 40 C.F.R. § 60.486a(c)(4) Subpart VVa recordkeeping requirement: “(4) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the

leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.”

3. NESHAP CC - Relevant Equipment Leak Requirements, Standards and Provisions

148. Pursuant to 40 C.F.R. § 63.640, NESHAP CC requirements apply to petroleum refining process units that are located at a plant site that is a CAA Section 112 “major source,” emit or have equipment containing or contacting one or more of the hazardous air pollutants listed in table 1 of the Subpart (“organic HAPs”) and all related emission points, in combination, that are located at a single refinery plant site, are associated with a petroleum refinery or petroleum refining process units and are identified in the following list: (i) miscellaneous process vents; (ii) storage vessels; (iii) wastewater streams and treatment operations; (iv) equipment leaks; (v) gasoline loading racks classified under SIC 2911; (vi) marine vessel loading operations located at a petroleum refinery (vii) storage vessels and equipment leaks associated with a bulk gasoline terminal or pipeline breakout station classified under SIC 2911 located within a contiguous area and under common control with a refinery; (viii) heat exchange systems; and (ix) releases associated with the decoking operations of a delayed coking unit. 40 C.F.R. §§ 63.640(a)(1) and (2) and (c)(1) – (9).

149. As URC has not elected to comply with certain alternative monitoring and other provisions of the NESHAP’s SOCI HON (40 C.F.R. Part 63, Subpart H), relevant equipment at Facility petroleum refining process units that contain or contact organic HAPs is subject to NESHAP CC equipment leak standards set forth at 40 C.F.R. § 63.648, which provide, in relevant and applicable part, that:

(a) Each owner or operator of an existing source subject to the provisions of this subpart shall comply with the provisions of 40 CFR part 60, subpart VV, and paragraph (b) of this section[,] with exceptions not herein applicable.

(1) For purposes of compliance with this section, the provisions of 40 CFR part 60, subpart VV, apply only to equipment in organic HAP service, as defined in § 63.641 of this subpart.

4. Relevant Additional Equipment Leak Requirements, Standards and Provisions of the URC Permit

150. The Written Refinery-Wide LDAR Program requirements of the Title V Permit, as incorporated therein from PA Plan Approval 62-017G via administrative amendment, are set forth in TV Permit Condition C-VII-027 “[25 Pa. Code §127.441] Operating permit terms and conditions.” (TV Permit at p. 42 of 556). TV Permit Condition C-VII-027 thus provides, in relevant and applicable part, that:

2. The program shall include:

(a) An overall, Refinery-wide leak rate goal that will be a target for achievement on a process-unit- by-process-unit basis;

(b) An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, and VHAPs, within process units that are owned and maintained by the refinery;

- (c) Procedures for identifying leaking equipment within process units that are owned and maintained by the refinery; including a chart delineating which screening values cover which process units. This should include process units that are covered by the screening values of 2500 ppm, and 1000 ppm respectively.

151. These Title V Permit additional requirements were more fully set forth in PA Plan Approval 62-017G (which was published at 33 Pa.B. 2073, issued to URC on April 26, 2003 and incorporated into the Title V Permit through administrative amendment), which established the Facility's Written Refinery-Wide LDAR Program and provided, in relevant and applicable part, that:

5. The sources are subject to 25 Pa. Code §§ 123.1, 123.31 and 123.41 for fugitive, odor and visible emissions, respectively.

* * *

7. These sources where applicable are subject to Subparts J, GGG and QQQ of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements of this subpart; 40 CFR 60.4 requires submission of copies of all requests, reports, applications, submittals and other communications to both the EPA and the Department. . . .

8. These sources where applicable are subject to Subparts CC . . . of the National Emission Standards for Hazardous Air Pollutants⁶⁵] and shall comply with all applicable requirements of this Subpart

* * *

12. The permittee shall use a portable flame ionization detector to monitor the components in VOC service on a quarterly basis. The level of VOC read by the detector shall be recorded for each component in the LDAR report. Any component found leaking shall be included in the LDAR report along with the date and date of repair. Any component not monitored according to the LDAR schedule shall be reported. In addition, any component not repaired in the required time frame shall be reported. The report shall be compiled on a quarterly basis (25 Pa. Code § 129.58, 40 CFR 60.590--60.594 and 63.640--63.653).

* * *

35. The facility shall use the screening value of 1,000 ppmv to determine VOC leaks for valves, flanges, sampling connections and open-ended valves on new units. The facility shall use the screening value of 2,000 ppmv for heavy and light liquid pump seals on new units. The new components are regulated by 40 CFR Part 63 Subpart CC which incorporates 40 CFR Part 63 Subpart H requirements for all the new fugitive components. The screening value of 2,500 ppm as a leaking component shall be used for existing fugitive components to calculate the fugitive emissions from components.

These Written Refinery-Wide LDAR Program requirements of the Title V Permit (and underlying PA Plan Approval) that apply to existing components at the URC Facility establish a leak threshold of 2,500 ppm for subject Facility valves and pumps, which is more stringent than the federally-applicable VOC equipment leak threshold provisions for pumps and valves that are set forth in NSPS CC / Subpart VV or in Subpart GGG / VV.

⁶⁵ 40 C.F.R. Part 63, Subpart CC.

152. TV Permit Condition D-VI-001⁶⁶ further incorporates the provisions of 25 Pa. Code § 129.58 (Petroleum refineries – fugitive sources), and the relevant VOC monitoring program, recordkeeping, repair and retesting of leaking components provisions set forth therein. The Regulatory requirements of Subparts GGG / VV are also incorporated into the Facility’s Title V Permit. *See the “Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries”* (Subpart GGG) provisions of TV Permit Conditions C-VII-080 (Applicability), 083 (Standards) and 085 (Exceptions). TV Permit at pp. 106 – 108. *See also*, the “Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry” (Subpart VV) provisions of TV Permit Conditions C-VII-051 (General), 054 (Pumps in light liquid service), 063 (Valves in gas/vapor service and in light liquid service), 067 (Delay of repair), 069 (Alternative standards for valves – allowable percentage of valves leaking), 070 (Alternative standards for valves-skip period leak detection and repair), 073 (Test methods and procedures), 075 (Recordkeeping requirements) and 077 (Reporting requirements). TV Permit at pp. 74 – 105.

153. Regulatory requirements of Subparts GGGa/VVa are similarly incorporated into the Facility’s Title V Permit. *See the “Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006”* (Subpart GGGa) provisions of TV Permit Conditions C-VII-081 (Applicability), 082 (Definitions) 084 (Standards) and 086 (Exceptions). TV Permit at pp. 107 – 110. *See also*, the “Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006” (Subpart VV) provisions of TV Permit Conditions C-VII-053 (General), 055 (Pumps in light liquid service), 064 (Valves in gas/vapor service and in light liquid service), 068 (Delay of repair), 072 (Equivalence of means of emission limitation), 074 (Test methods and procedures), 076 (Recordkeeping requirements) and 078 (Reporting requirements). TV Permit at pp. 76 – 106.

154. NESHAP CC equipment leak provisions apply to all existing sources at petroleum refining process units, all storage vessels associated with a bulk gasoline terminal or pipeline breakout stations and all emissions points, in combination, listed in 40 C.F.R. § 63.640 (c)(1) through (9) at the Facility that emit, or have equipment containing or contacting, one or more of the hazardous air pollutants listed in table 1 of NESHAP CC (*i.e.*, equipment in organic HAP service). *See also*, TV Permit Conditions C-VII-113 and 121 (at pp. 149 – 150 of 556 and at p. 167 of 556). With exceptions not herein applicable, these TV Permit Conditions also include requirements to comply with 40 C.F.R. Part 60, subpart VV, requirements.

155. As the provisions of NESHAP CC overlap with other regulations for equipment leaks, the TV Permit further provides that, subsequent to the dates set forth in Table 11 of NESHAP CC or as otherwise identified in the TV Permit, equipment leaks that are also subject to provisions of the 40 C.F.R. Part 60 standards promulgated before September 4, 2007, are required to comply only with the NESHAP CC provisions (*i.e.*, with NESHAP CC / Subpart VV requirements), while equipment leaks that are also subject to the provisions of Subpart GGGa are required to comply only with the Subpart GGGa/VVa regulations. TV Permit Condition C-VII-113 (TV Permit p.158 of 556).

⁶⁶ TV Permit p. 335 - 357 of 556.

B. Factual Background

1. URC's Facility LDAR Program

156. URC has instituted a Petroleum Refineries Fugitive Sources Monitoring (or LDAR) Program at the Facility through which it endeavors to perform required affected facility VOC component fugitive emission monitoring and repair activities at the Facility. Through this Program, URC also maintains associated component inspection, monitoring and repair records, and other required information, in a LeakDAS database that URC maintains at the Facility. URC also provides quarterly equipment VOC monitoring summary reports to PADEP, in accordance with 25 PA Code 129.58 requirements.

2. URC Facility Process Units that are “Affected Facilities” Having Components Subject to LDAR Requirements

157. EPA's review of electronic information maintained by URC in the Facility's LeakDAS database indicates that each of the following process units at the Facility is an affected facility containing one or more components – including valves and pumps – that are in light liquid and/or gas vapor service and which are subject to the leak monitoring requirements of either NESHAP CC / VV,⁶⁷ Subpart GGG / VV or Subpart GGGa / VVa, and with additional requirements of the Title V Permit (which incorporates the 25 Pa Code Section 129.58 “Petroleum refineries—fugitive sources” regulatory provisions and the additional Written Refinery-Wide LDAR Program requirements of PA Plan Approval 62-017G).

300-Crude Unit	400-Filters #1
300F Crude Connectors	400-Filters #2
301-Preflash Unit	400-Filters #3
302-Vacuum Unit	400-Filters #4
303-Vacuum Vent Gas	400-Gas Blending #1 (Combo)
304-#5-B Boiler	400-Gas Blending #2 (FCC)
310-DHT 1	400-Liquified Petroleum Gas
311 Sour Tips Stripper	400-Loading Areas
320-Reformer	400-Rail Loading #1 (LPG)
321-Light Stabilizer	400-Rail Loading #2
322-Prefractionator II	400-ULSD tanks (409/410)
323-NHT (Pretreater)	400-West Tanks
330-Saturate Gas Unit	410-Bottom Loading Rack
350-F.C.C. Unit	411-Vapor Combustion Unit (VCU)
351-FCC Gas Concentration	411-Vapor Recovery Unit
352-FCC Gas Treating	412-Top Loading Rack
353-7 Boiler	420F ISOM Connectors
360-Alkylation Unit	420-Isomerization Unit
370-Polymerization Unit	440-Tank Farm
384-Sulfur Recovery Unit 2	470-Distillate Hydrotreater II
385-Resulfur Tail Gas	490B-#6 Boiler

⁶⁷ *National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.*

400-342 Tank
400-East Tanks

490-Boiler House
602 – Hydrogen

158. Each of those valves and pumps that are in light liquid and/or gas vapor service at the above-identified affected facilities (including those in organic HAP service) that are regulated pursuant to NESHAP CC and Subpart GGG (which each incorporate the requirements of Subpart VV) and the Title V Permit (which incorporates those above-cited PA regulations and includes additional Written Refinery-Wide LDAR Program requirements that establish a more stringent leak threshold for Subpart GGG regulated equipment at the Facility), is subject to the applicable leak monitoring requirements of 40 C.F.R. § 60.482-2(a) (for pumps) and § 60.482-7(a) (for valves), and the associated repair standards of 40 C.F.R. § 60.482-2(c) (for pumps) and § 60.482-7(d) (for valves), including allowable and applicable delay of repair (or “DOR”) provisions of 40 C.F.R. § 60.482-9. All such NESHAP CC regulated and Subpart GGG regulated equipment (*i.e.*, existing equipment) is further subject to the more stringent (*i.e.*, 2500 ppm) leak threshold provisions of the Written Refinery-Wide LDAR Program requirements of the Title V Permit. Hereinafter, component valves and pumps that are in light liquid and/or gas vapor service and subject to Subpart GGG requirements are generally referred to as “Subpart GGG / VV” regulated. Component valves and pumps in light liquid and/or gas vapor service that are also in organic HAP service are hereinafter generally referred to as “NESHAP CC / VV” regulated.

