

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

BP PRODUCTS NORTH AMERICA INC.,	)	
	)	
Petitioner,	)	
	)	
	)	PCB 2024-026
v.	)	Permit Appeal
	)	1191155009—Madison County
ILLINOIS ENVIRONMENTAL	)	1LD980503106
PROTECTION AGENCY,	)	Log No. B-145R2
	)	
Respondent.	)	
	)	

**NOTICE OF FILING**

TO: Division of Legal Counsel	Clerk
Illinois Environmental Protection Agency	Illinois Pollution Control Board
1021 North Grand Avenue East	100 West Randolph Street, Suite 11-500
P.O. Box 19276	Chicago, Illinois 60601-3218
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Melanie.Jarvis@Illinois.gov	

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board BP Products North America Inc.'s Petition to Appeal Illinois EPA's Issuance of a Post-Closure RCRA Permit, a copy of which is herewith served upon you.

Dated: February 5, 2024

Respectfully submitted,

**BP PRODUCTS NORTH AMERICA INC.**

By: /s/ Alexander J. Bandza

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**BP PRODUCTS NORTH AMERICA INC.’s PETITION TO APPEAL  
ILLINOIS EPA’S ISSUANCE OF A POST-CLOSURE RCRA PERMIT**

NOW COMES the Petitioner, BP Products North America Inc. (“BPPNA”), by its attorneys, Barnes & Thornburg LLP, and, pursuant to the Illinois Environmental Protection Act (415 ILCS 5/40(a)(1)) and 35 Ill. Adm. Code §§ 105.208 & 705.212, hereby petitions the Illinois Pollution Control Board (“Board”) to appeal the Illinois Environmental Protection Agency’s (“Illinois EPA” and “Agency”) issuance of a Resource Conservation and Recovery Act (“RCRA”) permit to BPPNA (“Permit”) as it relates to operations at the Wood River, Illinois, Riverfront Property (“Facility”).<sup>1</sup>

In support of this Petition, BPPNA respectfully states as follows:<sup>2</sup>

**I. RECORD OF APPEAL**

1. Illinois EPA issued the draft Permit on July 7, 2023 (“Draft Permit”). (**Ex. A.**)
2. BPPNA provided its comments to the draft Permit on August 23, 2023. (**Ex. B.**)
3. Illinois EPA issued the Permit on September 29, 2023.<sup>3</sup> (**Ex. C.**)

<sup>1</sup> BPPNA and Illinois EPA are individually a “Party” and collectively, the “Parties.”

<sup>2</sup> BPPNA reserves its rights to further amend this Petition based on subsequent filings in this matter.

<sup>3</sup> Before issuing the final Permit language, Illinois EPA set forth a Response to Comments in this document (“RTC”).

**II. THIS APPEAL IS TIMELY FILED**

4. On October 24, 2023, the Parties timely filed a joint notice to extend the 35-day period within which BPPNA may appeal the Permit. *See* 415 ILCS 5/40(a)(1) (2022); 35 Ill. Adm. Code 101.300(b), 105.206(c), 105.208(a), (c).

5. By its Order dated November 2, 2023, the Board granted this extension request so as to allow BPPNA up to and until February 5, 2024 to timely file an appeal. (*See* PCB 24-26 Order (Nov. 2, 2023).) This appeal is timely filed.

**III. BACKGROUND**

6. The Property is located west of the BP Main Plant property (“Main Plant”) between the levee of the Wood River Drainage and Levee District (“WRDLD”) and the Mississippi River. (**Exs. D & E.**)

7. The RCRA regulated hazardous waste management units at the Facility are the Pond 1 Landfill and the East Surge Pond (“ESP”). Current operations at the Facility include post-closure care of the Pond 1 Landfill, and operation of the ESP to store nonhazardous water from the Facility, the Main Plant, and the City of Wood River Publicly Owned Treatment Works (“POTW”) under delay-of-closure regulations (35 Illinois Administrative Code 724.213(d)).

8. The Pond 1 Landfill and ESP (**Ex. F**) are located in the area of former wastewater treatment ponds 1, 1A, 2, 2A, 3, 3A, and 4. (**Ex. G.**) Amoco Oil Company formerly used the ponds to treat wastewater and stormwater from the Main Plant during its operation.

9. Amoco stored dissolved-air flotation (“DAF”) float from the petroleum refining industry (K048, a listed hazardous waste) in the ponds from 1977 to 1981. Amoco began removing hazardous liquids, sludges, and soil from the ponds in 1985. The pumpable sludges were rendered non-hazardous using the Chemfix® process in the late 1980s, and were disposed in the on-site Permitted Non-Hazardous Waste Landfill (“PNWL”) located in the area of former Pond 5. The

Chemfix® treated materials were delisted by the U.S. Environmental Protection Agency (“USEPA”) and the Board.

10. The heavy non-pumpable sludges and impacted soils from the ponds were solidified and placed in the Pond 1 Landfill. The Pond 1 Landfill is located in the area of former ponds 1, 1A, and the north portion of Pond 2. The placement of wastes in the Pond 1 Landfill was completed in 1994. The final vegetative cover for the Pond 1 Landfill was established on June 15, 1995. The certification of closure for the Pond 1 Landfill was submitted to Illinois EPA on August 14, 1995.

11. The southern part of Pond 2 and all of Ponds 2A, 3, 3A, and 4 were designated as the ESP so as to store nonhazardous water under delay of closure regulations. The Board issued an Adjusted Standard (AS-91-4) to Amoco to allow the ESP to be used for storage of non-hazardous water from the City of Wood River POTW during periods of maintenance or operational difficulties. A 1-foot compacted clay liner was placed on the floor and walls of the ESP.

12. A flood protection dike was constructed to 440-feet above mean sea level around the Temporary Surge Basin, Pond 1 Landfill, ESP, and PNWL, and is tied into the WRDLD levee.

13. In connection with BPPNA’s application for the above-referenced Permit, BPPNA also proposed to implement an optimized groundwater monitoring program for the Facility in accordance with 35 Illinois Administrative Code (IAC) 724.200 requirements and as approved in the Illinois EPA letter dated January 19, 2023. (**Ex. H.**)

14. The interim corrective action for the Facility is designed to control the migration of impacted groundwater within the Groundwater Management Zone (“GMZ”) by inducing a hydraulic gradient towards the interior of Main Plant facility.

15. The existing GMZ is shown on the following figure. (**Ex. I.**) The GMZ was a condition of the RCRA Part B Permit for the Pond 1 Landfill and the ESP issued in September



1993. Illinois EPA approved the GMZ in correspondence dated April 6, 1994. (**Ex. J.**)

#### IV. **ARGUMENT**

16. BPPNA sets forth its argument below in three parts. **First**, BPPNA sets out the relevant statutory background to the RCRA Permit application process and its appeal. **Second**, BPPNA sets out the inappropriate conditions, from a technical perspective, in the final Permit. **Third**, BPPNA sets out the inappropriate condition, from a legal perspective, in the final Permit.

##### A. **Relevant Statutory Background**

17. Pursuant to 35 Ill. Adm. Code § 705.212(a), a petition for an appeal of the Permit must be filed “within 35 days after a RCRA . . . final permit decision notification has been issued.” Board review of this category of permits “is pursuant to 35 Ill. Adm. Code 105.” *Id.* § 705.101(c). In turn, under 35 Ill. Admin. Code § 105.208, “the 35-day period . . . for petitioning for a hearing may be extended by the applicant for a period of time not to exceed 90 days by written notice provided to the Board from the applicant and the Agency within the initial appeal period.” *Id.* § 105.208(a). BPPNA and Illinois EPA sought and were granted this extension under §§ 105.208, 705.101(c), and 705.212(a).

18. Accordingly, because this Petition seeks “[r]eview . . . **under Section 705.212**,” “**the effective date and conditions will be stayed** as provided in Sections 705.202 through 705.205.” *Id.* § 705.201(d) (emphasis added).

19. In response to the draft Permit, if BPPNA “believe[d that] **any condition of a draft permit is inappropriate**, or that the Agency’s tentative decision to deny an application or prepare a draft permit is inappropriate,” BPPNA “must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period (including any public hearing) under Subpart D.” *Id.* § 705.183(d) (emphasis added).

20. In the instant Petition, BPPNA will demonstrate “that any issues being raised [in this petition] were raised during the public comment period (including any public hearing),” and “the petition . . . comport[s] with the requirements for permit appeals generally, as set forth in 35 Ill. Adm. Code 105.” *See id.* § 705.212(c).

21. As demonstrated below, BPPNA raised that the following conditions were “inappropriate” (*see id.* § 705.201) during the public comment period (*see id.* § 705.212).

**B. Technically Inappropriate Conditions in the Final Permit**

**1. Section II.B.1**

22. The applicable RCRA Permit extract is as follows:

“1. The Permittee may only store/treat non-hazardous wastewaters in total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plant and Riverfront facilities; (b) groundwater pumped as part of BP’s hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility. Any wastewater management activities at the facility at the ESP must meet all requirements by the Illinois EPA Bureau of Water, as necessary.”

23. BPPNA commented on this provision in the draft Permit. (*See RTC at 5-6.*)

24. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons:

- a. As to the first sentence, the capacity of the ESP listed in the Permit is incorrect. The actual capacity when accounting for the required freeboard is 80 million gallons.
- b. As to subsection (a), the reference to “domestic” sewage is imprecise. Sewage from the POTW is discharged by the POTW to the BPPNA ponds located on the Facility. The POTW discharge includes “municipal”

wastewater and may include sewage from its customers, which cannot be classified as “domestic.”

- c. As to subsection (c), BPPNA requests that if the Board approves delisting, BPPNA be allowed to discharge leachate from Pond 1 Landfill to the ESP in a manner consistent with other provisions of the Permit.

