Exhibit 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

VIA ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

Llewelyn Reed, Environmental Manager
BP Products North America Inc.
Llewellyn.Reed@bp.com

Re: Finding of Violation
BP Products North America Inc.
Whiting, Indiana

Dear Mr. Reed,

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to BP Products North America Inc. (BP or you) under Section 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). We find that you have violated the following requirements at your Whiting, Indiana facility: National Emission Standard for Benzene Waste Operations, codified at 40 C.F.R. Part 61, Subpart FF; the New Source Performance Standards for VOC Emissions from Petroleum Refinery Wastewater Systems, codified at 40 C.F.R. Part 60, Subpart QQQ; and your Title V operating permits.

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

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date. Please be advised that this conference is not a settlement negotiation covered by Federal Rule of Evidence 408 and we may use any information you submit in support of any administrative, civil or criminal action. After this conference (or after you have submitted a written reply), you will have an opportunity to engage in settlement negotiations before we file the complaint.

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

The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

SARAH MARSHALL

Digitally signed by SARAH MARSHALL
Date: 2021.12.09 14:02:12 -06'00'

Sarah G. Marshall
Supervisor, Air Enforcement and Compliance Assurance Section

Enclosure

cc: Jessica Gonzalez, BP America Inc.
Jessica.Gonzalez@bp.com

Phil Perry, Chief, IDEM
PPERRY@idem.IN.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
BP Products North America Inc.	)	**FINDING OF VIOLATION**
Whiting, Indiana	)	
	)	**EPA-5-22-IN-02**
Proceedings Pursuant to	)	
the Clean Air Act,	)	
42 U.S.C. §§ 7401 et seq.	)	
	)	

FINDING OF VIOLATION

The U.S. Environmental Protection Agency finds that BP Products North America Inc. (BP) is violating Section 112 of the Clean Air Act (CAA), 42 U.S.C. § 7412. Specifically, BP is violating the National Emission Standard for Benzene Waste Operations (Benzene Waste NESHAP), codified at 40 C.F.R. Part 61, Subpart FF (Subpart FF), New Source Performance Standards (NSPS) for VOC Emissions from Petroleum Refinery Wastewater Systems, codified at 40 C.F.R. Part 60, Subpart QQQ (Subpart QQQ), and your Title V operating permits.

Statutory and Regulatory Authority

1. Section 112(q) of the CAA, 42 U.S.C. § 7412(q), provides, in pertinent part, that any standard under this section in effect before the date of enactment of the CAA Amendments of 1990 (November 15, 1990) shall remain in force and effect after such date.

NESHAP General Provisions

2. 40 C.F.R. § 61.05(c) requires that ninety days after the effective date of any standard, no owner or operator shall operate any existing source subject to that standard in violation of the standard, except under a waiver granted by the Administrator under this part or under an exemption granted by the President under section 112(c)(2) of the CAA.

3. 40 C.F.R. § 61.12(a) provides that compliance with numerical emission limits shall be determined in accordance with emission tests established in 40 C.F.R. § 61.13 or as otherwise specified in an individual subpart.

4. 40 C.F.R. § 61.12(b) provides that compliance with design, equipment, work practice or operational standards shall be determined as specified in an individual subpart.

5. 40 C.F.R. § 61.12(c) requires that the owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source.

Benzene Waste NESHAP

6. Under Section 112(d) of the CAA, 42 U.S.C. § 7412(d), EPA promulgated the Benzene Waste NESHAP on March 7, 1990. *See* 55 *Fed. Reg.* 8346.

7. The Benzene Waste NESHAP, as amended pursuant to Section 112(q) of the CAA, became effective on January 7, 1993, and is codified at 40 C.F.R. Part 61, Subpart FF.

8. 40 C.F.R. § 61.340(a) states that the provisions of this subpart apply to owners and operators of chemical manufacturing plants, coke by-product recovery plants, and petroleum refineries.

9. 40 C.F.R. § 61.342(b) states that each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Megagrams per year (Mg/yr) or 11 ton/yr as determined in paragraph (a) of this section shall be in compliance with the requirements of paragraphs (c) through (h) of this section no later than 90 days following the effective date, unless a waiver of compliance has been obtained under 40 C.F.R. § 61.11, or by the initial startup for a new source with an initial startup after the effective date.