159. Each of those valves and pumps that are in light liquid and/or gas vapor service at the above- identified affected facilities that are regulated pursuant to Subpart GGGa (which incorporates the requirements of Subpart VVa), and the TV Permit is subject to the applicable leak monitoring requirements of 40 C.F.R. § 60.482-2a(a) (for pumps) and of § 60.482-7a(a) (for valves), and the associated repair standards of 40 C.F.R. § 60.482-2a(c) (for pumps) and of § 60.482-7a(d) (for valves), including allowable and applicable delay of repair (or “DOR”) provisions of 40 C.F.R. § 60.482-9a. Hereinafter, component valves and pumps that are in light liquid and/or gas vapor service that are subject to Subpart GGGa requirements are generally referred to as “Subpart GGGa / VVa” regulated.

3. Data and Information Reviewed and Relied Upon by EPA for Purposes of its LDAR Analysis

160. On March 17, 2023, URC responded to a January 21, 2023 information request letter (“IRL”) that EPA issued to URC pursuant to its CAA Section 114(a), 42 U.S.C. §7414(a), information gathering authorities. In its response to Question 14 of that IRL, URC advised EPA that the Facility was the victim of a ransomware attack on August 15, 2020. URC therein stated that such attack corrupted existing data in the Facility’s LDAR server and deleted all of the third quarter 2020 data that had been entered into the server. URC further stated that it initiated an aggressive effort to re-monitor Facility equipment before the end of the 2020 third quarter and that URC recorded 2020 fourth quarter equipment monitoring results on paper. URC thereafter explained that it subsequently repopulated the LDAR server with raw exported files and included a list of components, tag numbers, descriptions, and unit regulatory definitions from the third quarter of 2019 forward. However, URC also stated that no missing data was backfilled or restored into its LDAR database (though URC confirmed that raw files, paper copies, maintenance work orders and prior compliance reports do exist). URC further informed the Agency that it began to once again record accurate and uncorrupted data in the Facility’s LDAR database beginning January 1, 2021.

161. Based upon URC's IRL response, EPA understands that the Facility LDAR database information that URC has provided to EPA only contains full, complete, accurate and uncorrupted Facility equipment LDAR monitoring data for the time period beginning on January 1, 2021 and extending forward through at least August 10, 2021, the last date in the URC Facility LeakDAS Database that was provided to the NEIC representatives at the time of the Inspection and for which equipment inspection information was then available. As a result, EPA has elected to use and rely ONLY upon the data and information contained in the URC Facility LDAR database that pertains to the time period beginning on January 1, 2021 and extending through August 10, 2021 (the date of the Inspection) for purposes of the LDAR monitoring review and analysis discussed in this NOVOC.

C. Regulatory & Permit Violations – Failure to Comply with Monitoring and Repair Requirements Pertaining to Subpart GGG/VV regulated Pumps in Light Liquid Service.

COUNT XVIII – *Monthly Monitoring Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Pumps in Light Liquid Service* - Failure to Comply with the Monthly Monitoring Requirements of 40 C.F.R. §§ 60.592(a) and 60.482-2(a)(1) and with corresponding TV Permit Provisions

162. 40 C.F.R. § 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-2(a)(1) which, with exceptions not herein applicable, requires that each NESHAP CC / VV and Subpart GGG/VV regulated pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 C.F.R § 60.485(b).

163. Based on information URC recorded and maintained in the Facility's LeakDAS database, on at least one hundred and sixty-three (163) occasions between January 1, 2021 and August 10, 2021,⁶⁸ URC failed to perform required monthly monitoring of NESHAP CC / VV and Subpart GGG / VV regulated pumps and valves located at twenty-four (24) of the Facility's affected facilities, in accordance with the methods specified in 40 C.F.R. § 60.485(b), resulting in at least one hundred and sixty-three (163) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-2(a)(1) requirements, and of corresponding TV Permit provisions.⁶⁹

COUNT XIX – *First Attempt at Repair Requirements for Subpart GGG/VV Regulated Pumps in Light Liquid Service* - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-2(c)(2) and with corresponding TV Permit Provisions

164. 40 C.F.R. §§ 60.592(a) incorporates the requirement of 40 C.F.R. § 60.482-2 which, at 40 C.F.R. § 60.482-2(c)(2), requires that when a leak is detected at a NESHAP CC / VV or Subpart GGG/VV regulated pump in light liquid service, a first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

165. Based on information URC recorded and maintained in the Facility's LeakDAS database, on at least fifteen (15) occasions between January 1, 2021 and August 10, 2021, URC failed, within 5 calendar days of the date that a leak was detected, to make a first attempt at repair of a leaking pump in light liquid service that was NESHAP CC / VV or Subpart GGG / VV regulated (and located at six (6) of the Facility's affected facilities), resulting in at least fifteen (15) separate

⁶⁸ August 10, 2021 represents the last date in the URC Facility LeakDAS Database that was provided to the NEIC representatives at the time of the Inspection for which equipment inspection information is available.

⁶⁹ See TV Permit Condition C-VII-054 (at TV Permit pp. 77-79 of 556).

and independent violations of the first attempt leak repair regulatory standards of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-2(c)(2) requirements, and of corresponding TV Permit provisions.⁷⁰

COUNT XX – Final Repair Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Pumps in Light Liquid Service - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-2(c)(1) and with corresponding TV Permit Provisions

166. 40 C.F.R. §§ 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-2 which, at 40 C.F.R. § 60.482-2 (c)(1), requires that when a leak is detected at a NESHAP CC / VV or a Subpart GGG / VV regulated pump in light liquid service, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, unless certain circumstances exist which allow delay of repair under 40 C.F.R. § 60.482-9. Such circumstances include: (i) technical infeasibility without a process unit shutdown, in which case repair of the equipment must occur before the end of the next process unit shutdown; (ii) allowable repair delay for equipment which is isolated from the process and which does not remain in VOC service; and (iii) allowable pump repair delay if repair requires the use of a dual mechanical seal system that includes a barrier fluid system *and* repair is completed as soon as practicable, but not later than 6 months after the leak was detected. 40 C.F.R. §§ 60.482-9(a), (b) and (e).

167. Based on information URC recorded and maintained in the Facility's LeakDAS database, on at least eleven (11) occasions between January 1, 2021 and August 10, 2021, URC identified leaks at pumps in light liquid service at six (6) affected facilities that were NESHAP CC / VV and Subpart GGG / VV regulated, designated the pumps as technically infeasible to repair within 15 days, and thereafter failed to repair such equipment leaks within 15 days.

168. Based upon information URC recorded and maintained at the Facility, including the Facility's LeakDAS database, backups to each of these eleven (11) leaking pumps were previously installed, in place and readily available for use at each affected facility such that each of these leaking pumps was capable of being isolated from its respective process and taken out of VOC service. As a result, repair of these leaking pumps was not technically infeasible and URC's placement of such leaking pumps on DOR was an act in contravention of 40 C.F.R. § 60.482-9(b), which provides that "delay of repair of equipment will be allowed *for equipment which is isolated from the process and which does not remain in VOC service.*" [Emphasis supplied].⁷¹

169. URC's failure, on at least eleven (11) occasions between the dates of January 1, 2021 and August 10, 2021, to repair leaks detected at pumps in light liquid service at affected facilities that were NESHAP CC / VV or Subpart GGG / VV regulated and that URC improperly designated as technically infeasible to repair and then failed to repair within the required 15 days, constitutes at least eleven (11) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7(d)(1) requirements, and of corresponding Title V Permit provisions.⁷²

⁷⁰ See *id.*

⁷¹ In addition, while three (3) of these eleven (11) pumps were placed on DOR, a process unit shutdown occurred at the Facility. Nevertheless, URC allowed each of these three (3) pumps to remain on DOR beyond the period of that process unit shutdown, in further contravention of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-9(a), and of corresponding Title V Permit provisions.

⁷² See TV Permit Condition C-VII-054 (at TV Permit pp. 77-79 of 556).

D. Regulatory & Permit Violations – Failure to Comply with the Monitoring and Repair Requirements Pertaining to NESHAP CC / VV and Subpart GGG / VV regulated Valves in Gas/Vapor Service and in Light Liquid Service and with corresponding TV Permit Provisions

COUNT XXI – Initial Monitoring Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Valves in in Gas/Vapor Service and in Light Liquid Service Which Began Operation After the Initial Startup Date for a Process Unit - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and of 40 C.F.R. §§ 60.482-7(a)(2)(i) and (c)(1)(i) and with corresponding TV Permit Provisions

170. 40 C.F.R. § 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-7 which, at 40 C.F.R. § 60.482-7(a)(1) provides that: “[e]ach valve [in gas/vapor or in light liquid service within an affected facility] shall be monitored monthly to detect leaks by the methods specified in [40 C.F.R.] § 60.485(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, § 60.482-1(c) and (f), and §§ 60.483-1 and 60.483-2.”

171. 40 C.F.R. § 60.592(a) and 40 C.F.R. § 60.482-7(a)(2)(i), with exceptions not herein applicable, thereafter provide that each NESHAP CC / VV and Subpart GGG/VV regulated valve in gas/vapor service or in light liquid service which began operation in gas/vapor service or light liquid service after the initial startup date for the process unit, with exceptions not herein applicable, “must be monitored, for the first time, within 30 days after the end of its startup period to ensure proper installation.”

172. 40 C.F.R. § 60.592(a) also incorporates the requirements of 40 C.F.R. § 60.482-7(c)(1)(i), which further provides that: “[a]ny valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.”

173. As an exception to the two successive months of initial monitoring required pursuant to 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. §§ 60.482-7(a)(1)(i) and (c)(1)(i) provisions, NESHAP CC / VV and Subpart GGG / VV regulated valves in gas/vapor service or in light liquid service that began operation in gas/vapor service or light liquid service after the initial startup date for the process unit may be monitored in accordance with one of the alternative requirements of 40 C.F.R. § 60.592(b), which enables an owner or operator of a given process unit to elect to comply with: 40 C.F.R. § 60.483-1 (compliance with an allowable percentage of valves leaking of equal to or less than 2.0 percent); or 40 C.F.R. § 60.483-2(b)(2) (an alternative work practice which, after 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, allows an owner or operator to begin to skip 1 of the quarterly leak detection periods); or with 40 C.F.R. § 60.483-2(b)(3) (an alternative work practice which, after 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, allows an owner or operator to begin to skip 3 of the quarterly leak detection periods).