**2. Section II.B.2.b and c**

25. The applicable RCRA Permit extract is as follows:

“2. All wastewater managed in the ESP must be evaluated through the approved waste analysis plan for compatibility to ensure that all wastewaters placed into the ESP will be non-hazardous. The Permittee must: [ . . . ]

“b. Collect two (2) composite samples of leachate discharge, one from the manifolded pipe of odd numbered sumps and one from the even numbered sumps of the PNWL, sent to the ESP each quarter of the calendar year, when leachate is present at the PNWL in accordance with Condition II.B.2(c). If leachate is present at the PNWL but is not discharged to the ESP, then it must be noted in the analytical report included in the facility’s operating record and annual report, as required in II.B.2(c) below.

“c. The Permittee shall collect representative samples of the discharge described in Conditions II.B.2 (a) and (b) above and analyze it for all the constituents listed in 35 IAC 724 Appendix 1. The results of these efforts must be documented in the facility’s operating record and reported to Illinois EPA annually. If it is found that the wastewater/leachate is hazardous, then: (1) Illinois EPA (Bureau of Land Permit Section and Collinsville FOS) must immediately be notified of such findings via email and/or phone call (which determined to be most as most appropriate and effective); (2) No additional wastewaters/wastes must be discharged to the ESP until the Permittee is able to demonstrate to Illinois EPA’s satisfaction that no additional hazardous waste will be discharged to the impoundment; (3) The Permittee must develop and implement a plan for determining the source of the hazardous waste. A report documenting the results of this investigation must be developed; this report must also describe the steps to be taken to ensure this problem will not occur in the future. These plans and reports are subject to Illinois EPA review and approval.”

26. BPPNA commented on this provision in the draft Permit. (*See* RTC at 6-8.)
27. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the

Permit under this condition in the following respects and for the following reasons:

- a. As to the first sentence, BPPNA does not accept hazardous waste and is thus not required to have an “approved waste analysis plan.”
- b. As to subsection (b), the waste located in the PNWL was solidified and rendered non-hazardous using the Chemfix® process, and was delisted by the USEPA and the Board.
- c. As to subsection (c), Appendix I is not an appropriate sampling list. The Subpart C list is more appropriate to demonstrate that the PNWL leachate is non-hazardous waste and is only needed for a short duration to demonstrate to the Agency that the leachate does not exhibit characteristics of hazardous waste. Additionally, because the waste in the landfill is all from the same source and was treated using the same process, only one sample is needed to demonstrate that the leachate is non-hazardous.

**3. Section II.G.1**

28. The applicable RCRA Permit extract is as follows:

“G. FINANCIAL ASSURANCE REQUIREMENTS

“1. The permittee shall maintain financial assurance for closure of the surface impoundment(s) of at least \$538,420 (in 2020 dollars). The cost estimate for closure of this facility is shown in Attachment G to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 IAC 724 Subpart H.

29. BPPNA commented on this provision in the draft Permit. (Ex. B at 25.)
30. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the

Permit under this condition in the following respects and for the following reasons: As to subsection (1), it is possible that the cost estimate for closure could decrease over time. As such, BPPNA should not be required to maintain financial assurance in a fixed amount of “at least

\$538,420 (in 2020 dollars).” BPPNA alternatively proposes that the Permit be revised to indicate that BPPNA “shall maintain financial assurance of at least the amount of the approved cost estimate required in Condition II.G.2.”

**4. Section III.E. 4 and 5**

31. The applicable RCRA Permit extract is as follows:

“E. MONITORING, MAINTENANCE. AND RECORDKEEPING [...]

“4. The Permittee shall prevent run-on from eroding or otherwise damaging the final cover. At a minimum, the run-on control system shall be capable of preventing flow onto the active portion of the landfill during peak discharge from a 24 hour, 25-year storm event.

“5. The Permittee shall prevent run-off from eroding or otherwise damaging the final cover. At a minimum, the run-off management system shall be capable of collecting and controlling the volume of water resulting from a 24 hour, 25-year storm event.”

32. BPPNA commented on this provision in the draft Permit. (*See* RTC at 12.)

33. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons: As to subsections (4) and (5), the requirements for run-on control and run-off management, which are requirements for active landfills, are not applicable here because there are no active landfills.

**5. Section III.E.7**

34. The applicable RCRA Permit extract is as follows:

“7. The Permittee shall maintain the leachate collection system (LCS), and leak detection system (LDS) in accordance with the design plans and specifications contained in the approved permit application and the conditions in this permit. The permittee shall: [a.] Manage leachate collected in [CS and LDS in accordance with Condition III.E.9 below until an alternative compliance plan is approved by Illinois EPA to install a new LDS with a permanent pumping system and LDS. Any pumps from the LCS and LDS must be removed on cleaned at least once every year, as applicable. [b.] Every 10 years, the Permittee will use a camera to inspect the collection risers and sump for sediment build-up. If 10% or more of the screened interval is silted-in, the permittee shall remove sediment from the

collection riser and sumps using a high-pressure jet or equivalent method. [c.] Install and operate a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11(b). [d.] The LCS will maintain leachate levels within the collection risers at a depth such that leachate does not exceed one (1) foot above the liner.”

35. BPPNA commented on this provision in the draft Permit. (*See* RTC at 13-14.)

36. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the

Permit under this condition in the following respects and for the following reasons:

- a. As to the first sentence, LDS and LCS are used interchangeably, and this condition should be updated to correct references to LDS and LCS.
- b. As to subsection (a), the Pond 1 Landfill is not currently equipped with pumps. If installed, cleaning pumps once per year is not necessary and increases downtime, which could potentially damage the pumps.
- c. As to subsections (c) and (d), BPPNA has previously notified the Agency that without a pumping system, BPPNA is not able to meet these conditions, and thus BPPNA is working on an alternative compliance plan for Agency review and approval. More specifically, BPPNA has submitted the draft delisting petition to the Agency, where it is currently under review. BPPNA understands that the Agency is also in discussions with USEPA concerning the draft delisting petition. After BPPNA receives the Agency’s comments, BPPNA anticipates further revising the draft delisting petition, which may include further Agency review. Once this process is complete, BPPNA anticipates submitting the delisting petition to the Board for its review and decision. In parallel to BPPNA’s work on the delisting petition, BPPNA is also proposing to submit an alternative compliance plan to the Agency while the above-described delisting petition process is underway. Such an

alternative compliance plan is designed to: (1) outline BPNNA's interim plan while the Agency is reviewing and commenting on the draft delisting petition; and (2) subsequently, outline BPPNA's interim plan while the Board is considering BPPNA's delisting petition. After the Board rules on the delisting petition, BPPNA will work with the Agency to adjust the alternative compliance plan to the extent necessary to conform such a plan to the Board's ruling on the delisting petition.

**6. Section III.E.10. a. and b**

37. The applicable RCRA Permit extract is as follows:

"10. The permittee shall collect a representative sample of leachate from the landfill and analyze it for all the constituents listed in 35 IAC 724 Appendix I. These samples shall be collected and analyzed annually in accordance with the sampling and test methods specified in the approved permit application. The results of the leachate quality testing data shall be submitted and maintained in the facility's operating record and submitted to the Illinois EPA by July 15 each year.

"a. The Reduced List will be based on the four most recent complete 35 IAC 724 Appendix I analyses and include all parameters detected in any of the four Appendix I analyses. Starting the next sampling event after Illinois EPA approval, this Reduced List will be used in lieu of the Appendix I analysis for three out of four years, with the fourth-year reverting to a full Appendix I analysis. Any parameters not included on the existing Reduced List that are detected in the fourth-year Appendix I analysis shall be added to all future Reduced List analyses by means of a permit modification request. This cycle of three years of Reduced List, followed by one year of Appendix I analysis, will repeat for the remainder of the post-closure period.

"b. If an analysis of the leachate from the landfill detects a parameter for which the groundwater is not being analyzed, the permittee shall submit a Class 1\* permit modification to the Illinois EPA BOL Permit Section in writing within 30 days of the leachate analysis to add the previously undetected parameter(s) to the groundwater monitoring list."

38. BPPNA commented on this provision in the draft Permit. (*See* RTC at 14-15.)

39. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the

Permit under this condition in the following respects and for the following reasons:

- a. As to subsection (a), a constituent should be removed from the analyte list, pending Illinois EPA approval, if detections do not exceed the Class I Groundwater Quality Standard.
- b. As to subsection (b), an extensive dataset has been developed from sampling performed by the POTW for leachate transported for disposal. A reduced list of constituents for analysis should go into effect immediately (as of the effective date of the Permit) based on historical sampling results.

**7. Section III.E.11.b**

40. The applicable RCRA Permit extract is as follows:

“11. The permittee shall operate, monitor, and maintain the leachate collection system (LCS); and the leachate detection system (LDS) in accordance with the approved permit application and the following conditions: [ . . . ] b. In accordance with an alternative Compliance Plan, if approved by the Illinois EPA as referenced in Condition III.E.7, leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403’ above mean sea level (MSL) for LCS).”

41. BPPNA commented on this provision in the draft Permit. (*See* RTC at 14-16.)

42. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the

Permit under this condition in the following respects and for the following reasons: A draft delisting petition for the Pond 1 Landfill leachate has been submitted for review by Illinois EPA prior to submittal to the Board. BPPNA proposes to submit an alternative compliance plan for Illinois EPA review and approval, to be implemented while awaiting Board approval or denial of the delisting petition. The alternative compliance plan will propose a schedule to comply with the requirements as applicable following delisting approval or denial.

**8. Section III.E.12**



43. The applicable RCRA Permit extract is as follows:

“12. The permittee shall operate and maintain the alarm system as required in Condition III.E.7(c). The alarm system shall immediately alert the permittee or their representative if there is a problem with the leachate collection or leak detection systems. Within 48 hours of an alarm, a technician will check the LCS and/or LDS and initiate any necessary corrective actions.”