10. 40 C.F.R. § 61.341 defines "cover" as "a device or system which is placed on or over a waste placed in a waste management unit so that the entire waste surface area is enclosed and sealed to minimize air emissions. A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit such as access hatches, sampling ports, and gauge wells provided that each opening is closed and sealed when not in use. Example of covers include a fixed roof installed on a tank, a lid installed on a container, and an air-supported enclosure installed over a waste management unit."

11. 40 C.F.R. § 61.341 defines "fixed roof" as "a cover that is mounted on a waste management unit in a stationary manner and that does not move with fluctuations in liquid level."

12. 40 C.F.R. § 61.341 defines "individual drain system" as "the system used to convey waste from a process unit, product storage tank, or waste management unit to a waste management unit. The term includes all process drains and common junction boxes, together with their associated sewer lines and other junction boxes, down to the receiving waste management unit."

13. 40 C.F.R. § 61.341 defines "no detectable emissions" as "less than 500 parts per million by volume (ppmv) above background levels, as measured by a detection instrument reading in accordance with the procedures specified in § 61.355(h) of this subpart."

14. 40 C.F.R. § 61.341 defines "oil-water separator" as "a waste management unit, generally a tank or surface impoundment, used to separate oil from water. An oil-water separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples of an oil-water separator include an API separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment."

15. 40 C.F.R. § 61.341 defines "tank" as "a stationary waste management unit that is designed to contain an accumulation of waste and is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) which provide structural support."

16. 40 C.F.R. § 61.341 defines "waste management unit" as "a piece of equipment, structure, or transport mechanism used in handling, storage, treatment, or disposal of waste. Examples of a waste management unit include a tank, surface impoundment, container, oil-water separator, individual drain system . . .."

17. 40 C.F.R. § 61.342(c)(1)(ii) states that for each waste stream that contains benzene, including (but not limited to) organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the owner or operator shall comply with the standards specified in 40 C.F.R. §§ 61.343 through 61.347 of this subpart for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with paragraph (c)(1)(i) of this section.

18. 40 C.F.R. § 61.342(c)(1)(iii) states that each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in 40 C.F.R. §§ 61.343 through 61.347. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to paragraph (c) of this section.

19. 40 C.F.R. § 61.342(e) provides an alternative to the requirements specified in 40 C.F.R. § 61.342(c). However, 40 C.F.R. § 61.342(e)(2)(i) requires that the benzene quantity for the wastes described in paragraph (e)(2) of this section must be equal to or less than 6.0 Mg/yr (6.6 ton/yr), as determined in 40 C.F.R. § 61.355(k). Wastes as described in paragraph (e)(2) of this section that are transferred offsite shall be included in the determination of benzene quantity as provided in 40 C.F.R. § 61.355(k). The provisions of paragraph (f) of this section shall not apply to any owner or operator who elects to comply with the provisions of paragraph (e) of this section.

20. 40 C.F.R. § 61.343(a) states that except as provided in paragraph (b) of this section and in 40 C.F.R. § 61.351, the owner or operator must meet the standards in paragraph (a)(1) or (2) of this section for each tank in which the waste stream is placed in accordance with 40 C.F.R. § 61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering.

21. 40 C.F.R. § 61.343(a)(1) states that the owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.

22. 40 C.F.R. § 61.343(a)(1)(i)(A) states, that for fixed-roof tanks, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 parts per million by volume (ppmv) above background, as determined initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.

23. 40 C.F.R. § 61.343(b)(3) states that for each tank complying with paragraph (b) of this section, one or more devices which vent directly to the atmosphere may be used on the tank provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the tank or cover resulting from filling or emptying the tank, diurnal temperature changes, atmospheric pressure

changes or malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

24. 40 C.F.R. § 61.344(a)(1) states that the owner or operator shall meet the following standard for each surface impoundment in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain on each surface impoundment a cover (e.g., air-supported structure or rigid cover) and closed-vent system that routes all organic vapors vented from the surface impoundment to a control device.

25. 40 C.F.R. § 61.344(a)(1)(i)(A) states that the cover and all openings on each surface impoundment (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.

26. 40 C.F.R. § 61.344(a)(1)(i)(B) states that each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the surface impoundment except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

27. 40 C.F.R. § 61.346(a)(1) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device.

28. 40 C.F.R. § 61.346(a)(1)(i)(A) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The cover and all openings (e.g., access hatches, sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.

29. 40 C.F.R. § 61.346(a)(1)(i)(B) states that except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the drain system except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

30. 40 C.F.R. § 61.347(a)(1) states that except as provided in 40 C.F.R. § 61.352 of this subpart, the owner or operator shall meet the following standards for each oil-water separator in which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator to a control device.