174. The alternative monitoring requirements of 40 C.F.R. § 60.592(b) and 40 C.F.R. § 60.483-1(b)(1) and (2), however, include additional provisions and requirements that: “(1) [a]n owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in [40 C.F.R.] § 60.487(d); and] (2) [a] performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the

Administrator. The alternative standards of 40 C.F.R. § 60.483-2 similarly provide, at 40 C.F.R. § 60.483-2(a)(2), that “[a]n owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in § 60.487(d).”

175. EPA has received no information indicating, and no evidence to support, any claim that: (i) URC has ever provided notification to the EPA Administrator stating that it has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in [40 C.F.R.] § 60.487(d); or (ii) URC has successfully conducted any performance test as specified in 40 C.F.R. § 60.483-1(c). Absent evidence of such required notice and performance testing by URC, each of the Facility’s NESHAP CC / VV and Subpart GGG / VV regulated valves in gas/vapor service and in light liquid service which began operation in gas/vapor service or light liquid service after the initial startup date for its respective process unit, was required to have been monitored: (i) for the first time, within 30 days after the end of a startup period, in accordance with 40 C.F.R. § 60.482-7(a)(2)(i) requirements; and (ii) during the next (*i.e.*, successive) month, in accordance with 40 C.F.R. § 60.482-7(c)(1)(i) requirements, before any such valve found not to be leaking could *thereafter* be monitored during the first month of every subsequent quarter.

176. Based on information URC recorded and maintained in the Facility’s LeakDAS database, on at least one hundred and forty-five (145) occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to perform the required initial monitoring of NESHAP CC / VV and Subpart GGG / VV regulated Facility valves, located within nine (9) of the Facility’s affected facilities (*i.e.*, process units), which had begun operation in gas/vapor service and in light liquid service after the initial startup date of each respective process unit. On seven (7) of those occasions, URC failed to monitor such a valve, *for the first time*, within the required 30 days after the end of a startup period. On one hundred and thirty-eight (138) of those occasions, URC failed to monitor such a valve during the next (*i.e.*, the successive) month after its initial (*i.e.*, first) 30-day monitoring event.

177. URC’s failure, on at least one hundred and forty-five (145) occasions between the dates of January 1, 2021 and August 10, 2021, to timely perform the required initial monitoring (*i.e.*, first monitoring within the required first 30 days after the end of a startup period and/or subsequent monitoring during the next, successive month) of NESHAP CC / VV and Subpart GGG / VV regulated valves at the Facility which began operation in gas/vapor service and in light liquid service after the initial startup date for their respective process units, constitutes at least one hundred and forty-five (145) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7(a)(2)(i) and (c)(1)(i) regulatory requirements, and of corresponding Title V Permit provisions.⁷³

COUNT XXII – Consecutive Monthly Monitoring Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Valves in Gas/Vapor Service and in Light Liquid Service that have been Found to be Leaking - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-7(c)(2) and with corresponding TV Permit Provisions

178. 40 C.F.R. § 60.592(a) and TV Permit Condition C-VII-083 each incorporate the requirements of 40 C.F.R. § 60.482-7 which, at § 60.482-7(a)(1) provides, with exceptions not herein applicable, that each NESHAP CC / VV and Subpart GGG / VV regulated valve in gas/vapor service and in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40

⁷³ See TV Permit Condition C-VII-063 (TV Permit pp. 86-88 of 556).

C.F.R. § 60.485(b) and shall comply with 40 C.F.R. §§ 60.482-7(b) through (e). While 40 C.F.R. § 60.482-7(b) thereafter provides that “[i]f an instrument reading of 10,000 ppm or greater is measured, a leak is detected,” TV Permit Condition C-VI-027 establishes a reduced leak screening value of 2500 ppm for NESHAP CC / VV and Subpart GGG / VV regulated Facility equipment.

179. 40 C.F.R. § 60.482-7(c)(1)(i) provides that “[a]ny valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.” The similarly incorporated provisions of 40 C.F.R. § 60.482-7(c)(1)(ii) thereafter provide an alternative method of monitoring that, instead of requiring all of the leaking valves to be monitored in the first month of a quarter, alternatively allows the owner or operator to elect to subdivide the process unit into two or three subgroups of valves and to monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months *and the owner or operator keeps “records of the valves assigned to each subgroup.”* [Emphasis supplied].

180. The incorporated provisions of 40 C.F.R. § 60.482-7(c)(2) thereafter provide that “[i]f a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.”

181. Based upon information URC recorded and maintained in the Facility’s LeakDAS database, on at least seventy-five (75) occasions, involving nineteen (19) affected facilities, between the dates of January 1, 2021 and August 10, 2021, URC failed to monitor NESHAP CC / VV and Subpart GGG / VV regulated valves in gas/vapor service and in light liquid service, where an equipment leak was previously detected at a valve and the leaking valve was then repaired (*i.e.*, where an instrument reading of 2500 ppm or greater was previously measured at the valve and that valve was then subject to repair), on a monthly basis until such time as an equipment leak no longer was detected for 2 successive months, as required pursuant to 40 C.F.R. § 60.592(a), its incorporated 40 C.F.R. § 60.482-7(c)(2) requirements, and of the Title V Permit.

182. URC’s failure, on at least seventy-five (75) occasions between the dates of January 1, 2021 and August 10, 2021, to perform required monthly monitoring of NESHAP CC / VV and Subpart GGG / VV regulated Facility valves in gas/vapor service and in light liquid service that were previously found to be leaking and were then subject to repair, until such time as a leak no longer was detected for 2 successive months, constitutes at least seventy-five (75) separate and independent violations of 40 C.F.R. § 60.592(a), its incorporated 40 C.F.R. § 60.482-7(c)(2) requirements and of corresponding Title V Permit monitoring provisions.⁷⁴

COUNT XXIII – Quarterly Monitoring Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Valves in Gas/Vapor Service and in Light Liquid Service - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-7(c)(1) and with corresponding TV Permit Provisions

183. 40 C.F.R. § 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-7(c), which, at 40 C.F.R. § 60.482-7(c)(1), provides that: “(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected [; and] (ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into 2 or 3 subgroups of valves

⁷⁴ See *id.*

and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.”

184. Based on information URC recorded and maintained in the Facility’s LeakDAS database, on at least thirteen thousand three hundred and twenty-one (13,321) occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to perform required quarterly monitoring (*i.e.*, monitoring during any month within the calendar quarter) of NESHAP CC / VV and Subpart GGG / VV regulated valves in gas/vapor service and in light liquid service which are located at forty (40) of the Facility’s affected facilities, in accordance with 40 C.F.R. § 60.482-7(c)(1) and Title V Permit requirements.

185. URC’s failure to perform required quarterly monitoring (*i.e.*, monitoring during any month within the calendar quarter) of NESHAP CC / VV and Subpart GGG / VV regulated valves in gas/vapor service and in light liquid service on at least thirteen thousand three hundred and twenty-one (13,321) occasions between the dates of June 6, 2019 and August 10, 2021, constitutes at least thirteen thousand three hundred and twenty-one (13,321) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7(c)(1) requirements, and of corresponding Title V Permit monitoring provisions.⁷⁵

COUNT XXIV – First Attempt at Repair Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Valves in Gas/Vapor Service and in Light Liquid Service - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-7(d)(2) and with corresponding TV Permit Provisions

186. 40 C.F.R. § 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-7(d)(2), which provides that when a leak is detected at a NESHAP CC / VV or Subpart GGG / VV regulated valve in gas/vapor service or in light liquid service, a first attempt at repair be made no later than 5 calendar days after each leak is detected.

187. Based upon information URC recorded and maintained in the Facility’s LeakDAS database, on at least eighty-five occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to make a first attempt at the repair of leaking valves in gas/vapor service and in light liquid service located at twenty-four (24) affected facilities that were NESHAP CC / VV or Subpart GGG / VV regulated within 5 calendar days of the date the leaks were detected. On seventy-eight (78) of those occasions, URC’s initial repair attempts were not timely (*i.e.*, within 5 calendar days). On seven (7) such occasions, URC did not make any repair attempt at all and, instead, placed the leaking valve directly on DOR.

188. URC’s failure to make a timely (*i.e.*, within 5 calendar days) first attempt at repair of leaking NESHAP CC / VV and Subpart GGG/VV regulated valves in gas/vapor service or in light liquid service on at least eighty-five (85) occasions between January 1, 2021 and August 10, 2021, constitutes at least eighty-five (85) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7(d)(2) requirements, and of corresponding Title V Permit provisions.⁷⁶

⁷⁵ See *id.*

⁷⁶ See *id.*

COUNT XXV – Final Repair Requirements for NESHAP CC / VV and Subpart GGG / VV Regulated Valves in Gas/Vapor Service and in Light Liquid Service - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592(a) and 60.482-7(d)(1) and with corresponding TV Permit Provisions

189. 40 C.F.R. § 60.592(a) incorporates the requirements of 40 C.F.R. § 60.482-7(d)(1), which provides that when a leak is detected at a NESHAP CC / VV or a Subpart GGG/VV regulated valve in gas/vapor service or in light liquid service, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, unless certain circumstances exist which allow delay of repair under 40 C.F.R. § 60.482-9. Such circumstances include: (i) technical infeasibility without a process unit shutdown, in which case repair of the equipment must occur before the end of the next process unit shutdown; (ii) allowable repair delay for equipment which is isolated from the process and which does not remain in VOC service; and (iii) allowable repair delay for valves where the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, *and* when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 C.F.R. § 60.482-10. 40 C.F.R. §§ 60.482-9(a), (b) and (c).

190. 40 C.F.R. § 60.482-9(a) provides that “[d]elay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.” Delay of repair beyond a process unit shutdown is only allowed for a valve “if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.” 40 C.F.R. § 60.482-9(e).

191. Based upon information URC recorded and maintained at the Facility, including the Facility’s LeakDAS database, URC, on each of at least seven (7) occasions between January 1, 2021 and August 10, 2021, identified leaks at valves in gas/vapor service and in light liquid service that were located within five (5) affected facilities that were NESHAP CC / VV or Subpart GGG/VV regulated at the Facility.

192. On the seven (7) occasions referenced above, URC failed to repair the leaking valve within 15 calendar days without identifying any circumstances that would otherwise allow delay of repair under 40 C.F.R. § 60.482-9.

193. URC’s failure to repair valves in gas/vapor service and in light liquid service at affected facilities that were NESHAP CC / VV and Subpart GGG/VV regulated within 15 days after identifying a leak and without qualifying for allowable delay of repair under 40 C.F.R. § 60.482-9 requirements on at least seven (7) occasions between the dates of January 1, 2021 and August 10, 2021, constitutes at least seven (7) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7(d)(1) requirements, and of corresponding Title V Permit provisions.⁷⁷

⁷⁷ See id.

E. Regulatory & Permit Violations – Failure to Comply with the Monitoring and Repair Requirements Pertaining to Subpart GGGa / VVa regulated Valves in Gas/Vapor Service and in Light Liquid Service and with corresponding TV Permit Provisions

COUNT XXVI – Initial Monitoring Requirements for Subpart GGGa / VVa Regulated Valves in in Gas/Vapor Service and in Light Liquid Service Which Began Operation After the Initial Startup Date for a Process Unit - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592a(a) and 60.482-7a(a)(2)(i) and (c)(1)(i) and with corresponding TV Permit Provisions

194. 40 C.F.R. § 60.592a(a) incorporates the requirements of 40 C.F.R. § 60.482-7a which, at 40 C.F.R. § 60.482-7a(a)(1), provides that: “[e]ach valve [in gas/vapor or in light liquid service within an affected facility] shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, § 60.482-1a(c) and (f), and §§ 60.483-1a and 60.483-2a.” 40 C.F.R. § 60.482-7a(a)(2)(i), with exceptions not herein applicable, thereafter provides that each Subpart GGGa / VVa regulated valve in gas/vapor service or in light liquid service *which began operation in gas/vapor service or light liquid service after the initial startup date for the process unit*, with exceptions not herein applicable, “must be monitored, for the first time, within 30 days after the end of its startup period to ensure proper installation.” [Emphasis supplied]. 40 C.F.R. § 60.482-7a(c)(1)(i) further provides that: “[a]ny valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.”