44. BPPNA commented on this provision in the draft Permit. (*See* RTC at 13-14.)

45. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons: BPPNA has previously notified the Agency that Condition III.E.7.c is not feasible without a pumping system. BPPNA requests that the alarm system referenced in this Condition should specifically require action when water rises above an elevation of 422' above mean sea level (“MSL”). Such an alarm system and associated response activities should continue until such time that the Board takes action on BPPNA’s delisting petition and the Agency approves an alternative compliance plan.

**9. Section IV.D.1**

46. The applicable RCRA Permit extract is as follows:

“D. GROUNDWATER PROTECTION STANDARD.

“[1.] The following hazardous constituents and their concentration limits (35 IAC 620, Class I, Groundwater Quality Standards) comprise the Groundwater Protection Standard for the groundwater monitoring wells found in Conditions IV.C.1. (Total (unfiltered) values will be used for the comparison with the 35 IAC 620, Class I, Groundwater Quality Standards. Dissolved values shall be used for statistical evaluations required in Condition IV.H unless otherwise noted.)”

47. BPPNA commented on this provision in the draft Permit. (*See* RTC at 22-24.)

48. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons: In a letter dated January 19, 2023, the Agency approved the optimized Groundwater Corrective Action Program

which did not include all of the constituents listed in the Permit. Barium, cadmium, and total xylenes are either not detected above laboratory detection limits in leachate samples, or the detections are below the Class I Groundwater Quality Standards, and should be removed from the constituent list in accordance with Permit Condition IV.D.4, which is addressed below. Additionally, BPPNA submitted a Site-Wide Inorganics and Metals (“SWIM”) Evaluation Report dated January 25, 2022 for both the Facility and Main Plant that demonstrated that increases in dissolved-phase inorganics may be due to naturally occurring fluctuations or other external influences; and that these fluctuations may exceed the established Class 1 Groundwater Quality Standards. The SWIM evaluation determined that arsenic is present in the uppermost aquifer at background concentrations that exceed the Class 1 Groundwater Quality Standard of 0.01 mg/L. BPPNA proposed that a site-specific groundwater quality standard for arsenic be established at a concentration of 0.036 mg/L. BPPNA requests that the Concentration Limit for arsenic allow for a site-specific groundwater quality standard to be used if approved by the Agency.

**10. Section V.F**

49. The applicable RCRA Permit extract is as follows:

“F. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

“1. The current cost-estimate for completing corrective action and groundwater remediation, including 20% contingency, at the BP Riverfront provided by the facility is \$10,359,514 in 2020 dollars as described in Attachment G. The Permittee shall prepare an updated cost estimate for the completion of any corrective action required under this permit in order to provide financial assurance for the approved amount of that cost estimate as required in Condition VI.C. I (c).

[ . . . ]

“6. All cost estimates prepared under the requirements of Conditions V.F.1 through V.F.5 above must be submitted as a Class 1\* permit modification request in accordance with 35 IAC 703.281.”

50. BPPNA commented on this provision in the draft Permit. (*See* RTC at 28-29.)

51. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons:

- a. As to subsection (1), the 20% contingency requirement is arbitrary. Other corrective action facilities in area have lower contingency requirements. BPPNA has reviewed RCRA Permit Draft (Log No. B-214) dated September 26, 2023, for the Kinder Morgan Phoenix Holdings LLC facility bordering the Main Plant. The draft includes a 10% contingency requirement under Condition II.H.2.c, not 20%.
- b. As to subsection (6), a Class 1\* permit modification should not be required if the only annual cost estimate adjustment is to account for inflation.

**11. Section VII.13.a.**

52. The applicable RCRA Permit extract is as follows:

“13. MONITORING AND RECORDS. (35 IAC 702.150)

“a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix A of 35 IAC 721. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. SW-846, latest versions; Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-020, latest versions; or an equivalent method as specified in the approved Waste Analysis Plan.”

53. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons: BPPNA is not required to have an “approved Waste Analysis Plan” for this Facility because the Facility does not accept outside waste. A more appropriate reference would be “the analysis plan maintained in the facility’s OM&M Manual.”

**12. Section VII.27**

54. The applicable RCRA Permit extract is as follows:

“27. DOCUMENTS TO BE MAINTAINED AT FACILITY SITE.

“The Permittee shall maintain at the facility, until closure is complete, the following documents and amendments, revisions and modifications to these documents: a. Waste analysis plan as required by 35 IAC 724.113(b) and this permit.”

55. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons: BPPNA is not required to have a “Waste analysis plan” for this Facility because the Facility does not accept outside waste. A more appropriate reference would be “the analysis plan maintained in the facility’s OM&M Manual.”

**13. Section VII.31 and 32**

56. The applicable RCRA Permit extract is as follows:

“31. GENERAL WASTE ANALYSIS.

“The Permittee shall comply with the procedures described in the approved waste analysis plan. (35 IAC 724.113)

“32. SECURITY.

“The Permittee shall comply with the security provisions of 35 IAC 724.114(b) and (c).”

57. BPPNA respectfully requests that the Board compel the Illinois EPA to modify the Permit under this condition in the following respects and for the following reasons:

- a. As to Condition VII.31, BPPNA is not required to have “an approved waste analysis plan” for this Facility because the Facility does not accept outside waste. A more appropriate reference would be “the analysis plan maintained in the facility’s OM&M Manual.”
- b. As to Condition VII.32, security provisions are only applicable for the

regulated units at the Facility, not the entire Facility.

**C. Legally Inappropriate Conditions in the Permit**

**1. Section VI.C.4**

58. The applicable RCRA Permit extract is as follows:

“4. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a modification to the Corrective Action Section (Section V) of the Permit, for Illinois EPA review and approval, which provides written notification to any applicable off-site property owner that a GMZ for the Riverfront facility encompasses their property. This documentation will serve to verify off-site property owners are aware of a GMZ being present on their property.”

59. BPPNA commented on this provision in the draft Permit. (*See* RTC at 30.)

60. The GMZ concerning the Facility was established in 1994.

61. Applicable GMZ regulations are located at 35 Ill. Adm. Code Part 740.

62. The Illinois EPA filed its proposed Part 740 rules (proposal), along with a Statement of Reasons pursuant to 35 Ill. Adm. Code 102.121(b), on September 16, 1996. (*See* PCB R97-011 Order (June 5, 1997), at 2.) The Part 70 rules became final in June 1997. (*Id.* at 1.) None of the discussion in the Board’s order concerns previously established GMZs.

63. Illinois EPA has published guidance on its website, dated October 12, 2001, concerning establishing a GMZ at RCRA Facilities. None of the discussion in the Illinois EPA’s guidance concerns previously established GMZs.

64. The Illinois EPA’s requirement that BPPNA undertake different requirements for establishing a GMZ, which only arose years after the GMZ concerning the Facility was established, is unfair and is plainly unconstitutional under well-settled Illinois law.

65. Illinois EPA’s requirements that came into effect years after the establishment of the GMZ constitutes impermissible retroactive lawmaking and application, it violates BPPNA’s due process rights, and contravenes well-settled Illinois law against *ex post facto* laws.

WHEREFORE, for the reasons stated above, the parties request that the Board: (1) order Illinois EPA to modify the Permit in the technical respects outlined above; and (2) order Illinois EPA to withdraw its condition that BPPNA adhere to GMZ requirements that post-dated the establishment of the GMZ relevant to this Permit.

Dated: February 5, 2024

Respectfully submitted,

**BP PRODUCTS NORTH AMERICA INC.**

By: /s/ Alexander J. Bandza

Alexander J. Bandza, Esq.  
BARNES & THORNBURG LLP  
One N. Wacker Drive, Suite 4400  
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(312) 357-1313  
[abandza@btlaw.com](mailto:abandza@btlaw.com)

*Attorney for BP Products North America Inc.*

**CERTIFICATE OF E-MAIL SERVICE**

I, the undersigned, certify the following:

- That I have served the attached BP Products North America Inc.'s Petition to Appeal Illinois EPA's Issuance of a Post-Closure RCRA Permit, by e-mail upon the Illinois Environmental Protection Agency at the e-mail address of [epa.dlc@illinois.gov](mailto:epa.dlc@illinois.gov) and [Melanie.Jarvis@Illinois.gov](mailto:Melanie.Jarvis@Illinois.gov).
- That my e-mail address is [abandza@btlaw.com](mailto:abandza@btlaw.com).
- That the number of pages in the e-mail transmission is 17.
- That the e-mail transmission took place before 5:00 p.m. on the date of February 5, 2024.

/s/ Alexander J. Bandza  
*An Attorney for BP Products North America Inc.*

# EXHIBIT A





# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Electronic Filing Received, Clerk's Office 02/05/2024 \*IPB 2024-026\*

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/524-3301

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

7022 2410 0001 5387 7588

JUL 07 2023

BP Products North America, Inc.  
Attention: Ms. Michelle Knapp  
Liability Manager  
301 Evans Avenue  
P.O. Box 167  
Wood River, Illinois 62095

Re: 1191155009 – Madison County  
BP Products North American Inc./Riverfront Property  
ILD980503106  
Log No. B-145R2  
RCRA Administrative Record  
Permit Draft

Dear Ms. Knapp:

Attached is a draft renewed RCRA Post-closure permit and fact sheet for the above-referenced facility. The draft permit is based on the administrative record contained in the Illinois EPA's files. The contents of the administrative record are described in Title 35 Illinois Administrative Code (35 IAC) 705.144.