31. 40 C.F.R. § 61.347(a)(1)(i)(A) states that except as provided in 40 C.F.R. § 61.352 of this subpart, the owner or operator shall meet the following standards for each oil-water separator in

which waste is placed in accordance with 40 C.F.R. § 61.342(c)(1)(ii) of this subpart: The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h) of this subpart.

32. 40 C.F.R. § 61.350(a) states that delay of repair of facilities or units that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.

33. 40 C.F.R. § 61.355(h)(1) states that an owner or operator shall test equipment for compliance with no detectable emissions as required in 40 C.F.R. §§ 61.343 through 61.347, and 40 C.F.R. § 61.349 of this subpart in accordance with the following requirements: Monitoring shall comply with Method 21 from appendix A of 40 C.F.R. part 60.

34. 40 C.F.R. § 61.355(k) requires that "[a]n owner or operator shall determine the benzene quantity for the purposes of the calculation required by 40 C.F.R. § 61.342(e)(2) by the following procedure: (1) For each waste stream that is not controlled for air emissions in accordance with 40 C.F.R. §§ 61.343. 61.344, 61.345, 61.346, 61.347, or 61.348(a), as applicable to the waste management unit that manages the waste, the benzene quantity shall be determined as specified in paragraph (a) of this section, except that paragraph (b)(4) of this section shall not apply, i.e., the waste quantity for process unit turnaround waste is not annualized but shall be included in the determination of benzene quantity for the year in which the waste is generated for the purposes of the calculation required by 40 C.F.R. § 61.342(e)(2)."

35. 40 C.F.R. § 61.356(d) states that an owner or operator using control equipment in accordance with 40 C.F.R. §§ 61.343 through 61.347 shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment. If a control device is used, then the owner or operator shall maintain the control device records required by paragraph (f) of this section.

NSPS General Provisions

36. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (NSPS).

37. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.

Subpart QQQ

38. EPA promulgated Subpart QQQ on November 23, 1988. 53 *Fed. Reg.* 47623

39. 40 C.F.R. § 60.690(a) states that the provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, reconstruction is commenced after May 4, 1987.

40. 40 C.F.R. § 60.692-2(a)(1) states each drain shall be equipped with water seal controls.

41. 40 C.F.R. § 60.692-2(a)(2) states that each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.

42. 40 C.F.R. § 60.692-2(a)(5) states that whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in 40 C.F.R. § 60.692-6.

43. 40 C.F.R. § 60.692-2(b)(1) states that junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.

44. 40 C.F.R. § 60.692-2(b)(2) states that junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

45. 40 C.F.R. § 60.692-2(b)(3) states that junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.

46. 40 C.F.R. § 60.692-2(b)(4) states that if a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in 40 C.F.R. § 60.692-6.

47. 40 C.F.R. § 60.692-2(c)(1) states that sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

48. 40 C.F.R. § 60.692-2(c)(2) states that the portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

49. 40 C.F.R. § 60.692-2(c)(3) states that whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 40 C.F.R. § 60.692-6.

Title V

50. Pursuant to Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V operating permit after the effective date of any permit program approved or promulgated under Title V of the CAA. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See* 57 *Fed. Reg.* 32295; 40 C.F.R. Part 70. EPA promulgated regulations governing the federal operating permit program on July 1, 1996. *See* 61 *Fed. Reg.* 34228; 40 C.F.R. Part 70.

51. EPA promulgated interim approval of the Indiana Title V program on November 14, 1995. *See* 60 *Fed. Reg*. 57188 (effective on December 14, 1995). EPA fully approved the Indiana Title V program on December 4, 2001. *See* 66 *Fed. Reg.* 62969 (effective on November 30, 2001). The Indiana regulations governing the Title V permit program are codified at 326 Indiana Administrative Code 2-7 and are federally enforceable pursuant to Section 113(a)(3) of the CAA.

52. On December 8, 2014, the State of Indiana issued Title V operating permit # 089-30396-00453 to BP for its Whiting refinery.

53. On September 20, 2019, the State of Indiana issued Title V operating permit # 089-40517-00453 to BP for its Whiting refinery.

Factual Background

54. BP owns and operates a petroleum refinery at 2815 Indianapolis Boulevard, Whiting, Indiana 46394.

55. BP's Whiting, Indiana refinery is subject to requirements of the Benzene Waste NESHAP at Subpart FF and NSPS Subpart QQQ.