195. In keeping with 40 C.F.R. § 60.592a(a) and (b), such valves [*which began operation in gas/vapor service or light liquid service after the initial startup date for the process unit*] may be monitored in accordance with one of the two alternative requirements of 40 C.F.R. § 60.483-1a (compliance with an allowable percentage of valves leaking of equal to or less than 2.0 percent) or 40 C.F.R. § 60.483-2a(b)(2) (an alternative work practice which, after 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, allows an owner or operator to begin to skip 1 of the quarterly leak detection periods), or 40 C.F.R. § 60.483-2a(b)(3) (an alternative work practice which, after 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, allows an owner or operator to begin to skip 3 of the quarterly leak detection periods).

196. The alternative monitoring provisions of 40 C.F.R. § 60.483-1a(b)(1) and (2) include requirements that: “(1) [a]n owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in [40 C.F.R.] § 60.487a(d); and] (2) [a] performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator. The alternative standards of 40 C.F.R. § 60.483a-2 similarly provide, at 40 C.F.R. § 60.483-2a(a)(2), that “[a]n owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in § 60.487a(d).”

197. EPA has received no information indicating, and no evidence to support any claim, that: (i) URC has ever provided notification to the EPA Administrator stating that it has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in [40 C.F.R.] § 60.487a(d); or (ii) URC has successfully conducted any performance test as

specified in 40 C.F.R. § 60.483-1a(c). Absent evidence of such required notice and performance testing by URC, each of the Facility's Subpart GGGa / VVa regulated valves in gas/vapor service and in light liquid service which began operation in gas/vapor service or light liquid service after the initial startup date for its respective process unit, was required to have been monitored: (i) for the first time, within 30 days after the end of a startup period, in accordance with 40 C.F.R. § 60.482-7a(a)(2)(i) requirements; and (ii) during the next (*i.e.*, successive) month, in accordance with 40 C.F.R. § 60.482-7a(c)(1)(i) requirements, before any such valve found not to be leaking could *thereafter* be monitored during the first month of every subsequent quarter.

198. Based upon information URC recorded and maintained in the Facility's LeakDAS database, on at least twenty-nine (29) occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to perform the required initial monitoring of Subpart GGGa / VVa regulated valves which began operation in gas/vapor service and in light liquid service, respectively, after the initial startup date for their respective process units. On each of those twenty-nine (29) occasions, URC failed to monitor such a valve during the required second (*i.e.*, the successive) month after its initial (*i.e.*, first) 30-day required monitoring event.

199. URC's failure, on at least twenty-nine (29) occasions between the dates of January 1, 2021 and August 10, 2021, to timely and completely perform the required initial monitoring (*i.e.*, monitoring within the first 30 days after the end of a startup period *and* during the successive month) of Subpart GGGa / VVa regulated valves at the Facility which began operation in gas/vapor service and in light liquid service after the initial startup date for their respective process units, constitutes at least twenty-nine (29) separate and independent violations of 40 C.F.R. § 60.592(a) and its incorporated 40 C.F.R. § 60.482-7a(a)(2)(i) and (c)(1)(i) requirements, and of corresponding Title V Permit provisions.⁷⁸

COUNT XXVII – Quarterly Monitoring Requirements for Subpart GGGa / VVa Regulated Valves in Gas/Vapor Service and in Light Liquid Service - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592a(a) and 60.482-7a(c)(1) (which Provide that a Subpart GGGa / VVa Regulated Valve in Gas/Vapor Service and in Light Liquid Service May be Monitored Quarterly, Rather than Monthly, After No Leak is Detected for Two Successive Months) and with corresponding TV Permit Provisions

200. 40 C.F.R. § 60.592a(a) incorporates the requirements of 40 C.F.R. § 60.482-7a which, at § 60.482-7a(c)(1) provides that: “(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected” [; and] “(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into 2 or 3 subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.”

201. Based upon information URC recorded and maintained in the Facility's LeakDAS database, on at least four hundred and two (402) occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to perform required quarterly monitoring (*i.e.*, monitoring during any month within a calendar quarter) of valves in gas/vapor service and in light liquid service at two (2) of the Facility's affected facilities, in accordance with 40 C.F.R. § 60.482-7a(c)(1) provisions.

⁷⁸ See TV Permit Condition C-VII-064 (TV Permit pp. 88-89 of 556).

202. URC's failure to perform required quarterly monitoring (*i.e.*, monitoring during any month within a calendar quarter) of Subpart GGGa / VVa regulated valves in gas/vapor service and in light liquid service on at least four hundred and two (402) occasions between the dates of January 1, 2021 and August 10, 2021, constitutes at least four hundred and two (402) separate and independent violations of 40 C.F.R. § 60.592a(a) and its incorporated 40 C.F.R. § 60.482-7a(c)(1) requirements, and of corresponding Title V Permit monitoring provisions.⁷⁹

COUNT XXVIII – *First Attempt at Repair Requirements for Subpart GGGa / VVa Regulated Valves in Gas/Vapor Service and in Light Liquid Service* - Failure to Comply with the Standards of 40 C.F.R. §§ 60.592a(a) and 60.482-7a(d)(2) and with corresponding TV Permit Provisions

203. 40 C.F.R. § 60.592a(a) incorporates the requirements of 40 C.F.R. § 60.482-7a which, at 40 C.F.R. § 60.482-7a(d)(2), requires that when a leak is detected at a Subpart GGGa / VVa regulated valve in gas/vapor service or in light liquid service, a first attempt at repair be made no later than 5 calendar days after each leak is detected.

204. Based upon information URC recorded and maintained in the Facility's LeakDAS database, on at least five (5) occasions between the dates of January 1, 2021 and August 10, 2021, URC failed to make a first attempt at repair of leaking valves in gas/vapor service and in light liquid service that were subject to Subpart GGGa / VVa regulation within 5 calendar days of the date that valve leaks were detected. On one (1) of those occasions, URC's initial repair attempts were not timely (*i.e.*, within 5 calendar days). On four (4) such occasions, URC did not make a repair attempt at all, and instead placed the leaking valve directly on DOR.

205. URC's failure, on at least five (5) occasions between the dates of January 1, 2021 and August 10, 2021, to make a timely first repair attempt of leaking valves in gas/vapor service and in light liquid service that were subject to Subpart GGGa / VVa leak detection and repair standards within the required 5 calendar day period after the date that each leak was detected, constitutes at least five (5) separate and independent violations of 40 C.F.R. § 60.592a(a) and the incorporated first attempt leak repair standard requirements of 40 C.F.R. § 60.482-7a(d)(2), and of corresponding Title V Permit leak repair provisions.⁸⁰

COUNT XXIX – *Equipment Leak Standards of Performance for Containers that are Part of a Closed-Purge System* – Failure to Comply with NESHAP CC / Subpart VV Equipment Leak Performance Standards of 40 C.F.R. § 60.482-5(b)(2) and with corresponding TV Permit Provisions

206. During the Inspection, NEIC observed two closed-purge sampling systems at the Facility's 86,000 gallon gasoline fuel storage Tank 234 and at the Facility's saturate gas unit, which are existing sources subject to NESHAP CC / Subpart VV requirements. 40 C.F.R. § 63.648.

207. During the Inspection, a container (*i.e.*, a drum) was present directly below the fuel storage Tank 234 sample taps. The container was not being filled or emptied at the time of the

⁷⁹ See *id.*

⁸⁰ See *id.*

Inspection, but the container had liquid material in it and the lid was not closed. Using EPA Method 21 monitoring procedures, NEIC measured emissions at the container opening of 9,000 ppm VOCs.⁸¹

208. During the Inspection, another container (*i.e.*, a bucket) was present below sample tap E116 of the Facility's saturate gas unit. Because the container was part of the assembly of equipment used during periods of representative operation to take samples of the process fluid, the container was part of the sampling connection system. That container was not being filled or emptied at the time of the Inspection but it, too, had liquid material content and the bucket lid was not closed. NEIC performed EPA Method 21 monitoring at the opening of this bucket, but the monitoring instrument "flamed out," indicating that the VOC vapors being emitted from the container were at concentrations higher than the instrument could measure. NEIC then used a Forward Looking InfraRed ("FLIR") camera to visibly record emissions from the opening at the top of the bucket.⁸²

209. NEIC's observations and monitoring results, described above indicates that URC failed to keep two (2) containers that were each part of a closed-purge system covered or closed at times when those containers were not being filled or emptied, in violation of 40 C.F.R. § 60.482-5(b)(2) and the Title V Permit.⁸³

VI. FINDINGS OF HAZARDOUS WASTE MANAGEMENT VIOLATIONS

210. The Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6928(a), as amended by the Hazardous and Solid Waste Amendments of 1984 (hereinafter, "RCRA"), was enacted to address the serious environmental and health dangers arising from the generation, management, and disposal of wastes, particularly "hazardous wastes," for comprehensive "cradle-to-grave" regulation is mandated under RCRA Subtitle C, 42 U.S.C. §§ 6921-6939e ("RCRA Subtitle C").

211. EPA was delegated the task of developing criteria for identifying the characteristics of hazardous waste and the listing of hazardous wastes, which are subject to stringent RCRA Subtitle C standards that govern their generation, transportation, treatment, storage and disposal. *See* 42 U.S.C. §§ 6921-25; 40 C.F.R. Part 261. Some of these management standards are set forth at 40 C.F.R. Parts 262 and 264. RCRA allows a state to apply for EPA authorization of its own state hazardous waste program. 42 U.S.C. § 6926(b) (which consists of state statutes or regulations) and reviews the state program to ensure that its requirements are at least as stringent as the federal program. To be authorized, a state hazardous waste program must be, among other things: equivalent to the federal Subtitle C program established by EPA; consistent with the federal and state programs applicable in other States; and it must provide for adequate enforcement of compliance with the requirements of RCRA. These authorized requirements operate "in lieu" of the federal program under Subtitle C. *See* 42 U.S.C. § 6926(b).

212. Once authorized by EPA, a state's hazardous waste regulations operate as requirements of RCRA Subtitle C and are enforceable by EPA pursuant to RCRA § 3008(a). 42 U.S.C. § 6928(a).

213. The Commonwealth of Pennsylvania has received federal authorization to administer a Hazardous Waste Management Program (the "Pennsylvania Hazardous Waste Management Program") in lieu of the federal hazardous waste management program established under RCRA Subtitle C, 42

⁸¹ *See* Insp. Rpt. at p. 23.

⁸² *Id.*; *See also*, Insp. Rpt. Appendix CAA D (FLIR Video No. 170).

⁸³ TV Permit Conditions C-VII-059 at ¶ (b)(2). (TV Permit pp. 83-84 of 556).