Under the provisions of 35 IAC 705.141(d), the draft permit and administrative record must be publicly noticed and made available for public review and comment. The Illinois EPA must also provide an opportunity for a public hearing. Copies of the draft decision, fact sheet, and renewal application are available for review at the Wood River Public Library, 326 E. Ferguson Avenue, Wood River, Illinois and on the Illinois EPA website. The Illinois EPA has not scheduled a public hearing at the current time. However, any interested party may request a public hearing. The public comment period will close on August 26, 2023.

During the comment period, the applicant or any interested party may submit comments to the Illinois EPA on the draft renewed RCRA Post-closure permit. At the close of the comment period, the Illinois EPA will prepare a response to significant comments. Comments on the draft permit renewal may be submitted to:

Brad Frost, Office of Community Relations (#5)  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

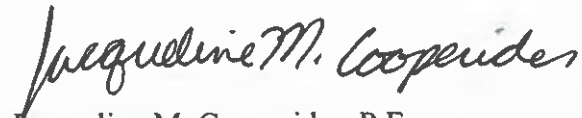
2125 S. First Street, Champaign, IL 61820 (217) 278-5800  
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120  
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000  
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200  
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022  
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

Illinois EPA will issue a final renewal permit after the close of the public comment period unless the Illinois EPA decides to reverse the tentative decision. The appeal process and limitations are addressed in 35 IAC 705.212.

If you have any questions regarding the groundwater monitoring aspects of this draft permit, please contact Amy Butler, P.G. at 217/558-4716. If you have questions regarding the other aspects of this permit, please contact Takako Halteman, P.E. at 217/524-3274.

Sincerely,



Jacqueline M. Cooperider, P.E.  
Permit Section Manager  
Bureau of Land

JMC:TNH: 1191155009-RCRA-B145R2-Draft.docx

*TNH*

Attachment: Fact Sheet  
Draft Renewed RCRA Post-Closure Permit

cc: Norberto Gonzalez, U.S. EPA – Region V  
Emily Keener, U.S. EPA – Region V  
Michael Hoffman, Wood Environment & Infrastructure Solutions, Inc

**FACT SHEET**  
**Draft Renewed RCRA Post-Closure Permit**

**ILD 980503106**  
**STATE ID # 1191155009**

This fact sheet has been prepared pursuant to the requirements of Title 35 Illinois Administrative Code (35 IAC) Section 705.143. The fact sheet is intended to be a brief summary of the principal facts and significant factual, legal, methodological, and policy questions considered in preparing a draft renewed RCRA post-closure permit. This permit will allow BP Products North America Riverfront Facility (BP) to : (1) continue to manage non-hazardous waste in a hazardous waste surface impoundment known as the East Surge Pond (ESP) while establishing the schedule and plan for commencing the required closure and, if necessary, post-closure for the unit; (2) provide post-closure for a closed hazardous waste landfill known as the Pond 1 Landfill; (3) conduct a groundwater corrective action program, and (4) conduct a corrective action program on the solid waste management units at the facility. Pursuant to 35 IAC 705.143(a), this fact sheet is sent to the applicant and to any other person who requests it.

I. INTRODUCTION

The draft permit for BP contains all of the standard conditions required by 35 IAC 702, 703, and 724; and the applicable conditions of 35 IAC 724 for post-closure care of the Pond 1 Landfill (a closed hazardous waste landfill) and management of non-hazardous waste in a hazardous waste surface impoundment known as the East Surge Pond (ESP) while establishing the schedule and plan for commencing the required closure and, if necessary, post-closure for the unit. BP is an existing facility that has been operating under a Part B RCRA Permit first issued on September 30, 1993 (B-145); the renewal permit issued on August 11, 2008 (B-145R); and most recently modified on February 7, 2022 (B-145R-M-4, M-18, M-14, M-15).

II. DESCRIPTION OF FACILITY

A. General

The Main Plant and Riverfront facilities were owned by Amoco Oil Company until the company merged with BP in 1999. Amoco operated an oil refinery at the Main Plant from 1908 to 1981 and Amoco Petroleum Additives Company operated in a portion of the Main Plant from 1957 to 1996. The Riverfront facility was used by Amoco to gain access to barges on the Mississippi River. In addition, it was used for the management of refinery waste. Currently, Kinder Morgan Liquids Terminals LLC (KMLT) operates and Kinder Morgan Phoenix Holdings, LLC (KMPH) owns a storage and distribution facility for gasoline and petroleum distillates at a portion of the Main Plant that was sold to KMPH and will be subject to a separate RCRA Permit. Distribution operations are managed via pipelines, aboveground storage tanks at the Main Plant, and barge operations on the Mississippi River. While both the Main Plant and Riverfront facilities

are owned and operated by BP, each facility has been issued a separate RCRA Permit under a separate site identification number.

The Riverfront Property is being remediated and redeveloped for industrial and commercial use. It has been divided into parcels A through J which will be investigated, remediated, reported on, and redeveloped on a parcel-by-parcel basis.

#### B. Site Description

The BP Riverfront facility is located between the levee of the Wood River Drainage Levee District (WRDLD) and the Mississippi River, just west of Illinois Route 3, in Madison County, Illinois. It is a 231-acre site mainly in Wood River, Illinois, with the 23 southernmost acres being located in the Village of Hartford, Illinois. The mailing address of the facility is:

BP Products North America Inc.  
301 Evans Avenue, Post Office Box 167  
Wood River, IL 62095

The Riverfront facility is adjacent to, and its operation was associated with the former Amoco Refinery in Wood River. This 569-acre former refinery is located due east of the riverfront property. Route 143, East Rand Avenue, South Sixth Street, and Illinois Route 3 bound the former refinery on the north, south, east, and west sides, respectively. A drawing showing the location of both these facilities is provided in Attachment 1 to this fact sheet.

### III. HAZARDOUS WASTE MANAGEMENT ACTIVITIES

#### A. Description of Units

Two hazardous waste management units (HWMUs) are present at the Riverfront facility: (1) the East Surge Pond (ESP) - a surface impoundment continuing to receive non-hazardous wastewaters, including non-hazardous leachate from the Permitted Non-Hazardous Waste Landfill (PNWL), under a delay of closure adjusted standard; and (2) the Pond 1 Landfill, a closed hazardous waste landfill currently under post-closure care. A drawing showing the location of these units within the facility is provided in Attachment 2. A more detailed discussion of these units follows:



1. Surface Impoundment - East Surge Pond (ESP):

<u>Surface Impoundment Designation</u>	<u>Capacity (gallons)</u>	<u>Dimensions of Impoundment</u>	<u>Description of Hazardous Waste &amp; Waste Numbers</u>
ESP	100 million Gallons	20.9 acre	Sediments and soil contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry)

The ESP includes the southern portion of former Pond 2 and all of former Ponds 2A, 3, 3A, and 4 which were used as oxidation surface impoundments to treat wastewater and storm water from the Main Plant until 1977. Dissolved air flotation (DAF) float, a listed hazardous waste, from the wastewater treatment plant which replaced these ponds was subsequently stored in these ponds, from 1977 to 1981. Illinois EPA initially approved a RCRA closure plan (Log No. C-145) for these ponds on April 4, 1986; the goal of these approved efforts was clean closure.

The hazardous sludges and the majority of the impacted soils in these ponds were subsequently removed and placed in the Pond 1 Landfill (this unit is further discussed below). Not all of the contamination could be removed and thus the ponds were unable to be clean closed. A 1-foot clay liner was then installed on the floor and walls of the ESP. Currently, the ESP accepts non-hazardous wastewater from the Main Plant facility, non-hazardous PNWL leachate, and non-hazardous wastewater from the Wood River Wastewater Treatment Plant (WWTP) in accordance with a delay of closure adjusted standard (AS-91-4).

The ESP has a 100-million-gallon capacity and is designed so that 80 million gallons of storage are normally available below the 2-foot freeboard level. This gives the ESP the ability to handle the amount of water from a 21-day maintenance shutdown of the WWTP plus a 24 hour 100-year storm. After each discharge to the ESP, the water level is checked so that the 2-foot minimum freeboard level is not exceeded. In the event this level is exceeded, influent water can be diverted to the Temporary Surge Basin or the West Surge Pond.

There is a Flood Protection Dike surrounding the ESP and Temporary Surge Basin on the west, north, and south sides. The dike serves a dual purpose for holding water in (if these units overflow) and keeping flood waters out and continues around to the Permitted Non-Hazardous Waste Landfill and to the Wood River Drainage Levee District (WRDLD) levee.

The ESP must eventually be closed in accordance with a closure plan approved by the Illinois EPA. Therefore, this permit requires BP to submit a proposed schedule

for closure of the ESP for Illinois EPA's approval. BP must provide post-closure care in accordance with 35 IAC 724 for the ESP if all of the wastes or contaminated material or media cannot be removed or decontaminated in accordance with the closure plan and meeting the requirements of 35 IAC 742. If it is determined that the clean closure requirements (closure by removal) cannot be met and post-closure care is required, this permit shall be modified to require closure and post-closure care as a landfill in accordance with 35 IAC 724, Subparts G and H.

2. Post-Closure Care – Pond 1 Landfill

The following hazardous waste management unit shall be provided with post-closure care:

<u>Name &amp; Type of Unit.</u>	<u>Horizontal Dimensions &amp; Volume</u>	<u>Date Post-Closure began</u>
Pond 1 Landfill	4.1 acres / 100,000 cubic yards	August 14, 1995

This landfill contains 80,000 cubic yards of stabilized heavy sludges and impacted soils. This landfill occupies the former locations of Ponds 1 and 1A and a part of Pond 2. These ponds have also been former hazardous waste ponds and the goal of the closure plan for these ponds (Log No. C-145) was "clean" closure. However, this goal was not achieved and the sludges and some soil from these ponds were temporarily removed and placed in other ponds so that this landfill could be constructed.