56. BP is a facility with a total annual benzene quantity of greater than 10 Mg/yr since at least 2001.

57. EPA conducted an on-site Subpart FF inspection on October 29, 2019 (October 2019 Inspection) at BP's Lakefront wastewater treatment plant (Lakefront WWTP).

58. BP conducted a third-party BWON Program Assessment (First Audit) that concluded with a summary report on Mach 26, 2021.

59. BP's First Audit identified the following Subpart QQQ failures during the visual inspection:

a. 26 applicable segregated storm sewer catch basins with oil present in the 12 pipestill (PS) process unit;
b. Four applicable segregated storm sewer catch basins with oil present in the Coker 2 process unit;
c. One applicable segregated storm sewer catch basins without water in the diesel distillate unit process unit (DDU);
d. Seven instances of atmospheric drains and paving drains with oil or oily water visible during the time of the inspection in the alkylation (Alky) process unit;
e. One drain was closed with a wooden plug in the vapor recovery unit (VRU) 100 process unit;
f. Two drains were either flooded and covered in debris, or the p-trap was collapsed on the drains in the VRU 100 process unit; and
g. At manhole 1 (MH-1) with vacuum tower 1 (VT-1), the vent pipe was cut off at the top of the manhole.

60. BP's First Audit identified Subpart QQQ sewers that are designed to be controlled, but BP has failed to control, in the following process units: 11 pipestill A (PSA); 11 PSC; 12 PS; 4 ultraformer (UF); coker feed unit (CFU); Coker 2/VRU 400; fluidized catalytic cracking unit (FCU) 500; gas-oil hydrotreater (GOHT); Lakefront; VRU 100; VRU 200; and VRU 300.

61. BPs First Audit identified BWON sewers that are designed to be controlled, but BP has failed to control, in the following process units:11 PSA;11 PSC;12 PS;4 UF; Alky; FCU 600; CFU; Coker 2/VRU 400; FCU 500; GOHT; Lakefront; VRU 100; VRU 200; and VRU 300.

62. BP's First Audit identified the following chronic leakers from BWON inspections and Method 21 (M21) monitoring failures that occurred during the 2018-2020 timeframe:

Process Unit	**Inspection Failure Summary**
11 PSA	Twenty-five (25) instances of atmospheric drains, paving drains, and catch basins with oil and/or debris visible during the time of the inspection. Eight (8) atmospheric drains were clogged with dirt. Two (2) atmospheric drains were dry and did not have a water seal. Three (3) manholes had bolts missing. One (1) cleanout was equipped with a covered a plate, but was not sealed. One (1) atmospheric drain had a piping stud up south of AD-66 and was rusted with a hole in top. The desalter area was covered in oil underneath and on the east side at the time of inspection. Drains in the water house were flooded; therefore material intended to route to IDS is not contained within IDS. Three (3) atmospheric drains were plugged, and the area surrounding the drains were flooded; therefore, material intended to route to IDS is not contained within IDS. One (1) atmospheric drain was used for desalter triline checks and was very oily. An air mover was nearby to clear vapors away from the drain. One (1) atmospheric drain was filled with concrete. Seven (7) atmospheric drains utilized wood plugs as control. One (1) atmospheric drain could not be inspected due to piping in the way. One (1) catch basin was completely covered over by caulking.
11PSC	Eleven (11) atmospheric drains and paving drains with oil, debris, or both visible during the time of the inspection. One (1) atmospheric drain was dry. Two (2) manhole covers were missing bolts. One (1) manhole was covered by tarps and blankets and had a cone placed on top. A strong vapor smell was present at the time of the inspection. One (1) catch basin was full of oily solids. One (1) paving drain contained sludge. One (1) cleanout exhibited visible wetness on the S/SE edge of the cleanout. Two (2) atmospheric drains and one paving drain were clogged with mud or plugged with foam. One (1) paving drain received continuous desalter brine water sample to the drain. One (1) bucket of oil was located at P305A. The desalter crude sample station area was very oily, with buckets of oil next to the sample station. One (1) manhole was concreted over. Three (3) atmospheric drains were covered with a fire blanket. One (1) atmospheric drain was covered in cloths.