U.S.C. §§ 6921-6939e. Effective January 30, 1986, the Commonwealth of Pennsylvania Hazardous Waste Regulations (“PaHWR”) were authorized by the EPA pursuant to Section 3006(b) of RCRA, 42 U.S.C. § 6926(b), and 40 C.F.R. Part 271, Subpart A. The PaHWR subsequently were revised, and thereafter re-authorized by EPA, on three separate occasions (September 26, 2000, January 20, 2004 and April 29, 2009) and such authorized revised PaHWR requirements and provisions became effective on November 27, 2000, March 22, 2004 and June 29, 2009, respectively. The PaHWR incorporates by reference certain federal hazardous waste management regulations that were in effect as of May 1, 1999 (and as of July 6, 1999 for certain regulations regarding Universal Waste) for the November 27, 2000 PaHWR authorization, June 28, 2001 for the March 22, 2004 PaHWR authorization and October 12, 2005 for the April 29, 2009 PaHWR authorization.

I. Failure to Make Accurate Hazardous Waste Determinations Pursuant to 25 Pa Code § 262a.10 Requirements

A. Regulatory and Factual Background

214. The Facility (EPA ID No. PAD002105179) has notified as a large quantity generator (“LQG”) of hazardous waste (or “HW”). As a large quantity HW generator at the Facility, URC is subject to the provisions of Pennsylvania’s current authorized revised PaHWR codified at 25 Pa. Code Chapters 260a-266a, 266b, and 268a-270a, which have become requirements of RCRA Subtitle C and are federally enforceable by EPA pursuant to RCRA § 3008(a), 42 U.S.C. § 6928(a). As a LQG of HW at the Facility, URC, at all times herein relevant, was subject to the requirements of 25 PA Code Section 262a. (Standards Applicable to Generators of Hazardous Waste).

B. Applicable Regulatory Requirements

215. Except as otherwise expressly provided therein, 25 PA Code § 262a.10 incorporates by reference the requirements of 40 C.F.R. § 262.11. Pursuant to 25 PA Code § 262a.10 and 40 C.F.R. § 262.11(a) and (b), a person who generates a solid waste, must make an accurate determination, at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations and must determine if that waste is excluded from regulation under 40 C.F.R. § 261.4. If the waste is not excluded under 40 C.F.R. § 261.4, then pursuant to 25 PA Code § 262a.10 and 40 C.F.R. § 262.11(c) and (d)(1) and (2), the person must: (i) use acceptable knowledge of the waste to determine whether the waste meets any of the listing descriptions in 40 C.F.R. Part 261, Subpart D; and then (ii) further determine, through the application of acceptable knowledge (including process knowledge), applicable testing procedures, or a combination of both, whether the waste exhibits one or more hazardous characteristics identified in 40 C.F.R. Part 261, Subpart C.

C. Regulatory Violations –Failing to Make Hazardous Waste Determinations, Pursuant to Applicable 25 Pa Code § 262a.10 [40 C.F.R. § 262.11] Requirements, to Properly Characterize: Sludge Generated from Refinery Process Sewer Cleanouts as F037 Listed Hazardous Waste; Bottom Sludge Generated from DGF Unit Cleanouts as F038 Listed Hazardous Waste; and, Spent Toluene Generated from Quality Control Laboratory Glassware Cleaning Operations, associated wastewater mixtures and sludges generated at the WWPT as F005 Listed Hazardous Wastes.

COUNT XXX – Failure to Properly and Accurately Characterize Sludge Generated from Refinery Process Sewer Cleanouts as F037 Hazardous Waste

216. During the course of the August 2021 Facility Inspection, a URC Facility representative explained to NEIC that when URC Facility personnel clean out the Facility’s refinery process sewers, the materials removed consists “primarily [of] gravel, which [is] de-watered then disposed to the landfill as residual waste.”⁸⁴ URC’s *Residual Waste Biennial Report* for 2020 also records that URC shipped 1,397 tons of what it identified as “IND[ustrial] WASTEWATER TREATMENT SLUDGE/SEDIMENT INC[luding] ACID MINE DR[ainage] SL[udge]” off-site from the Facility to Advanced Disposal Services Greentree Landfill in Kersey, Pennsylvania, as residual waste during that 2020 calendar year.⁸⁵

217. Facility representatives further advised NEIC that URC cleans the bottom sludge from the Facility’s DGF Unit on an annual basis to remove accumulated bottom sludge and sediment and that the sludge is characterized as K048 hazardous waste, combined in a container with other generated bottom material (that is also characterized as K048 hazardous waste) and “DGF float,” and shipped off-site as such for disposal.⁸⁶

218. 40 C.F.R. § 261.31 (Hazardous wastes from non-specific sources) provides, in relevant part, that “Petroleum refinery primary oil/water/solids separation sludge” is a solid waste and an **F037 listed hazardous waste** from non-specific sources *unless excluded* under 40 C.F.R. §§ 260.20 and 260.22 and listed in appendix IX. “Petroleum refinery primary oil/water/solids separation sludge” is therein described as including: “Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. . . .”

219. As revealed upon review of URC’s *2019 Biennial Report*⁸⁷ and individual URC Hazardous Waste Manifests that NEIC inspected onsite during the August 2021 Facility Inspection, URC ships its Facility-generated hazardous wastes off-site under the waste codes K048, K050, K051, K170, D001, D002, D008, and D018. However, URC also generates petroleum refinery primary and secondary oil/water/solids separation sludges that meet the **F037** listing description in 40 C.F.R. § 261.31 which are not excluded under 40 C.F.R. §§ 260.20 and 260.22 and listed in appendix IX. URC has failed to properly characterize and/or to ship those hazardous wastes off-site *as F037 listed hazardous waste*.

⁸⁴ Insp. Rpt. Appendix RCRA J at p.1

⁸⁵ Insp. Rpt. Appendix RCRA K at p.7

⁸⁶ Insp. Rpt. Appendix RCRA A at pp. 3, 4

⁸⁷ Insp. Rpt. Appendix RCRA I at pp. 1 - 3

220. URC has violated 25 Pa Code § 262a.10 and the requirements of 40 C.F.R. § 262.11 that are incorporated therein, by failing to properly and accurately characterize its generated refinery process sewer cleanout sludges as F037 listed hazardous wastes (in addition to such other hazardous waste “characteristics” that they meet).

COUNT XXXI – Failure to Properly and Accurately Characterize Waste Bottom Sludge Generated from DGF Unit Cleanouts as F038 Listed Hazardous Waste

221. Pursuant to 40 C.F.R. § 261.32, the specific source of the K048 listing is “petroleum refining” and such listing pertains to “**Dissolved air floatation (DAF) float** from the petroleum refining industry” (emphasis supplied).

222. Pursuant to 40 C.F.R. § 261.31, the F038 hazardous waste listing applies to “Petroleum refinery secondary (emulsified) oil/water/solids separation sludge” which is defined to include “[a]ny sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries . . . include[ing], but [] not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units” unless they are excluded under 40 C.F.R. §§ 260.20 and 260.22 and listed in appendix IX. The 40 C.F.R. § 261.31 F038 hazardous waste listing further informs that “[s]ludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in [40 C.F.R.] § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) **and** F037, **K048**, and K051 **wastes are not included in this listing.**” (Extra emphasis supplied).

223. URC’s *2019 Biennial Report*⁸⁸ and the individual URC Hazardous Waste Manifests that NEIC inspected onsite during the Facility Inspection confirm that URC ships its Facility-generated hazardous wastes off-site under the waste codes K048, K050, K051, K170, D001, D002, D008, and D018. However, URC also clearly generates petroleum refinery primary and secondary oil/water/solids separation sludges that meet the F038 listing description in 40 C.F.R. § 261.31 and which are not excluded under 40 C.F.R. §§ 260.20 and 260.22 and listed in appendix IX. URC has failed to properly characterize and/or to ship those hazardous wastes off-site, for disposal, as F038 listed hazardous waste.

224. URC has violated 25 Pa Code § 262a.10 and the requirements of 40 C.F.R. § 262.11 that are incorporated therein, by failing to properly and accurately characterize its generated DGF Unit cleanout sludges as F038 listed hazardous wastes.

COUNT XXXII – Failure to Properly and Accurately Characterize Spent Toluene Generated from Quality Control Laboratory Glassware Cleaning Operations, associated wastewater mixtures and sludges generated at the WWPT as F005 Listed Hazardous Wastes

225. URC uses toluene to clean and rinse sample glassware at its Facility quality control laboratory. The spent solvent from such cleaning operations is drained into laboratory sinks, which discharge to the Facility’s API separator at the WWTP under NPDES permit PA0005304. URC

⁸⁸ See, Id.

characterizes this spent toluene as a solid, but not as a hazardous, waste despite the fact that spent toluene solvent generated in this manner meets the 25 PA Code § 261a.1 (which incorporates by reference the 40 C.F.R. § 261.3) definition of hazardous waste and the 25 PA Code § 261a.1 (which incorporates by reference 40 C.F.R. § 261.31) description of an F005 listed hazardous waste. For the F005 hazardous waste listing to not carry through to the wastewater discharged to the Facility's API separator at the WWTP and to all associated sludges generated at the WWTP, the facility must demonstrate that its wastewater meets one of the *de minimis* wastewater exemptions under 40 C.F.R. §261.3(a)(2)(iv)(A-G), which allows for mixtures of small quantities of specific hazardous waste to be discharged to a Clean Water Act-regulated wastewater treatment system and to be exempt from regulation as a listed hazardous waste.

226. During the course of the August 2021 Facility Inspection, NEIC sought to determine whether the spent toluene generated by URC from quality control laboratory glassware cleaning operations and discharged to the Facility's API Separator at the WWTP might potentially qualify for one of the *de minimis* wastewater exemptions available under 25 PA Code § 261a.1, which incorporates by reference the provisions of 40 C.F.R. § 261.3(a)(2)(iv)(A-G).⁸⁹ URC Facility representatives provided NEIC with records and information documenting the quantities of toluene issued to the Facility quality control laboratory, along with estimated daily wastewater volumes; however, Facility representatives did not provide those computations necessary to demonstrate that URC was, in fact, meeting either of the *de minimis* wastewater exemptions of 40 CFR §§ 261.3(a)(2)(iv)(B) or (E), or any other regulatory exemptions. As a result, URC failed to properly characterize as F005 listed hazardous waste, the spent toluene that it generated from quality control laboratory glassware cleaning operations at the Facility, the waste rinse water into which that spent toluene was mixed prior to discharge to the Facility's API separator at the WWTP, and resulting DGF float (characterized only as K048 hazardous waste) and DGF bottom sludges (to which the F038 listed hazardous waste code also applies) subsequently generated at the DGF unit (which further treats the effluent by removing any oil that remains after treatment in the API oil-water separator).

227. URC has violated 25 Pa Code § 262a.10 and the requirements of 40 C.F.R. § 262.11 that are incorporated therein, by failing to properly and accurately characterize, as F005 listed hazardous waste, the spent toluene that it generated from quality control laboratory glassware cleaning operations at the Facility, the waste rinse water into which that spent toluene was mixed prior to discharge to the Facility's API separator at the WWTP, and resulting DGF float (which is also a K048 hazardous waste) and DGF bottom sludges (which are also an F038 listed hazardous waste).