The material placed in this landfill was removed from these ponds as well as the ponds used to create the ESP. Completion reports of the liner, solidification of waste, and construction of the landfill cover were provided to the Illinois EPA on August 14, 1995, along with the Closure Certification Statement. The Pond 1 Landfill has been under post-closure care since August 1995. This post-closure care includes maintenance of the final cover, management of leachate, groundwater corrective action, and providing financial assurance for these activities in accordance with 35 IAC 724.

Post-closure permit conditions are the requirements associated with monitoring, maintaining, and record keeping of the HWMUs described above in accordance with the provisions of the post-closure care plan. Sections II and III of the permit contains conditions specific to post-closure and implementation of the regulatory requirements of 35 IAC 724, Subpart G.

The purpose of this RCRA post-closure permit is to require that all the referenced HWMUs receive post-closure care. Groundwater monitoring must continue through the post-closure care period for established monitoring wells, at a minimum. Inspections during this post-closure period must identify any maintenance needed, including, but not limited to, the final cover system and

vegetation of the two closed landfills. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

#### IV. CORRECTIVE ACTION

##### A. Solid Waste Management Units (SWMUs)

35 IAC 724.201 and the original RCRA permit for this facility requires that it conduct corrective action, as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any SWMUs of concern at this facility.

The BP Riverfront facility in Wood River, Illinois was issued a RCRA permit (Log No. B-145) on September 30, 1993, which, among other things, required it to conduct corrective action on twelve (12) SWMUs and one Product Release Site (PRS). This permit also required implementation of a facility-wide groundwater corrective action program which consists of: (1) a groundwater pump and treat system to address contaminated groundwater; and (2) a monitoring program to ensure the effectiveness of the pump and treat system and; (3) establishing a Groundwater Management Zone (GMZ). A GMZ was initially approved for this facility on April 6, 1994, and re-approved on January 19, 2023.

On August 9, 2001 (B-145-CA-24), Illinois EPA approved a plan to expand corrective action efforts to the entire facility. Some corrective action efforts at the facility have been conducted on a site-wide basis, while others have been conducted on a parcel-by-parcel basis (Parcels A through J). See Attachment 2 - Site Layout Map for location of these areas within the facility.

##### B. Groundwater Corrective Action

BP implemented a Groundwater Corrective Action Program in 1994 after an earlier detection monitoring program confirmed a Statistically Significant Increase (SSI) and constituent concentrations above the applicable groundwater quality standards were identified. BP has conducted and continues to conduct a groundwater corrective action monitoring program in accordance with Section IV of the Permit for Light Non-Aqueous Phase Liquid (LNAPL) and groundwater impacts that originated from operations of the former wastewater treatment ponds and other refinery-related historical activities. Cone of Depression (COD) groundwater pumping wells are operated, at the neighboring Main Plant Property owned by BP, to induce a hydraulic gradient for groundwater to pump and treat the dissolved constituents exceeding the applicable standards in groundwater. BP also conducts corrective action and/or groundwater monitoring associated with multiple Parcels across the property, which are conducted in accordance with Section V of the Permit and Illinois EPA letters.

C. Standard Permit Conditions

Permit Section VII contains Standard Permit Conditions that are regulatory requirements of 35 IAC, Parts 702, 703 and 724. These conditions are of a general nature and are applicable to all Hazardous Waste Management facilities regulated pursuant to an Illinois EPA RCRA permit. These conditions include the effectiveness of the permit, permit actions, severability, permit expiration, monitoring and retention of records, transfer of permits, and compliance schedules.

V. **CONSIDERED PERMIT ACTIONS OTHER THAN RCRA**

A. Air

The air emissions from a hazardous waste management facility are regulated under the Clean Air Act (CAA), the Illinois Environmental Protection Act and State regulations at the Title 35: Environmental Protection, Subtitle B: Air Pollution. Under these regulations, a permit is required to install or operate any process which is or may be a source of air pollutants.

B. Water

A discharge of any waste waters from a hazardous waste management facility into the waters of the State, is required to have a National Pollutant Discharge Elimination System (NPDES) permit, issued by the Illinois EPA under Section 39(b) of the Environmental Protection Act. BP Riverfront facility has a discharge permit (NPDES #IL0000035).

VI. **PROCEDURES FOR REACHING A FINAL DECISION**

Pursuant to 35 IAC 705.162(a)(2), the public is given forty-five (45) days to review the application and comment on the draft Permit conditions prior to Illinois EPA taking any final permitting action on the application for this RCRA Hazardous Waste Management Permit. The comment period will begin on July 12, 2023, the date of publication of the public notice in a major local newspaper of general circulation. The comment period will end on August 26, 2023.

Copies of the permit application, draft permit and fact sheet are available for review on the Illinois EPA website, and at:

Wood River Public Library  
326 E. Ferguson Avenue,  
Wood River, Illinois 62095

The administrative record contains the permit application, draft permit, fact sheet, and other supporting documents and correspondence submitted to the Illinois EPA. The administrative record can be made available for public inspection by appointment only at the Illinois EPA's Springfield headquarters from 9:00 a.m. to 5:00 p.m., Monday through Friday. Inspection of the



administrative record must be scheduled in advance by contacting Brad Frost at the address listed below.

In response to requests received during the comment period or at the discretion of the Illinois EPA, a public hearing may be held to clarify one or more issues concerning the permit application. A request for a public hearing must be submitted in writing and shall state the nature of the issues proposed to be raised at the hearing. Public notice of a public hearing will be issued at least forty-five (45) days before the hearing date.

For further information regarding the permit process, to submit written comments on the draft permit, or to request a public hearing, please contact:

Brad Frost, Office of Community Relations (#5)  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217-782-7027

When the Illinois EPA makes its final permit decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final permit decision. The permit will become effective thirty-five days (35) after service of notice of the decision or at a later date if stated in the permit unless the decision is appealed.

Attachment 1 - Site Location Map  
Attachment 2 - Site Layout Map



**FACT SHEET****Draft Renewed RCRA Post-Closure Permit****ILD 980503106****STATE ID # 1191155009**

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The ESP must eventually be closed in accordance with a closure plan approved by the Illinois EPA. Therefore, this permit requires BP to submit a proposed schedule



for closure of the ESP for Illinois EPA's approval. BP must provide post-closure care in accordance with 35 IAC 724 for the ESP if all of the wastes or contaminated material or media cannot be removed or decontaminated in accordance with the closure plan and meeting the requirements of 35 IAC 742. If it is determined that the clean closure requirements (closure by removal) cannot be met and post-closure care is required, this permit shall be modified to require closure and post-closure care as a landfill in accordance with 35 IAC 724, Subparts G and H.

2. Post-Closure Care – Pond 1 Landfill

The following hazardous waste management unit shall be provided with post-closure care:

<u>Name &amp; Type of Unit.</u>	<u>Horizontal Dimensions &amp; Volume</u>	<u>Date Post-Closure began</u>
Pond 1 Landfill	4.1 acres / 100,000 cubic yards	August 14, 1995

This landfill contains 80,000 cubic yards of stabilized heavy sludges and impacted soils. This landfill occupies the former locations of Ponds 1 and 1A and a part of Pond 2. These ponds have also been former hazardous waste ponds and the goal of the closure plan for these ponds (Log No. C-145) was "clean" closure. However, this goal was not achieved and the sludges and some soil from these ponds were temporarily removed and placed in other ponds so that this landfill could be constructed.

The material placed in this landfill was removed from these ponds as well as the ponds used to create the ESP. Completion reports of the liner, solidification of waste, and construction of the landfill cover were provided to the Illinois EPA on August 14, 1995, along with the Closure Certification Statement. The Pond 1 Landfill has been under post-closure care since August 1995. This post-closure care includes maintenance of the final cover, management of leachate, groundwater corrective action, and providing financial assurance for these activities in accordance with 35 IAC 724.

Post-closure permit conditions are the requirements associated with monitoring, maintaining, and record keeping of the HWMUs described above in accordance with the provisions of the post-closure care plan. Sections II and III of the permit contains conditions specific to post-closure and implementation of the regulatory requirements of 35 IAC 724, Subpart G.

The purpose of this RCRA post-closure permit is to require that all the referenced HWMUs receive post-closure care. Groundwater monitoring must continue through the post-closure care period for established monitoring wells, at a minimum. Inspections during this post-closure period must identify any maintenance needed, including, but not limited to, the final cover system and

vegetation of the two closed landfills. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

#### IV. CORRECTIVE ACTION

##### A. Solid Waste Management Units (SWMUs)

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On August 9, 2001 (B-145-CA-24), Illinois EPA approved a plan to expand corrective action efforts to the entire facility. Some corrective action efforts at the facility have been conducted on a site-wide basis, while others have been conducted on a parcel-by-parcel basis (Parcels A through J). See Attachment 2 - Site Layout Map for location of these areas within the facility.

##### B. Groundwater Corrective Action

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C. Standard Permit Conditions

Permit Section VII contains Standard Permit Conditions that are regulatory requirements of 35 IAC, Parts 702, 703 and 724. These conditions are of a general nature and are applicable to all Hazardous Waste Management facilities regulated pursuant to an Illinois EPA RCRA permit. These conditions include the effectiveness of the permit, permit actions, severability, permit expiration, monitoring and retention of records, transfer of permits, and compliance schedules.

V. **CONSIDERED PERMIT ACTIONS OTHER THAN RCRA**

A. Air

The air emissions from a hazardous waste management facility are regulated under the Clean Air Act (CAA), the Illinois Environmental Protection Act and State regulations at the Title 35: Environmental Protection, Subtitle B: Air Pollution. Under these regulations, a permit is required to install or operate any process which is or may be a source of air pollutants.