12 PS	One hundred and twenty-two (122) atmospheric drains, paving drains, and catch basins with oil, debris, or both visible during the time of the inspection. Fifty-six (56) atmospheric drains were dry, with no water seal. The BB-1 stormwater sump had staining on the outside concrete edges and cracks along the surface of the sump. The manhole cover on the NW corner was missing bolts. At sump S-201, a flange appeared heavily corroded with potential gasket damage. Six (6) manholes had visible wetness along concrete, missing bolts, or both. One (1) atmospheric drain with water present that did not appear to be trapped. Two (2) atmospheric drains with horizontal running water, indicating the lack of a water seal. One (1) atmospheric drain receiving continual BFW overflow without a water seal. One (1) atmospheric drain filled with concrete and/or mud. Oil from D-118/D-116 pumps covered the area east of the drums, and was draining into paving drain. Drain AD-336 receives water on level control from D-118. Drain overflows onto ground and across pad to paving drains whenever the control valve opens. Drain AD-337 overflows from AD-336 onto ground and across pad to paving drains whenever the control valve opens. Two (2) uncovered buckets of desalter brine water were
ARU	Twenty-four (24) atmospheric drains and paving drains with oil or oily water visible during the time of the inspection. Five atmospheric (5) drains were dry, with no water seal. One (1) paving drain had no water seal. One (1) cleanout had lots of caulking that could be lifted from the grooves.
CFU	Five (5) atmospheric drains were dry, with no water seal. Two (2) atmospheric drains and one paving drain had moving water at the bottom of the pipe, indicating there was enough water in the p-trap to form a proper water seal or that no trap was present. One (1) atmospheric drain was plugged with debris. One (1) cleanout was covered with an unsecured pipe blind. Two (2) atmospheric drains and one cleanout had steam exiting the component. Six (6) atmospheric drains utilized wood plugs as control. Eight (8) atmospheric drains and paving drains with oily water visible during the time of the inspection.
Coker 2	Twenty-two (22) atmospheric drains and catch basins with oil, sludge, or oily water visible during the time of the inspection. Two (2) atmospheric drains were dry, with no water seal. Two (2) atmospheric drains were clogged with debris, making the drain seal difficult to observe. Five (5) manholes were missing at least one bolt. Three (3) manholes had gaskets in poor repair or missing gaskets altogether. Hydrocarbon vapor was present at one of them. One (1) manhole had cracks present in the concrete near the gasket. One (1) cleanout was covered with a wooden top. Two (2) catch basins were steaming, both of which were covered, one by a boom and one by a fire blanket. One (1) catch basin was covered by a boom. Hydrocarbon vapor was present when the cover was removed.

DDU	Missing bolts on manholes MH-3, MH-4, and MH-5. One (1) atmospheric drain was dry and did not have a water seal. Gaskets that require repair on S-307. Vapor present in the area of two atmospheric drains. Two (2) instances of atmospheric drains with a hydrocarbon sheen on the surface of the water seals.
FCU 500/600	Eight (8) atmospheric drains, paving drains, or cleanouts were dry, and had no water seal. Six (6) manholes or junction boxes had holes in caulking or peeling caulking, steaming, oil stains, covers not bolted down, or uncaulked holes in the lid. Sixteen (16) instances of atmospheric drains and paving drains with oil layer during the time of the inspection. Seven (7) instances of cleanouts, vents, and manholes steaming. One (1) unplugged cleanout without a trap. Two (2) atmospheric drains with bubbling or overflowing water. One (1) atmospheric and paving drains were plugged. One (1) catch basin venting steam from the sewer, covered by a boom, with no steam lines entering the basin itself. One (1) junction box missing two hatches with small leaks venting. According to inspection sheets, VT-23 in FCU500 should have a COV; however, no COV was located. Steam was passing through the COV on VT-24 in FCU500 without showing a relief event. One (1) atmospheric drain covered with a boom. Four (4) cleanouts, one (1) paving drain and two (2) atmospheric drains with wooden plugs. VT-7 in FCU600 did not have a COV but was surrounded by other vents with COVs. Thirteen (13) instances of atmospheric and paving drains steaming.
GOHT	Five (5) atmospheric drains had a hydrocarbon layer on the water during the time of the inspection Three (3) atmospheric drains had a sheen on the water during the time of the inspection. The drain valve off a line at the SE corner of D-933 was open. Four (4) atmospheric drains had low water seals and gas escaped while they were inspected. Two (2) atmospheric drains were covered with non-vapor-tight seals. One (1) atmospheric drain utilized wood plugs as control.
Lakefront	Conservation vent chattering when liquid flow released into sewer box at manholes 11 and 12. Rumbling and odor present during chattering. Flow indicator did not pop to show evidence of release. Some odor around sump area of manhole 6. Oil on top of the bar screen, presenting general hydrocarbon odor. At the north and south DNF, oil and/or sludge was leaking out of manholes on bottom of vessels. At the “A” Funk Valve box, there was a visible oil leak on the SW corner of the box. Oil sheen on top of water in the stormwater trenches.