II. Owning & Operating a Hazardous Waste Treatment, Storage, or Disposal Facility without a Permit as required by 25 Pa Code § 270a.1 and Section 3005(a) and (e) of RCRA, 42 U.S.C. § 6925(a) and (e)

A. Regulatory and Factual Background

228. At all times herein relevant, URC, as a LQG of HW at the Facility, was subject to the requirements of 25 PA Code Section 262a. (Standards Applicable to Generators of Hazardous Waste).

⁸⁹ 40 C.F.R. § 261.3(a)(2)(iv)(B) and (E) allows for certain mixtures of small quantities of specifically listed hazardous wastes to be discharged to a Clean Water Act-regulated wastewater treatment system and to be exempt from regulation as a listed hazardous waste under certain demonstrated conditions.

B. Applicable Regulatory Requirements

229. 25 PA Code § 262a.10 incorporates by reference the requirements and provisions of 40 C.F.R. § 262 (Standards Applicable to Generators of Hazardous Waste), including those of 40 C.F.R. § 262.34(a) which specifies, inter alia and with exceptions not herein applicable, that a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that:

- a. Pursuant to 40 C.F.R. § 262.34(a)(1)(ii), the waste is placed in tanks and the generator complies with the applicable requirements of Subparts J, AA, BB, and CC of 40 C.F.R. Part 265, except §§ 265.197(c) and 265.200;
- b. Pursuant to 40 C.F.R. § 262.34(a)(4), “[t]he generator complies with the requirements for owners or operators in Subparts C and D in 40 C.F.R. part 265, with [40 C.F.R.] § 265.16, and with 40 C.F.R. [§] 268.7(a)(5).”
- c. Pursuant to 40 C.F.R. § 265.31 (of 40 C.F.R. Part 265, Subpart C), “Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.”

230. Pursuant to 40 C.F.R. § 265.193(a) – (e) (of 40 C.F.R. Part 265, Subpart J), and with exceptions not herein applicable, in order to prevent the release of hazardous waste or hazardous constituents to the environment, owners and operators of facilities that use tank systems for storing or treating hazardous waste must have secondary containment that, inter alia, is: designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water; capable of detecting and collecting releases; constructed of or lined with materials that are waste compatible and of sufficient strength to prevent failure; provided with a leak detection system designed and operated to detect the failure of either the primary and secondary containment structure; designed or operated to drain and remove liquids resulting from leaks; and must include an external liner or vault designed or operated to contain 100 percent of the capacity of the largest tank within its boundary or a double-walled tank designed as an integral structure.

231. Pursuant to 40 C.F.R. § 265.195(b)(1) – (3) (of 40 C.F.R. Part 265, Subpart J) and with exceptions not herein applicable, the owner or operator shall inspect at least once each operating day, overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; above ground portions of the tank system, if any, to detect corrosion or releases of waste; and the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

232. Pursuant to 25 PA Code Section 262a., which incorporates by reference the requirements of 40 C.F.R. § 262.34(a): “[a] generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of 40 C.F.R. parts 264 and 265 and the permit requirements of 40 C.F.R. Part 270 . . . ”.

233. 25 PA Code Section 270a.1., with exceptions not herein applicable, further incorporates by reference the requirements and provisions of 40 C.F.R. Part 270 and its appendices (relating to “EPA Administered Permit Programs: The Hazardous Waste Permit Program”). 40 C.F.R. §§ 270.1(b) and 270.10(e)(1), along with RCRA §§ 3005(a) and (e), 42 U.S.C. §§ 6925(a) and (e), further require any person who is treating, storing and/or disposing of hazardous waste, including owners of existing hazardous waste management facilities, to obtain a permit (pursuant to RCRA § 3005(a), 42 U.S.C. § 6925(a), and 40 C.F.R. § 270.1(b)) or interim status (pursuant to RCRA § 3005(e), 42 U.S.C. §§ 6925(e), and 40 C.F.R. § 270.10(e)(1)).

C. Regulatory Violations – Storage of D001/D009 Hazardous Waste in Facility Bulk Storage Tank 334 Without a Permit or Qualifying for Interim Status or the 90-Day HW Accumulation Exemption

COUNT XXXIII – *Storage of Hazardous Waste Without a Permit* - Hazardous Waste Tank Storage for Greater than 90 Days and Without Meeting Tank System Requirements

234. During the August 2021 Facility Inspection, NEIC was advised by URC Facility representatives that during the course of a March 2018 Plant Shutdown, URC Facility personnel removed bottom material and residues from its crude distillation unit and placed that material in the Facility’s 426,833 gallon-capacity URC Bulk Storage Tank 334 (*a/k/a* PA DEP Tank No. 030A), which URC Facility representatives stated was not in use at the time. NEIC obtained and reviewed the Facility’s combined “Preparedness, Prevention, and Contingency/Spill Prevention Response Plan” (hereinafter, “PCC/SPR Plan”) during the Inspection and recorded that URC’s May 15, 2018 (*i.e.*, Version 2018-0515) Bulk Storage Tank list reported that URC Bulk Storage Tank 334 was then “temporarily out of use” and “out of service.”⁹⁰

235. During the Inspection, a URC Facility representative advised NEIC that subsequent to the initial placement of crude distillation unit bottom material and residues into Facility Bulk Storage Tank 334 in March of 2018, vacuum trucks were used to remove recoverable oil from the bottom material and residues that had been placed into Bulk Storage Tank 334. The Facility representative explained to the EPA NEIC representatives that: (i) this recovered oil was unloaded into the API separator at the Facility’s Wastewater Treatment Plant, where it was skimmed and directed into the Facility’s slop oil recovery system for placement back into the refining process; (ii) the non-recoverable materials from the crude unit cleanout were allowed to remain in Facility Bulk Storage Tank 334; and (iii) the non-recoverable materials that remained in Bulk Storage Tank 334 were subsequently shipped off-site for disposal, at a designated hazardous waste incineration facility, as D001 / D009 hazardous waste under URC Hazardous Waste Manifest Nos. 021071204JJK (under which 36,980 pounds of hazardous waste described as “waste flammable liquid” and “crude oil” was shipped off-site from the URC Facility on March 10, 2020) and 010391247JJK (under which 18,560 pounds of hazardous waste described as “Tank Bottoms, Tank No. 334” and “waste solids containing crude oil”) was shipped off-site from the URC Facility on May 28, 2020).⁹¹

236. URC does not have a permit to store hazardous waste in Bulk Storage Tank 334 and Bulk Storage Tank 334 does not meet the 25 Pa Code Section 264a, Subchapter J, technical standards for hazardous waste tanks that are applicable to permitted facilities or the 25 Pa Code Section 265a,

⁹⁰ Insp. Rpt. at p. 44; Insp. Rpt Appendix RCRA D at p. 1.

⁹¹ Insp. Rpt. at p. 45; Insp. Rpt Appendix RCRA F at pp. 1 - 4. *See also*, Insp. Rpt Appendix RCRA E.

Subchapter J, technical standards for hazardous waste tanks that are applicable to large quantity generators of hazardous waste, respectively, because Facility Bulk Storage Tank 334 is not equipped with the required secondary containment system designed to prevent the migration of waste out of the tank system to the soil or groundwater.⁹²

237. At the time of the August 2021 Facility Inspection, URC Facility representatives could not provide an explanation to NEIC as to why hazardous waste non-recoverable materials from the crude unit cleanout that URC stored, for many months, in Facility Bulk Storage Tank 334 subsequent to March of 2018, were not removed and properly disposed until March of 2020.⁹³ Nor could URC Facility representatives provide NEIC with any documentation indicating that that Bulk Storage Tank 334's overfill/spill control equipment and the area immediately surrounding the externally accessible portion of that tank system were ever inspected, on a daily basis (or otherwise) to ensure that the overfill/spill control equipment was in good working order or to detect erosion or signs of releases of hazardous waste from the above ground portions of the tank system, its construction materials and the area immediately surrounding the externally accessible portion of the tank system.

238. By storing oil-bearing secondary material that that was no longer destined for reinsertion to the refining process and which was, therefore, an D001 / D009 Hazardous Waste, in Facility Bulk Storage Tank 334 for a period greater than 90-days (*i.e.*, from at least March 30, 2018 until May 28, 2020) and without performing daily inspections of that tank system's overfill/spill control equipment to ensure that it was in working order, or of the above ground construction materials and the area immediately surrounding the externally accessible portion of the tank system to detect erosion or signs of releases of hazardous waste (per the 40 C.F.R. Part 265, Subpart J requirement of 40 C.F.R. § 265.195(b)(1) – (3)).

239. By storing D001 / D09 hazardous waste (that it eventually shipped off-site for disposal, on March 10, 2020 and on May 28, 2020) in Bulk Storage Tank 334 for periods in excess of 90 days and without meeting the 40 C.F.R. Part 265, Subpart J, requirements of 40 C.F.R. §§ 265.193(a) through (e) and §§ 265.195(b)(1), (2) and (3), URC also failed to meet the permit exemption conditions of 40 C.F.R. § 262.34(a)(1)(ii) that would allow it to accumulate hazardous waste in tanks for 90 days or less without a permit or without having interim status.

240. By and through URC's storage of hazardous waste at the Facility for a period greater than 90 days without satisfying the conditions of 25 PA Code § 262a.10, which incorporates by reference the requirements and provisions of 40 C.F.R. § 262 (*Standards Applicable to Generators of Hazardous Waste*), including those of 40 C.F.R. § 262.34(a), URC violated 25 PA Code Section 270a.1., which incorporates the requirements of 40 C.F.R. §§ 270.1(b) and 270.10(e)(1), along with RCRA §§ 3005(a) and (e), 42 U.S.C. §§ 6925(a) and (e), by owning and operating a hazardous waste storage facility without obtaining a permit or qualifying for either interim status or for the 90-day HW accumulation exemption set forth in 25 PA Code Section 262a.10.

⁹² Insp. Rpt. Appendix RCRA B, pp. 27 – 28; photographs 53 and 54.

⁹³ Insp. Rpt. at p. 45.

III. Failing to Maintain and operate its Facility to minimize the possibility of an unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

A. Regulatory and Factual Background

241. By storing Hazardous Waste in Facility Bulk Storage Tank 334 for a period greater than 90 days without obtaining a Hazardous Waste Permit and without meeting 40 C.F.R. Part 265, Subpart C and J requirements, as delineated above, and without otherwise qualifying for either interim status or for the 90-day HW accumulation exemption set forth in 25 PA Code Section 262a.10 [40 C.F.R. § 262.34(a)], URC became subject to the Pa Code Chapter 264a. permit requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities and its 25 Pa Code Chapter 264.a requirements.

B. Applicable Regulatory Requirements

242. 25 PA Code Section 264a.1. (*Incorporation by reference, purpose, scope and reference*) provides that: “(a) Except as expressly provided in this chapter, the requirements of 40 C.F.R. Part 264 and its appendices (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities) are incorporated by reference.”

243. 40 C.F.R. § 264.31 (*Design and operation of facility*) provides that: “[f]acilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.”

C. Regulatory Violations – Failing to Maintain and Operate its Facility to Minimize the Possibility of an Unplanned Sudden or Non-Sudden Release of Hazardous Waste and/or Constituents to the Environment

COUNT XXXIV - *Failing to Maintain and Operate its Facility to Minimize the Possibility of an Unplanned Sudden or Non-Sudden Release of Hazardous Waste and/or Constituents* - Failing to Maintain and operate its Facility to minimize the possibility of an unplanned sudden or non-sudden release of K050 hazardous waste heat exchanger bundle cleaning sludge and K170 hazardous waste sediment/solids from petroleum refining operations, or hazardous constituents thereof, to air, soil, or surface water which could threaten human health or the environment.