B. Water

A discharge of any waste waters from a hazardous waste management facility into the waters of the State, is required to have a National Pollutant Discharge Elimination System (NPDES) permit, issued by the Illinois EPA under Section 39(b) of the Environmental Protection Act. BP Riverfront facility has a discharge permit (NPDES #IL0000035).

VI. **PROCEDURES FOR REACHING A FINAL DECISION**

Pursuant to 35 IAC 705.162(a)(2), the public is given forty-five (45) days to review the application and comment on the draft Permit conditions prior to Illinois EPA taking any final permitting action on the application for this RCRA Hazardous Waste Management Permit. The comment period will begin on START DATE, the date of publication of the public notice in a major local newspaper of general circulation. The comment period will end on END DATE.

Copies of the permit application, draft permit and fact sheet are available for review on the Illinois EPA website, and at:

Wood River Public Library  
326 E. Ferguson Avenue,  
Wood River, Illinois 62095

The administrative record contains the permit application, draft permit, fact sheet, and other supporting documents and correspondence submitted to the Illinois EPA. The administrative record can be made available for public inspection by appointment only at the Illinois EPA's Springfield headquarters from 9:00 a.m. to 5:00 p.m., Monday through Friday. Inspection of the



administrative record must be scheduled in advance by contacting Brad Frost at the address listed below.

In response to requests received during the comment period or at the discretion of the Illinois EPA, a public hearing may be held to clarify one or more issues concerning the permit application. A request for a public hearing must be submitted in writing and shall state the nature of the issues proposed to be raised at the hearing. Public notice of a public hearing will be issued at least forty-five (45) days before the hearing date.

For further information regarding the permit process, to submit written comments on the draft permit, or to request a public hearing, please contact:

Brad Frost, Office of Community Relations (#5)  
Illinois Environmental Protection Agency  
1021 N. Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217-782-7027

When the Illinois EPA makes its final permit decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final permit decision. The permit will become effective thirty-five days (35) after service of notice of the decision or at a later date if stated in the permit unless the decision is appealed.

Attachment 1 - Site Location Map  
Attachment 2 - Site Layout Map



Fact Sheet  
Draft Renewed RCRA Permit  
Log No. B-145R2

ATTACHMENT 1

Site Location Map



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li> Riverfront Property Boundary</li> <li> Riverfront Facility Plus 1 Mile</li> <li> Pond 1 Landfill and East Surge Pond Boundary</li> <li> Municipal Well</li> </ul>	<p><b>Source</b></p> <p>USGS 7.5 Minute Topographic Map -Wood River, MO 2017 -Alton, IL 2017 -Bethalto, IL 2017 -Columbia Bottoms, MO 2017</p>	<p><b>Figure for Item #9 - Map Part A Permit Application</b></p> <p><b>Topographic Map</b> 1 Mile Facility Boundary 8 1/2 Riverfront Impervious Wood River, Illinois</p>	<p><b>wood.</b></p> <p><b>bp</b></p>
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Fact Sheet  
Draft Renewed RCRA Permit  
Log No. B-145R2

ATTACHMENT 2

Site Layout Map





<p><b>Legend</b></p> <ul style="list-style-type: none"> <li> Solid Waste Management Unit (SMWU)</li> <li> Land Reuse Parcel Boundaries</li> <li> Riverfront Property Boundaries</li> <li> Product Release Site (PRS)</li> </ul>	<p style="text-align: center;">                 1 in = 600 ft         </p>	<p style="text-align: center;"> <b>FIGURE F-1</b>  <b>Land Reuse Parcels, SMRUs</b>  <b>and PRS Location Map</b>  <b>BP Riverfront Property</b>  <b>Wood River, Illinois</b> </p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p><b>wood.</b></p> <p>22811 Oakwood Drive, Suite 100 Oakbrook, IL 60155</p> <p>Cell No: 630.473.2320                  Contact By: 44                  Date: 1/25/2024</p> </div> <div>  </div> </div>
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**RCRA HAZARDOUS WASTE PERMIT**

1191155009 – Madison County  
ILD980503106  
BP Products North America/Riverfront  
Permit Log B-145R2  
RCRA Administrative Record

Issue Date: DRAFT  
Effective Date: DRAFT  
Expiration Date: DRAFT  
Modification Date: DRAFT

**PERMITTEE**

BP Products North America, Inc.  
Attention: Ms. Michelle Knapp  
301 Evans Avenue, P.O. Box 167  
Wood River, Illinois 62095

A Renewed RCRA POST-CLOSURE hazardous waste permit is hereby issued to BP Products North America Inc.(BP) as Owner and Operator and Permittee pursuant to Section 39(d) of the Illinois Environmental Protection Act and Title 35 Illinois Administrative Code Subtitle G (35 IAC).

**PERMITTED HAZARDOUS WASTE ACTIVITY**

This permit requires BP to conduct the following hazardous waste activities in accordance with the approved permit application and the conditions in this permit:

**Disposal:** One surface impoundment (East Surge Pond) for non-hazardous waste only (D83)

**Post-Closure Care:** One closed landfill (Pond 1 Landfill) (D80) with detection and compliance monitoring

**Groundwater Monitoring:** Corrective Action Monitoring

**Corrective Action:** Twelve (12) SWMUs and one Product Release Site in ten (10) Parcels (Parcels A – J)

This permit consists of the conditions contained herein and those in the sections and attachments in this permit. The Permittee must comply with all terms and conditions of this permit and the applicable regulations contained in 35 IAC Parts 702, 703, 705 and 720 through 729, in effect through the effective date of this permit.

This permit is issued based on the information submitted in the approved permit application identified in Attachment A of this permit and any subsequent amendments. Any inaccuracies found in the information provided in the permit application may be grounds for the termination or modification of this permit (see 35 IAC 702.187 and 702.186) and potential enforcement action (415 ILCS 5/44(h)).

**DRAFT**

Jacqueline M. Cooperider, P.E.  
Permit Section Manager  
Bureau of Land

JMC:TNH: 1191155009-RCRA-B145R2-Draft.docx





Hazardous Waste RCRA Permit

BP Products North America -- Riverfront Facility

Wood River, Illinois

LPC No. 1191155009

ILD980503106

**Hazardous Waste RCRA Permit  
BP Products North America/Riverfront Facility**

**TABLE OF CONTENTS**

<b><u>ITEM</u></b>	<b><u>PAGE</u></b>
Table of Contents	i
Section I. General Facility Description	I-1 to I-3
Section II. Surface Impoundments	II-1 to II-8
Section III. Post-Closure for the Pond 1 Landfill Unit	III-1 to III-13
Section IV. Groundwater Corrective Action Program	IV-1 to IV-15
Section V. Corrective Action	V-1 to V-16
Section VI. Special Conditions	VI-1 to VI-3
Section VII. Standard Conditions	VII-1 to VII-13
Section VIII. Reporting and Notification Requirements	VIII-1 to VIII-4
Attachment A – Approved Permit Application	A-1
Attachment B – Location Map & Drawings of Permitted Units	B-1 to B-3
Attachment C – Groundwater Monitoring Attachments	C-1 to C-8
Attachment D – Corrective Action Attachments	D-1 to D-8
Attachment E – Corrective Measures Program Requirements	E-1 to E-11
Attachment F – Construction Certification Form	F-1
Attachment G – Closure, Post-Closure and Corrective Action Cost Estimates	G-1
Attachment H – Post-Closure Inspection Schedule	H-1 to H-2
Attachment I – Certification of Completion of Closure	I-1
Attachment J – Certification of Completion of Post-Closure Care	J-1

## SECTION I: GENERAL FACILITY DESCRIPTION

### A. OWNER AND OPERATOR

The facility is owned and operated by BP Products, North America Inc., hereinafter referred to as the "Permittee" (Title 35 Illinois Administrative Code (35 IAC) 702.121, 702.123 and 703.181).

BP Products North America, Inc.  
301 Evans Avenue  
Wood River, Illinois 62095

Facility Contact:  
Michelle Knapp  
Liability Manager  
Remediation Management Services Company  
An Affiliate of BP Products North America Inc.  
847-346-7112  
[michelle.knapp@bp.com](mailto:michelle.knapp@bp.com)

### B. LOCATON

1. Location of the facility:

The BP Riverfront facility is a 231-acre site mainly in Wood River, Illinois, with the 23 southernmost acres being located in the Village of Hartford in Madison County, Illinois. It is located between the levee of the Wood River Drainage Levee District (WRDLD) and the Mississippi River, just west of Illinois Route 3. The mailing address for this facility is 301 Evans Avenue, Wood River, Illinois. (Note: This is also the mailing address for BP Main Plant facility).

The Riverfront facility is adjacent to, and its operation was associated with the former Amoco Refinery in Wood River. This 569-acre former refinery is located due east of the BP Riverfront property. The general boundaries of the former refinery are Route 143, East Rand Avenue, South Sixth Street, and Illinois Route 3 on the north, south, east, and west sides, respectively.

2. Facility Maps:

The general location of the facility is shown on Figure B-1, Attachment B of this permit. The locations of the hazardous waste management units (HWMUs), solid waste management units (SWMUs), regulated by this permit are shown on Figure D-2, Attachment D of this permit.

**C. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES**

Amoco operated an oil refinery at the Main Plant (BP Main Plant facility – 1191150001) from 1908 to 1981 and Amoco Petroleum Additives Company operated in a portion of the Main Plant from 1957 to 1996. The Riverfront facility was used by Amoco to gain access to barges on the Mississippi River. In addition, it was used for the management of refinery waste. Presently, Kinder Morgan Liquid Terminals LLC (KMLT) owns, and Kinder Morgan Phoenix Holdings (KMPH) operates a storage and distribution facility at the Main Plant for gasoline and petroleum distillates. Distribution operations are carried out via pipelines and aboveground tanks at the Main Plant. The Main Plant and Riverfront facilities were owned by Amoco Oil Company until the company merged with BP in 1999.