Alky	One (1) cleanout had a cracked top. Two (2) atmospheric drains were dry and did not have a water seal. The TK-17 Condensate Sump had a visible leak.
4 UF	Seven (7) manholes were not sealed, had gaps, were not recaulked after the last opening, or had small cracks in the concrete lid. One (1) paving drain was dry. Two (2) atmospheric drains with a pipe blind placed on top. Four (4) drains east of D-47 looked to be pump oil drains with oil visible on the surface of the water. One (1) sump pump on top of sump with caulking coming off in a spot, cracked concrete at the pump base, and two cracks across the entire sump concrete top. Two (2) atmospheric drains with a hydrocarbon layer on the water surface. One (1) hole in concrete nearby a cleanout. One (1) atmospheric drain covered with plywood. One (1) atmospheric drain with some sediment in the bottom of the drain with some water. One (1) atmospheric drain with steam venting from the drain. A drain valve on D-36 was closed but did not have a plug. Three (3) vents at CC-48, CC-49, and CC-44 did not have carbon canisters, but were connected to conservation vents with a hose. Immediately south of D-47 Baker Hughes 12” tote - concrete cap with a hole in the middle.
VRU 100	The gas trap had some cracks in the cement box, and there was steam blowing through the seals on Manhole 9 (MH-9). Current TAB accounting states that the sewer flowing through MH-9 is not BWON controlled; however, there are BWON drain inspections for that area. One (1) paving drain was dry and had no water seal. Manhole 5 (MH-5) with vent VT-5 was unsealed. Two (2) manholes were not sealed, including one with a hole in its caulking. Three (3) instances of paving drains with oil visible during the time of the inspection. One (1) instances of paving drains with oily water visible during the time of the inspection. One (1) vent and one atmospheric drain had visible steam escaping the component. One (1) paving drain was flooded. One (1) atmospheric drain was receiving continuous water.
VRU 200	Steam was blowing through the seals of MH-10. Sand was on top of the gas trap box and wood on sides. Other hatches were closed. One (1) paving drain and one atmospheric drain had no water trap visible. Three (3) paving drains contained oil during the time of the inspection. Two (2) paving drains contained oily sheen during the time of the inspection. One (1) paving drain was flooded. One (1) cleanout was covered with a cracked top with a hole in it.

VRU 300	Sixteen (16) instances of paving drains and atmospheric drains were dry and had no water seal. One (1) catch basin was dry and contained no water. One (1) manhole was missing bolts from bolt holes on the lid. One (1) paving drain had no seal leg. Twenty (20) atmospheric drains and paving drains contained oil or oily water during the time of the inspection. Eight (8) atmospheric drains, and paving drains were covered, clogged, or otherwise filled with dirt. One (1) atmospheric drain was clogged with sludge. Six (6) manholes had concrete cracks, on the surface, or at the edge gaskets. Four (4) cleanouts did not have a cap. One had a steam hose inside. One (1) vent had corroded gaskets. One (1) atmospheric drain was clogged and the area flooded with water. One (1) paving drain was covered with wood, with steam hoses entering it. Two (2) cleanouts had a wooden plug inserted. One (1) atmospheric drain was noted to have a hydrocarbon vapor smell, with water entering the drain and visible steam exiting the drain. One (1) atmospheric drain was overflowing and appeared to be plugged. Two (2) atmospheric drains had steam rising from the drain. One (1) atmospheric drain was entirely caulked over, perhaps for use as a seal
VRU 400	Four (4) atmospheric drains were dry and contained no water. MH-401 was missing 2 bolts. One (1) atmospheric drains catch basins contained oil during the time of the inspection. Manholes required caulking and repair around concrete. Seven (7) atmospheric drains had vapor present when inspected. Sixteen (16) atmospheric drains catch basins contained oily water during the time of the inspection. Two (2) atmospheric drains contained a very low water level. Six (6) atmospheric drains were covered with fire blanket. Two could not be inspected, as the fire blanket could not be removed temporarily to check the drain.