244. During the August 2021 Facility Inspection, NEIC observed that URC utilizes a pad at the Facility, which is designated as the “old bundle wash pad” (hereinafter, “Bundle Wash Pad”) for various maintenance activities (including hydroblasting of heat exchanger bundles, draining of vacuum truck hoses and cleaning of other refinery equipment)⁹⁴ and that drainage from the Bundle Wash Pad flows to a trench, which leads to a drain, and conveys the collected drainage into the API Separator at the Facility’s wastewater treatment plant (“WWTP”).⁹⁵

⁹⁴ Insp. Rpt Appendix RCRA B, pp. 12 – 14, 16 – 17; photos 22-25, 30, and 31.

⁹⁵ Insp. Rpt. at pp. 41 - 42.

245. During the Inspection, a URC Facility representative explained to NEIC that heat exchanger bundles are cleaned on the Bundle Wash Pad, that heat exchanger bundle cleaning sludge meets the definition of K050 hazardous waste and that solid materials that fall on the Bundle Wash Pad during heat exchanger bundle cleaning operations are picked up, put into drums and shipped off-site under Hazardous Waste Manifest with the K050 hazardous waste designation.⁹⁶ The Facility representative also explained that vacuum hoses that were then being hung up and stored at the West end of the Bundle Wash Pad area are used by Facility personnel to clean Facility Tanks 190 through 197, which contain carbon black, a form of clarified oil.⁹⁷ The Facility representative informed the EPA NEIC representatives that URC typically cleans 2 of these Tanks annually and that the resulting residues are collected and shipped off-site under Hazardous Waste Manifest as K170 hazardous waste (*i.e.*, clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations).⁹⁸

246. During the course of the Facility Inspection, NEIC observed and photographed visible waste residues near the back wall of the Bundle Wash Pad, near the identified heat exchanger bundle cleaning area where K050 hazardous waste heat exchanger bundle cleaning sludge is generated.⁹⁹ The EPA NEIC representatives also observed and photographed visible cracks in the concrete surface of the Bundle Wash Pad in the immediate area where bundle cleaning operations had occurred.¹⁰⁰ NEIC also observed and photographed visible solids/residues on the West end of the Bundle Wash Pad in the area where petroleum refining operation sediment/solids cleaning operations generate K170 hazardous waste and immediately underneath the location where vacuum hoses used by Facility personnel to clean carbon black from Tanks 190 through 197 were hung up, allowed to drain and are stored when not in use.¹⁰¹

247. At the time of the August 2021 Facility Inspection, URC failed to operate and maintain its Facility so as to minimize the possibility of an unplanned sudden or non-sudden release of K050 hazardous waste heat exchanger bundle cleaning sludge and K170 hazardous waste sediment/solids from petroleum refining operations, and/or hazardous constituents thereof, to air, soil, or surface water which could threaten human health or the environment.

248. By and through URC's failure to maintain and operate the Facility Bundle Wash Pad so as to minimize the possibility of an unplanned sudden or non-sudden release of K050 and of K170 hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, URC also failed to satisfy the permit exemption conditions of 40 C.F.R. § 262.34(a)(4) that would allow it to accumulate hazardous waste for 90 days or less without a permit or without having interim status.

249. Because URC failed to meet the 25 PA Code Section 262a. hazardous waste generator standards (*i.e.*, the 40 C.F.R Part 265, Subpart C, requirements of 40 C.F.R. § 262.34(a)) that would allow a generator to accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status and did not otherwise qualify for an exemption from the permit and/or

⁹⁶ Insp. Rpt. at p. 42. NEIC further observed a 55-gallon drum on the Bundle Wash Pad at the time of the Inspection that was purportedly being used for less-than-90-day accumulation of K050 bundle cleaning sludge, which was dated "7/30/21." Insp. Rpt. at p. 42; Insp. Rpt Appendix RCRA B, p. 16; photo 30.

⁹⁷ Insp. Rpt. at p. 42.

⁹⁸ Id.

⁹⁹ Id.; Appendix RCRA B, p 13, photos 23 and 24.

¹⁰⁰ Id.

¹⁰¹ Insp. Rpt. at p. 42; Appendix RCRA B, p 13, photo 24.

interim status requirements of RCRA Section 3005(a) and (e), 42 U.S.C. § 6925(a) and (e), URC violated 25 PA Code Section 264a.1., which incorporates by reference 40 C.F.R. § 264.31 (*Design and operation of facility*) and provides that: “[f]acilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.”

IV. Failing to Develop and Follow a Schedule and Procedure for Inspecting a Facility Hazardous Waste Storage Tank and Failing to Perform and Document Required Daily Inspections of a Facility Hazardous Waste Storage Tank System, in Accordance with 25 Pa Code Section 264a.195 Requirements

A. Regulatory and Factual Background

250. By storing D001 / D009 Hazardous Waste in Facility Bulk Storage Tank 334 for a period greater than 90 days (*i.e.*, from at least March 30, 2018 until May 28, 2020) without obtaining a Hazardous Waste Permit and without meeting 40 C.F.R. Part 265, Subpart C and J requirements, as delineated above, and without otherwise qualifying for either interim status or for the 90-day HW accumulation exemption set forth in 25 PA Code Section 262a.10 [40 C.F.R. § 262.34(a)], URC became subject to the Pa Code Chapter 264a. permit requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities and its Subchapter J incorporated tank and tank system inspection requirements (*i.e.*, 40 C.F.R. § 264.195).

B. Applicable Regulatory Requirements

251. 25 PA Code Section 264a.1. (*Incorporation by reference, purpose, scope and reference*) provides that: “(a) Except as expressly provided in this chapter, the requirements of 40 CFR Part 264 and its appendices (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities) are incorporated by reference.”

40 C.F.R. § 264.195 (“Inspections) provides and requires that:

(a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.

(b) The owner or operator must inspect at least once each operating day data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design.

(c) In addition, [and with exceptions not herein applicable], the owner or operator must inspect at least once each operating day:

(1) Above ground portions of the tank system, if any, to detect corrosion or releases of waste.

(2) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (*e.g.*, dikes) to detect erosion or signs of releases of hazardous waste (*e.g.*, wet spots, dead vegetation).

C. Regulatory Violations – Owning and Operating a Hazardous Waste Storage Tank Without Developing and Following a Schedule and Procedure for Inspecting Tank Overfill Controls and Without Performing and Documenting Required Daily Tank and Tank System Inspections

COUNT XXXV – *Failing to Comply with Required HW Storage Tank Inspection Requirements* - Owning and Operating Hazardous Waste Bulk Storage Tank 334 from at least March 30, 2018 through May 28, 2020 Without Developing and Following a Schedule and Procedure for Inspecting Tank Overfill Controls and Without Performing Required Daily Monitoring System Data, Tank and Tank System Inspections.

252. During the August 2021 Inspection, NEIC found no evidence that URC had developed or followed a schedule and procedure for inspecting Facility Bulk Storage Tank 334’s overfill controls during the period that the Tank was used to store D001 / D009 hazardous waste or that Facility personnel had performed and documented required daily inspections of: (a) data gathered from Bulk Storage Tank 334’s monitoring and leak detection equipment to ensure that the tank system is being operated according to its design; (b) above ground portions of the tank system, to detect corrosion or releases of waste; or (c) its construction materials and the area immediately surrounding the externally accessible portion of the tank system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

253. As a result of each of the above-described Facility Bulk Storage Tank 334 tank and tank system inspection failures, URC violated 25 PA Code Section 264a.1. and its incorporated requirements of 40 C.F.R. §§ 264.195(a), (b) and (c)(1) and (2).

V. Failing to Have Required Secondary Containment for a Facility Hazardous Waste Storage Tank

A. Regulatory and Factual Background

254. By storing Hazardous Waste in Facility Bulk Storage Tank 334 without obtaining the required Hazardous Waste Permit or qualifying for either interim status or for the 90-day HW accumulation exemption set forth in 25 PA Code Section 262a.10 [40 C.F.R. § 262.34(a)], URC became subject to the Pa Code Chapter 264a. permit requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities and its Subchapter J existing tank and tank system provisions for the containment and detection of releases (i.e., 40 C.F.R. § 264.193).

B. Applicable Regulatory Requirements

255. 25 PA Code Chapter 264a.1. incorporates, by reference, the requirements of 40 C.F.R. Part 264 and its appendices (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities), and its 40 C.F.R. § 264.193 (*Containment and detection of releases*) requirements applicable to new and existing tank systems.

256. Pursuant to 40 C.F.R. § 264.193(a), “[i]n order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided [and with exceptions not herein applicable]: . . . (1) For all new and existing tank systems and components, prior to their being put into service. . . .”

257. Pursuant to 40 C.F.R. § 264.193(b), “[s]econdary containment systems must be: (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.”

258. 40 C.F.R. § 264.193(c) further requires, in relevant part, that in order “[t]o meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum: (1) Constructed of or lined with materials that are compatible with the wastes(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients . . . , physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation . . . ; (2) Placed on a foundation or base capable of providing support to the secondary containment system . . . and capable of preventing failure due to settlement, compression, or uplift; (3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time . . . ; and (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. . . .”

259. Pursuant to 40 C.F.R. § 264.193(d), “[s]econdary containment for tanks must include one or more of the following devices: (1) A liner (external to the tank); (2) A vault; (3) A double-walled tank; or (4) An equivalent device as approved by the Regional Administrator” and, in addition to the requirements of 40 C.F.R. § 264.193(b), (c), and (d), 40 C.F.R. § 264.193(e), further requires, in relevant part, that “secondary containment systems must satisfy the following requirements: (1) External liner systems must be: (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary; (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system . . . ; (iii) Free of cracks or gaps; and (iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (*i.e.*, capable of preventing lateral as well as vertical migration of the waste).”

C. Regulatory Violations – Failing to Have Adequate Secondary Containment for an Existing Hazardous Waste Storage Tank System

COUNT XXXVI – *Failing to Have Hazardous Waste Tank System Secondary Containment - Owning and Operating and Existing Hazardous Tank System (i.e., Hazardous Waste Bulk Storage Tank 334) from at Least March 30, 2018 Through May 28, 2020 Without Providing Secondary Containment that Meets the Requirements of 25 PA Code Section 264a.1., Which Incorporates, by Reference, the Containment and Release Detection Provisions of 40 C.F.R. § 264.193.*

260. Facility Bulk Storage Tank 334 (*a/k/a* PA DEP Tank No. 030A) is a 426,833-gallon capacity Bulk Storage Tank that was constructed in 1941. This Tank is located within earthen containment, such that any leaking materials would not be contained and would impact adjacent soil and could enter the nearby Facility wastewater treatment system. The Tank was taken out of service, and was temporarily out of use at the Facility, until utilized by URC, between March 2018 and May 28, 2020, to store D001 / D009 Hazardous Waste bottom material and residues removed from the

Facility's crude distillation unit.¹⁰² At that time, and pursuant to 25 PA Code Section 264a.1 and 40 C.F.R. § 264.193(a)(3), Facility Bulk Storage Tank 334 became an "existing tank system" that was subject to 25 PA Code Section 264a.1. and its incorporated 40 C.F.R. § 264.193 containment and release detection requirements.