The Riverfront Property is now being remediated and redeveloped and will continue to have industrial and commercial use. It has been split up into ten (10) parcels: Parcels A through J which will be investigated, remediated, reported on, and redeveloped on a parcel-by-parcel basis.

For many years prior to 1977, a series of surface impoundments (or ponds) at the Riverfront facility were used to treat wastewater from the refinery. In the mid-1970s, these ponds were replaced by a new wastewater treatment plant. From 1977 to 1981, Amoco stored Dissolved Air Flotation (DAF) float, a listed hazardous waste, in Ponds 1, 1A, 2, 2A, 3, 3A and 4 of the former series of wastewater treatment ponds. As such, these ponds became HWMUs subject to the requirements of RCRA. Amoco elected to close these hazardous waste surface impoundments; Illinois EPA approved a closure plan for these units on April 4, 1986 (Log No. C-145). The main goal of this closure effort was to remove all sludges and contaminated soil from these ponds, treat the removed material and render it non-hazardous and then dispose of it in a permitted on-site landfill.

The pumpable material from the subject ponds were removed, treated, and placed in the Pond 5 landfill as a non-hazardous waste in accordance with plans approved by and a permit received from Illinois EPA. However, Amoco found that they could not easily remove/treat the heavier sludges and contaminated soils in the ponds and thus pursued an alternative closure effort at these ponds as follows:

1. The heavier sludges and some impacted soils from Ponds 1, 1A and the north portion of Pond 2 were removed and stored in the other ponds to allow for the construction of the Pond 1 landfill (a hazardous waste landfill). The heavier sludges and impacted soils from all the ponds (listed hazardous wastes) were subsequently placed in the Pond 1 landfill, which had been constructed in accordance with the requirements for a hazardous waste landfill at the former location of Ponds 1, 1A and the northern portion of Pond 2.
2. The heavier sludge and some contaminated soil from the southern half of Pond 2, as well as Ponds 2A, 3, 3A and 4 were also placed in the Pond 1 landfill. However, not all contaminated soil was removed from the ponds and the clean



closure requirements of RCRA were not achieved. As such, Amoco pursued and obtained a delay of closure adjusted standard (AS-91-4) allowing the company to continue discharging non-hazardous wastewaters into a unit referred to as the "East Surge Pond" (ESP) which was created from these ponds. These wastewaters include wastewater from the Main Plant, Wood River Wastewater Treatment Plant, and non-hazardous leachate from the Pond 5 landfill, also known as the Permitted Non-Hazardous Waste Landfill (PNWL). A one-foot compacted clay liner was placed on the floors and walls of the East Surge Pond (from which the sludges and some contaminated soil had been removed) before wastewater began to be discharged into the pond.

The Pond 1 landfill is approximately 4.1 acres and contains 80,000 cubic yards of stabilized heavy sludges and impacted soils. This landfill has been closed in accordance with a plan approved by Illinois and has been under post-closure care since August 1995.

The ESP is 20.9 acres in size with a storage capacity of 100 million gallons, and 80 million gallons are normally available below the 2-foot freeboard level. As indicated above, it is used as a backup system and only accepts non-hazardous wastewater from the Main Plant facility and the Wood River Wastewater Treatment Plant (WWTP); and nonhazardous leachate from the onsite PNWL in accordance with the delay of closure adjusted standard (AS-91-4) and this permit. It will eventually have to be closed in accordance with a plan approved by Illinois EPA.

BP is also conducting a groundwater monitoring/corrective action program at this facility and also a general corrective action for the SWMUs at the facility. The groundwater corrective action program includes: (1) a groundwater management zone and (2) a groundwater pump and treat system whose goal is to prevent any contaminated groundwater from flowing off-site. As part of the general corrective action program, the facility has been broken up into ten parcels and the SWMUs in each parcel have individual focus.. BP also has the option of conducting corrective action on all contaminated areas or recognized environmental conditions in a given parcel.

This permit allows/requires BP to carry out at following activities at the Riverfront facility: (1) continue storing/treating non-hazardous wastewaters in the ESP until closure activities begin; (2) provide post-closure care for the Pond 1 Landfill; (3) conduct corrective action, as appropriate, on the recognized environmental conditions at the facility; and (4) implement a groundwater monitoring/corrective action program. A RCRA permit was initially issued for these activities on September 30, 1993 (Log No B-145) and was previously renewed on August 11, 2008 (Log No. B-145R). This renewal permit (Log No. B-145R2) supersedes the previously issued two permits and any associated modifications.

**SECTION II: SURFACE IMPOUNDMENT**

**A. SUMMARY**

The East Surge Pond (ESP) is a hazardous waste surface impoundment that currently only receives/stores/treats non-hazardous wastewaters and non-hazardous leachate from the adjacent and onsite Permitted Non-Hazardous Waste Landfill (PNWL). It covers approximately 20.9 acres and has a capacity of 100 million gallons and is designed so that 80 million gallons of storage are normally available below the 2-foot freeboard level.

The impoundment is constructed in an area where several impoundments (the southern part of Pond 2 and all of Ponds 2A, 3, 3A, and 4) were once present that stored hazardous waste but were not clean closed in accordance with Title 35 Illinois Administrative Code (35 IAC) 724 or 725. During construction of the ESP, all sludges/sediments and most of the contaminated soil was removed from these ponds. The floor and sides of the ESP are lined with 1 foot of recompacted clay, and are protected from a 100-year flood event by a flood-protection dike. The location and layout of the East Surge Pond are presented in Figure B-3 of Attachment B to this permit.

The Illinois Pollution Control Board issued an Adjusted Standard (AS-91-4) to the Permittee to allow operation of the ESP for the storage/treatment of non-hazardous wastewaters under the delay of closure regulations contained in 35 IAC 724.213. Although some residual soil contamination may remain in the ESP during the delay of closure period, no new hazardous wastes are allowed be placed in the unit. During the delay of closure period, the unit will manage only non-hazardous wastewaters, including nonhazardous leachate from the adjacent PNWL. This section contains provisions for continued operation and eventual closure of this unit; and requires BP to submit a proposed schedule for the closure of the ESP.

**B. DESCRIPTION OF SURFACE IMPOUNDMENT AND WASTES**

1. The Permittee may only store/treat non-hazardous wastewaters a total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plan and Riverfront facilities; (b) groundwater pumped as part of BP's hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility.

<u>Surface Impoundment Designation</u>	<u>Capacity (gallons)</u>	<u>Dimensions of Impoundment</u>	<u>Description of Hazardous Waste &amp; Waste Numbers</u>
ESP	100 million	20.9 acre	Sediments and soil contaminated with K048 Dissolved Air Flotation (DAF) float from the petroleum refining industry

2. All wastewater managed in the ESP must be evaluated through the approved waste analysis plan for compatibility to ensure that all wastewaters placed into the ESP will be non-hazardous. The Permittee must:

- a. Collect/analyze a sample of the first discharge of wastewater, sent to the ESP each quarter of the calendar year.
- b. Two composite samples of the first leachate discharge, one from the manifolded pipe of odd numbered sumps and one from the even numbered sumps of the PNWL, sent to the East Surge Pond each quarter of the calendar year.

These samples must be analyzed for all the characteristics of hazardous waste set forth in 35 IAC 721, Subpart C. The results of these efforts must be documented in the facility's operating record. If it is found that the wastewater/leachate is hazardous, then:

- (1) Illinois EPA (Bureau of Land Permit Section and Collinsville FOS) must immediately be notified of such findings via email and/or phone call (which determined to be most as most appropriate and effective);
- (2) No additional wastewaters/wastes must be discharged to the ESP until the Permittee is able to demonstrate to Illinois EPA's satisfaction that no additional hazardous waste will be discharged to the impoundment;
- (3) The Permittee must develop and implement a plan for determining the source of the hazardous waste. A report documenting the results of this investigation must be developed; this report must also describe the steps to be taken to ensure this problem will not occur in the future. These plans and reports are subject to Illinois EPA review and approval.

3. The Permittee is prohibited from storing, treating, or disposing any waste (hazardous or non-hazardous) in the permitted unit(s) that is not identified in Condition II.B.1.

### **C. DESIGN AND OPERATING REQUIREMENTS**

1. The Permittee shall operate and maintain the surface impoundment in accordance with the plan and narrative contained in "East Surge Pond Addendum to Section E" section of the approved permit application and the conditions in this permit.



2. The Permittee shall operate and maintain the surface impoundment to prevent overtopping in accordance with the detailed design plans and operating practices contained in "East Surge Pond Addendum to Section E" section of the approved permit application. A minimum of two feet of freeboard must be maintained at all times in the ESP.
3. The Permittee shall comply with all requirements of the Adjusted Standard for delay of closure of the ESP issued by the Illinois Pollution Control Board, dated March 11, 1992 (AS-91-4). This adjusted standard allows the Permittee to continue using the ESP for the storage/treatment of non-hazardous wastewaters until they decide to close the impoundment in accordance with 35 IAC 724
4. The requirements of Condition II.B.2 above must be met at all times while the ESP continues to receive non-hazardous wastewaters.
5. The Permittee shall maintain the surface impoundment dike in accordance with the operating practices contained in the approved permit application and the conditions in this permit.

**D. REPORTING**

The Permittee shall notify the Illinois EPA in writing within seven (7) days after detecting either a leak in the surface impoundment dike or a sudden drop in the liquid level (and the drop is not known to be caused by changes in the flows into or out of the impoundment). The procedures set forth in the contingency plan and 35 IAC 724.327 must then be followed if one of these incidents occur.