63. The First Audit also identified the following chronic leakers based on BP's BWON inspections and EPA Method 21 (M21) monitoring failures (failure is defined as leaks monitored at 500 ppm or greater detected using M21), during the 2018-2020 timeframe:

Process Unit	**Equipment Name**	**Failures**
11PS	D-118 North	4 M21 leaks detected; 2 visual failures
4UF	4UF South Pad	7 M21 leaks detected; 1 visual failure
Catalytic Reformer Unit (CRU)	CRU oil water separator (OWS)	7 M21 leaks detected (6 in 2020); 3 visual failures (all in 2020)

FCU 500	FCU 500 West Separator	9 M21 leaks detected (at least 6 in 2020); 2 visual failures
FCU 600	FCU 600 West Separator	3 M21 leaks detected
Aromatics Unit (ARU)	Xylene-West Separator	8 M21 leaks detected (at least 6 in 2018); 3 visual failures
Lakefront	Barscreen Seal Plate	8+ M21 leaks detected (at least 35 in 2018)
Lakefront	Grit Chamber	M21 leaks detected; 3 visual failures (at least 2 in 2020)
Lakefront	Dissolved Nitrogen Flotation (DNF) Float Tanks 310, 320, 330 & 340	80+ M21 leaks detected (at least 37 in 2019)
Lakefront	Box 1 4596	4+ M21 leaks detected (at least 2 in 2020)
Lakefront	Mixers 1, 3, 4 & top of Tank 562	6+ M21 leaks detected (at least 4 in 2018)
Lakefront	Closed Vent System (CVS) components on Carbon Canisters (CC) 300 & CC-302	4+ M21 leaks detected (at least 3 in 2020)
Lakefront	MH 5	2 M21 leaks detected (all in 2020); 2 visual failures
Lakefront	MH 2-4	2 M21 leaks detected (all in 2020); 2 visual failures (all in 2020)
Lakefront	MH 4-30	M21 leaks detected; 2 visual failures
Oil Movement Division (OMD)	Alky Casper Sump	7 M21 leaks detected (at least 4 in 2018); 1 visual failure
Outside Battery Limits (OSBL)	MH 8-6	2 M21 leaks detected; 2 visual failures (all in 2020)
OSBL	MH 12-21	2 M21 leaks detected; 4 visual failures
OSBL	MH 10-122	4 visual failures
OSBL	MH 11-52	8 visual failures (at least 5 in 2020)
OSBL	MH 13-30	1 M21 leak detected; 4 visual failures
OSBL	MH 13-41	1 M21 leak detected; 3 visual failures

OSBL	MH 13-44	2 M21 leaks detected; 2 visual failures
OSBL	MH 13-7 A/B	3 M21 leaks detected (14 in 2018); 7 visual failures (6 in 2018)
OSBL	MH 14-3	1 M21 leak detected; 4 visual failures
OSBL	MH 4-48	3 visual failures

64. The First Audit identified the following missed waste streams from the Total Annual Benzene report:
    a. Desalter brine observation interface quantification for 11PSA/C;
    b. Certain maintenance waste (i.e. sight glass clearing, filter changeouts; and
    c. Desalter triline checks in 12PS and 11PSA.

65. BP also conducted an additional third-party BWON Evaluation Review (Second Audit) that concluded with a summary report submitted to the United States in April 2021.

66. The Second Audit identified the following of BWON visual inspection failures:

Component Type	**Issue**	**Failure Count**
Catch Basin	Needs flushed; M21 Fail	2
Cleanout	Cap not forming tight seal	3
Cleanout	Cap not forming tight seal; M21 Fail	2
Drain	Broken Concrete	1
Drain	Drain has sandbags and sand; Cannot inspect	1
Drain	Full of debris	3
Drain	No water seal	21
Drain	No water seal; M21 Fail	10
Drain	Oily Drain	4
Manhole (MH)	Gaps and cracks; M21 Fail	9
MH	Missing bolts creating gaps	3
MH	Seal issues and temporary repair sealant lifting	42
MH	Duct tape inserted into hole on lid; Needs sealed	1

MH	Sand covered; Cannot confirm tight seal	2
	Total	104

67. The Second Audit identified the following BWON EPA M21 inspection failures (23 total) at two Catch Basins, ten Drains, two Cleanouts; and nine Manholes/Junction Boxes.

68. The Lakefront WWTP consists of equipment including, at a minimum, junction boxes, a grit chamber, bar screens, oil-water separators, manhole covers, and wastewater conveyances used to control its total annual benzene quantity in accordance with 40 C.F.R. § 61.342(e) (i.e., 6 Mg/yr).