261. At all times relevant to Facility Bulk Storage Tank 334's March 2018 through May 28, 2020, use as a hazardous waste storage tank at the Facility, URC failed to ensure that the Bulk Storage Tank 334 tank system had secondary containment that met each of the applicable requirements of 40 C.F.R. § 264.193(b), (c), (d) and (e), in violation of 25 PA Code Section 264a.1. and its incorporated 40 C.F.R. § 264.193 requirements.

VI. Failing to Have a Written Assessment Attesting to the Integrity of a Facility Hazardous Waste Storage Tank

A. Regulatory and Factual Background

262. By storing Hazardous Waste in Facility Bulk Storage Tank 334 without obtaining the required Hazardous Waste Permit or qualifying for either interim status or for the 90-day HW accumulation exemption set forth in 25 PA Code Section 262a.10 [40 C.F.R. § 262.34(a)], URC became subject to the Pa Code Chapter 264a. permit requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities and its Subchapter J existing tank and tank system integrity assessment requirements of 40 C.F.R. § 264.191.

B. Applicable Regulatory Requirements

263. 25 PA Code Chapter 264a.1. incorporates, by reference, the requirements of 40 C.F.R. Part 264 and its appendices (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities), and its 40 C.F.R. § 264.191 (Assessment of existing tank system's integrity) requirements.

264. 40 C.F.R. § 264.191(a) provides that "[f]or each existing tank system that does not have secondary containment meeting the requirements of § 264.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer, in accordance with § 270.11(d), that attests to the tank system's integrity by January 12, 1988."

265. 40 C.F.R. § 264.191(b) further provides, in relevant and applicable part, that "This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following: (1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed; (2) Hazardous characteristics of the waste(s) that have been and will be handled; (3) Existing corrosion protection measures; (4) Documented age of the tank system, if available . . . ; and (5) Results of a leak test, internal inspection, or other tank integrity examination such that: . . . (ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by an independent, qualified,

¹⁰² Insp. Rpt. at pp. 44 – 45.

registered professional engineer in accordance with § 270.11(d), that addresses cracks, leaks, corrosion, and erosion.”

C. Regulatory Violations – Failing to Obtain and Maintain a Properly Reviewed and Certified Written Hazardous Waste Storage Tank Integrity Assessment

COUNT XXXVII – *Failing to Have and Maintain a Required Hazardous Waste Storage Tank Written Integrity Assessment* - Failing to Obtain a Written Assessment, Reviewed and Certified by an Independent Professional Engineer, that Attests to the Integrity of Hazardous Waste Bulk Storage Tank 334 in Accordance with 25 Pa Code Chapter 264a.1, and to Keep such Written Assessment on File at the Facility in Accordance with the Requirements of 25 PA Code Section 264a.191.

266. As noted above, Facility Bulk Storage Tank 334 (a/k/a PA DEP Tank No. 030A) is a 426,833-gallon capacity “existing tank system” that was constructed in 1941 and is located within earthen containment that fails to meet the applicable secondary containment requirements of 25 PA Code Section 264a.1 and its incorporated 40 C.F.R. § 264.193(b), (c), (d) and (e) requirements.

267. At all times relevant to URC’s March 2018 through May 28, 2020 use of Facility Bulk Storage Tank 334’s to store D001 / D009 characteristic HW, URC failed to obtain and keep on file at the Facility a written tank system integrity assessment for this Tank system, have it reviewed and certified by an Independent Professional Engineer, or otherwise determine that such Tank system was not leaking or unfit for use, in violation of applicable 25 Pa Code Chapter 264a.1 and its incorporated 40 C.F.R. § 264.193(b), (c), (d) and (e) and 40 C.F.R. § 264.191(a) and (b) regulatory requirements.

VII. ENFORCEMENT AUTHORITIES

268. Section 113(a)(1) of the Act, as amended, 42 U.S.C. § 7413(a)(1), grants EPA the authority to enforce any requirement (or prohibition) of an applicable/approved implementation plan or permit. Furthermore, 40 C.F.R. § 52.23 entitled “Violation and Enforcement” provides, in pertinent part, that failure to comply with any approved regulatory provision of a State Implementation plan or any permit condition issued pursuant to approved or promulgated regulations for the review of new or modified stationary or indirect sources, or with any permit limitation or condition contained within an operating permit issued under an EPA-approved program that is incorporated into the State implementation plan, shall render the person so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the Act.

269. Section 113(a)(1) of the Act further provides that at any time after the expiration of 30 days following the date of issuance of a Notice of Violation (*e.g.*, this NOVOC), the EPA Administrator, or an EPA official authorized to act as his representative, may, without regard to the period of violation issue an order requiring compliance with the requirements of the state implementation plan or permit, or issue an administrative penalty order pursuant to Section 113(d), 42 U.S.C. § 7413(d), for civil administrative penalties.

270. Section 113(a)(3) of the Act, as amended, 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 Sections 111 and 112 of the Act, 42 U.S.C. §§ 7411, 7412, including a requirement or prohibition of any rule promulgated under Sections 111 and 112 of the Act, the Administrator may issue an administrative penalty order

under CAA Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to CAA Section 113(b) for injunctive relief and civil penalties.

271. Pursuant to Section 306(a) of the Act, as amended, 42 U.S.C. § 7606(a), regulations promulgated thereunder at 40 C.F.R. Part 15 and Executive Order 11738, facilities to be utilized in federal contracts, grants and loans must be in full compliance with the Act and all regulations promulgated pursuant thereto. Violations of the Act may result in the subject Facility being declared ineligible for participation in any federal contract, grant or loan.

272. Violations of RCRA are also subject to civil penalties. Section 3008(a) of RCRA authorizes EPA to take enforcement action whenever it is determined that a person is in violation of any requirement of RCRA Subtitle C, EPA's regulations thereunder, or any regulation of a state hazardous waste program which has been authorized by EPA. Section 3008(g) of RCRA, 42 U.S.C. § 6928(g), authorizes the assessment of a civil penalty against any person who violates any requirement of Subtitle C of RCRA.

273. The issuance of this NOVOC does not in any way limit or preclude the EPA from pursuing additional enforcement options concerning the review referenced in this NOVOC. Moreover, this NOVOC does not preclude enforcement action for violations not specifically addressed in this NOVOC.

VIII. PENALTIES AND PENALTY ASSESSMENT CRITERIA

274. Pursuant to Section 113(b)(1) - (3) of the Act, as amended, 42 U.S.C. § 7413(b)(1) - (3), and the appropriate *Adjustment of Civil Monetary Penalties for Inflation* pursuant to 40 C.F.R. Part 19, EPA may assess penalties of up to \$51,796 per day of violation for CAA violations occurring after November 2, 2015, where penalties are assessed on or after January 12, 2022. 87 *Fed. Reg.* 11676; 1679 (Jan. 12, 2022). Section 113(c) of the Act, as amended, 40 U.S.C. § 7413(c), further provides for criminal penalties or imprisonment, or both, for any person who knowingly violates any plan or permit requirement more than 30 days after the date of the issuance of a Notice of Violation.

275. Section 113(e)(1) of the Act, as amended, 42 U.S.C. § 7413(e)(1), states that in determining the amount of penalty to be assessed under this section, the EPA Administrator or the court, as appropriate, shall take into consideration (in addition to such other factors as justice may require) the size of the business, the economic impact of the penalty on the business, the violator's full compliance history and good faith efforts to comply, the duration of the violation as established by any credible evidence (including evidence other than the applicable test method), payment by the violator of penalties previously assessed for the same violation, the economic benefit of noncompliance, and the seriousness of the violation.

276. Section 113(e)(2) of the Act, as amended, 42 U.S.C. § 7413(e)(2), allows the court to assess a penalty for each day of the violation. For purposes of determining the number of days of violation, where the plaintiff makes a prima facie showing that the conduct or events giving rise to this violation are likely to have continued or recurred past the date of this NOVOC (or a previously issued air pollution control agency notice of violation for the same violation), the days of the violation shall be presumed to include the date of this NOVOC (or the previous notice of violation) and each and every day thereafter until Respondent establishes that continuous compliance has been achieved, except to the extent that Respondent can prove by the preponderance of the evidence that there were intervening days during which no violation occurred.

277. Pursuant to RCRA Section 3008(g), 42 U.S.C. § 6928(g) and the appropriate *Adjustment of Civil Monetary Penalties for Inflation* pursuant to 40 C.F.R. Part 19, EPA may assess penalties of up to \$81,540.00 per day of violation for violations occurring after November 2, 2015, where penalties are assessed on or after January 12, 2022. 87 *Fed. Reg.* 11676; 1679 (Jan. 12, 2022). Pursuant to RCRA Section 3008(a), 42 U.S.C. § 6928(a), any person who violates any requirement of the authorized state hazardous waste management program is subject to civil action, and a civil monetary penalty, upon EPA's prior notice to the State in which the violation occurred. Such penalty shall be calculated in accordance with the statutory penalty criteria in Section 3008(g) of RCRA, which requires that EPA take into account the seriousness of the violation and any good faith efforts to comply with the applicable requirements.

278. Please note that in determining the appropriate penalty amount, EPA also may consider a violator's voluntary performance of a Supplemental Environmental Project (or "SEP"). A SEP is a project that is not otherwise legally required of, or planned by, a violator, which is designed to either (1) reduce the likelihood that similar violations will occur in the future, (2) reduce adverse public health and/or environmental impacts to which the violations contributed, or (3) reduce the overall risk to public health and/or the environment potentially affected by the violations. For your information, here is the link to the EPA SEP website, which includes a link to EPA's Enforcement and Compliance History Online ("ECHO") database with examples of SEPs that have been performed: <https://www.epa.gov/enforcement/supplemental-environmental-projects-seps>. A copy of the 2015 update to the 1998 U.S. EPA Supplemental Environmental Projects Policy can also be found at: <https://www.epa.gov/sites/default/files/2015-04/documents/sepupdatedpolicy15.pdf>. If you are interested in proposing or discussing performance of a SEP as part of the settlement of this matter, please review the SEP Policy prior to our meeting. EPA would welcome the discussion of any proposals or questions you may have about potential SEPs.

IX. OPPORTUNITY FOR CONFERENCE

279. EPA is extending URC an opportunity to advise the Agency of any further information EPA should consider with respect to each of the violations, alleged above, in this NOVOC. To take advantage of this opportunity, URC should respond to this NOVOC **within thirty (30) calendar days** of its receipt by you. URC's response should be sent by electronic mail and should include any relevant documents URC believes EPA should consider. If URC has any questions regarding anything in this NOVOC or in any linked documents, or desires to provide any written correspondence, please contact Mr. Stafford Stewart of the EPA Region III Enforcement and Compliance Assurance Division at stewart.stafford@epa.gov or at 215-814-5352; or, have your attorney contact Mr. A.J. D'Angelo, Senior Assistant Regional Counsel, at dangelo.aj@epa.gov or at (215) 814-2480.

280. Whether or not URC is able to provide EPA with further information, EPA is providing URC an opportunity to meet with EPA to respond to the alleged violations and to confer about a possible resolution of this matter. If URC does not respond to EPA's offer to confer **within thirty (30) calendar days** of receiving this letter, EPA may pursue enforcement options to address the violations described in this letter without further advance notice to URC.

X. EFFECTIVE DATE

281. This NOVOC shall be effective immediately upon receipt.

Electronically Signed and Dated by:

Karen Melvin, Director

Enforcement and Compliance Assurance Division

U.S. Environmental Protection Agency, Region III

Attachments

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