69. BP has incorporated the applicability of Subpart FF into its Title V operating permits.

70. In April 2021, BP notified EPA via email and phone that the grit chamber located at the Lakefront WWTP operated uncontrolled for calendar year 2020 and thus exceeded the 6 Mg/yr benzene quantity in 40 C.F.R. § 61.342(e).

71. Condition G.3 of BP's 2014 Title V operating permit # 089-30396-00453, states that BP shall comply with the applicable provisions of Subpart FF for its individual drain systems, oil-water separators, tanks, containers, treatment processes, and closed-vent systems.

72. Conditions F.11.2 and F.11.3 of BP's 2014 Title V operating permit # 089-30396-00453, states that BP shall comply with the applicable provisions of Subpart QQQ for its individual drain systems, oil-water separators, and closed-vent systems.

73. BP's 2014 Title V operating permit # 089-30396-00453, was amended on various dates thereafter.

74. Conditions E.3.1 and E.3.2 of BP's 2019 Title V operating permit # 089-40517-00453, states that BP shall comply with the applicable provisions of Subpart FF for its individual drain systems, oil-water separators, tanks, containers, treatment processes, and closed-vent systems.

75. BP's 2019 Title V operating permit # 089-40517-00453, was amended on various dates thereafter.

76. Conditions F.11.1 and F.11.2 of BP's 2019 Title V operating permit # 089-40517-00453, states that BP shall comply with the applicable provisions of Subpart QQQ for its individual drain systems, oil-water separators, tanks, containers, treatment processes, and closed-vent systems.

Violations

77. BP failed to maintain water seal controls on each drain with several process units as required by 40 C.F.R. § 60.692-2(a)(1), and its Title V operating permits.

78. BP failed to maintain all junction boxes with a cover with a seal and an open vent pipe to be at least 90 cm (3 ft) in length and not exceed 10.2 cm (4 in) in diameter as required by 40 C.F.R. § 60.692-2(b)(1) and (b)(2), and its Title V operating permits.

79. BP failed to maintain all sewer lines closed to the atmosphere and covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces as required by 40 C.F.R. § 60.692-2(c)(1) and its Title V operating permits.

80. Based on the number of visual inspection failures identified in the First and Second Audit, BP failed to properly conduct monthly visual inspections as required by 40 C.F.R. § 60.692-2(a)(2), 60.692-2(b)(3), and 60.692-2(c)(2) and its Title V operating permits.

81. By not conducting the monthly visual inspections of the individual drain systems, junction boxes, and sewers, BP failed to make necessary and timely repairs as required by 40 C.F.R. § 60.692-2(a)(5), 60.692-2(b)(4), and 60.692-2(c)(3), and its Title V operating permits.

82. Based on the number of visual inspection failures identified in the First and Second Audits, BP failed to properly conduct quarterly visual inspections as required by 40 C.F.R. § 61.346(a)(2), and its Title V operating permits.

83. Based on the leaks identified by EPA during EPA's October 2019 Inspection, BP failed to design to operate all covers and openings with no detectable emissions for waste management units including tanks, surface impoundments, individual drain system, and oil-water separators, as required by 40 C.F.R. §§ 61.343(a)(1)(i)(A), 61.344(a)(1)(i)(A), 61.344(a)(1)(i)(B), 61.346(a)(1)(i)(A), 61.346(a)(1)(i)(B) and 61.347(a)(1)(i)(A), and its Title V operating permits.

84. Based on BP's notification that BP operated its grit chamber uncontrolled for calendar year 2020, BP failed to comply with the 6 Mg/yr control option as required by 40 C.F.R. § 61.342(e) and 61.342(e)(2)(i), and its Title V operating permits.

85. By not designing and/or operating each waste management unit to no detectable emissions, BP failed to route all emissions to a closed-vent system as required by 40 C.F.R. §§ 61.343(a)(1), 61.344(a)(1), 61.346(a)(1), and 61.347(a)(1), and its Title V operating permits.

86. By identifying leaks above the no detectable emissions standard for waste management units and not calculating a benzene quantity uncontrolled for those leaks, BP failed to demonstrate compliance with the uncontrolled emissions level as required by 40 C.F.R. §§ 61.355(k) and 61.342(e)(2)(i), and its Title V operating permits.

MICHAEL HARRIS

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Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division