**E. INSPECTIONS**

1. The Permittee shall inspect the surface impoundment (including liner and appurtenances for control of overtopping) in accordance with the inspection schedule in the approved permit application.
2. The Permittee must inspect the surface impoundment on a weekly basis and within 72 hours of any storm or rain fall event of 3 or more inches in 24 hours to detect any evidence of:
  - a. deterioration, malfunctions, or improper operation of overtopping control equipment;
  - b. sudden drops in the level of the impoundment's contents; or
  - c. severe erosion or other signs of deterioration in dikes and other containment devices.

3. If the ESP is taken out of service for more than six months, then prior to returning to service, the Permittee shall obtain a certification from a qualified Professional Engineer registered in the State of Illinois that the surface impoundment and the flood-protection dike, including that portion of any dike which provides freeboard, have structural integrity.
4. The results of all inspections conducted on the ESP must be recorded on an inspection log and placed in the operating record for this facility. Appropriate action, including implementation of the contingency plan if necessary, must be carried out in response to deficiencies noted during inspections; the results of these efforts must also be documented on an inspection log/repair log and placed in the operating record for the facility. The forms in Exhibit ESP-3 and Exhibit ESP-4 of the approved permit application shall be used to document inspections and any repairs done at the facility.

**F. CLOSURE REQUIREMENTS**

At closure, at a minimum, all waste, waste residues, and hazardous constituents must be removed from the unit. Remaining wastes, liner, and underlying soil containing or contaminated with waste, waste residue, or hazardous constituents must also be removed/remediated as appropriate to meet the requirements of 35 IAC 742. Closure of the surface impoundment must be carried out in accordance with the contingent closure plan contained in the "East Surge Pond Addendum to Section E" section of the approved permit application, as modified below:

1. The Permittee shall submit to the Illinois EPA in writing a proposed schedule to close the ESP for Illinois EPA's review and approval within one (1) year of the effective date of this permit. The proposed schedule for closure of the ESP required in this section must include and consider any additional non-closure activities associated with the ESP. Any additional non-closure activities associated with the ESP must commence at least five (5) years prior to the expiration of this permit so that the required RCRA closure activities of the ESP may commence prior to the expiration date of this permit unless approved otherwise by Illinois EPA.
2. The Permittee shall notify the Illinois EPA in writing of its intent to close the ESP at least 180 days prior to the date closure is expected to begin. Along with this notification, the Permittee shall submit a sampling and analysis plan to be used in demonstrating that all contaminated material (sludge, liner, and underlying soil) has been removed. This plan must be approved by the Illinois EPA in writing prior to being implemented. Illinois EPA review of this plan will be subject to the permit appeal provisions contained in Sections 39(a) and 40(a) of the Illinois Environmental protection Act. The response from the Illinois EPA will approve with or without conditions, if appropriate and establish:
  - a. The sampling and decontamination plan;

- b. What contaminants must be analyzed for; and
  - c. The level at which decontamination or removal is considered complete. Please note that any proposed risk assessment will be subject to Illinois EPA's review. If the risk assessment is determined to be inadequate, the Illinois EPA may establish cleanup levels that will be protective of human health and the environment based upon the procedures set forth in 35 IAC 742.
3. All sweepings, wash water, and rinsate generated during the closure of the ESP shall be managed as a hazardous waste, unless it can be shown to be exempt under 35 IAC 721.
  4. Additional plans and reports must be submitted to Illinois EPA for approval as necessary, to provide for the proper remediation (i.e., achievement of soil and groundwater remediation objectives developed in accordance with 35 IAC 742) of the sludges, liner, and underlying soil at the ESP.
  5. Within sixty (60) days after closure of the ESP is complete, the Permittee shall submit certification to the Illinois EPA that the unit has been closed in accordance with the approved closure plan.

A closure certification form meeting the requirements of 35 IAC 724.215 must be signed by an authorized representative of the Permittee and a qualified Professional Engineer. Signatures must meet the requirements of 35 IAC Section 702.126. The qualified Professional Engineer (registered in the State of Illinois) must be present at all critical activities during the closure. These activities might include soil sampling, soil removal, backfilling, final cover placement, etc. The frequency of inspections by the independent engineer must be sufficient to determine the adequacy of each critical activity. Financial assurance must be maintained for the ESP until the Illinois EPA approves the closure certification for the unit.

A Closure Documentation Report must be developed and submitted along with the certification of closure and include:

- a. Background information about the facility overall and the overall closure project.
- b. A description of the unit closed (include scaled maps showing location of unit within facility and layout of unit(s), information related to construction of the unit(s), identification of wastes managed in the unit).
- c. A chronological discussion of all closure activities and what was accomplished as a result of completing these activities.

- d. The volume of waste, waste residue and contaminated soil (if any) removed. The term waste includes wastes resulting from decontamination activities.
- e. Scaled drawings showing the horizontal and vertical boundaries of the extent of any soil removal effort.
- f. A description of the method of waste handling and transport.
- g. The waste manifest numbers.
- h. Copies of the waste manifests.
- i. As appropriate and available: boring logs; well construction diagrams; geologic cross-sections groundwater monitoring data; and information about any groundwater remediation effort.
- j. Information documenting the results of all sampling/analysis efforts. The goal of presenting this information should be to describe, in a logical manner, the activities and results associated with the sampling/analysis effort. At a minimum, this information must include:
  - (1) identification of the reason for the sampling/analysis effort and the goals of the effort;
  - (2) a summary in tabular form of all analytical data, including all quality assurance/quality control data;
  - (3) a scaled drawing showing the horizontal location from which all soil samples were collected;
  - (4) identification of the depth and vertical interval from which each sample was collected;
  - (5) a description of the soil sampling procedures, sample preservation procedures and chain of custody procedures;
  - (6) identification of the test method used, and detection limits achieved, including sample preparation, sample dilution (if necessary) and analytical inferences;
  - (7) copies of the final laboratory report sheets, including final sheets reporting all quality assurance and quality assurance dates;



- (8) visual classification of each soil sample in accordance with ASTM D-2488;
    - (9) a summary of all procedures used for quality assurance/quality control, including the results of these procedures; and
    - (10) a discussion of the data, as it relates to the overall goal of the sampling/analysis effort.
  - k. Information demonstrating that the remediation objectives approved for the project have been achieved, including establishment of any engineered barriers or institutional controls necessary to support these objectives.
  - l. Color photo documentation of closure. Document conditions before, during, and after closure.
  - m. A detailed summary of the costs incurred in completing the required closure activities.
6. The Permittee shall analyze all samples individually (i.e., no compositing). Sampling and analytical procedures shall be conducted in accordance with the latest edition of SW-846 and Attachment G to the Illinois EPA Bureau of Land's RCRA closure plan guidance. Sample size per interval shall be minimized to prevent dilution of any contamination. Apparent visually contaminated material within a sampling interval shall be included in the same portion of the interval to be analyzed. To demonstrate a parameter is not present in a sample, analysis results must show a detection limit at least as low as the practical quantitation limit (PQL) for that parameter as identified in the latest edition of SW-846.
7. To avoid creating another regulated storage unit during closure, it is recommended that any necessary permits for waste disposal are obtained prior to initiating excavation activities. If it is necessary to store excavated hazardous waste on-site prior to off-site disposal, do so only in containers or tanks or in other units if approved by the Illinois EPA in writing for less than ninety (90) days. Do not create regulated waste pile units by storing excavated hazardous waste in an unapproved manner. The ninety (90) day accumulation time exemption (35 IAC 722.134) only applies to containers and tanks.
8. Under the provisions of 29 CFR 1910, cleanup operations must meet the applicable requirements of OSHA's Hazardous Waste Operations and Emergency Response standard. These requirements include hazard communication, medical surveillance, health and safety programs, air monitoring, decontamination, and training. General site workers engaged in activities that expose or potentially expose them to hazardous substances must receive a minimum of 40 hours of safety and health training off site plus a minimum of three days of actual field experience under the direct supervision of a trained experienced supervisor.

Managers and supervisors at the cleanup site must have at least an additional eight hours of specialized training on managing hazardous waste operations.

9. If the Illinois EPA determines that implementation of this closure plan fails to satisfy the requirements of 35 IAC 724.211, the Illinois EPA reserves the right to amend the closure plan. Revisions of closure plans are subject to the appeal provisions of Section 40 of the Illinois Environmental Protection Act.
10. The Permittee shall provide post-closure care in accordance with 35 IAC 724 for the ESP if all of the wastes or contaminated material or media cannot be removed or decontaminated in accordance with the closure plan and meeting the requirements of 35 IAC 742. If it is determined that the clean closure requirements (closure by removal) cannot be met and post-closure care is required, this permit must be modified to require closure and post-closure care as a landfill in accordance with 35 IAC 724, Subparts G and H.
11. Should post-closure care, as described above, become necessary, the permittee shall submit an application for modification to this permit, including an amended closure and post-closure care plan for this unit, within thirty (30) days following discovery that clean closure cannot be accomplished. If a determination is made not to pursue clean closure prior to the implementation of the closure plan, the modification request shall be made no later than sixty (60) days after such determination is made.
12. Financial assurance for closure and post-closure of the ESP as a landfill, if required, shall be provided within thirty (30) days following modification of the permit as set forth in Condition II.F.11 above.

**G. FINANCIAL ASSURANCE REQUIREMENTS**

1. The permittee shall maintain financial assurance for closure of the surface impoundment(s) of at least \$538,420 (in 2020 dollars). The cost estimate for closure of this facility is shown in Attachment G to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 IAC 724 Subpart H.
2. The approved cost estimate for closing this unit is as described in Attachment G. The Permittee must provide financial assurance for this amount in accordance with 35 IAC 724, Subpart G.
3. A revised closure cost estimate for the ESP must be submitted with the schedule for the closure for the ESP as required in Condition II.F.1. Such cost estimate must include all activities necessary to initiate and complete the closure of the ESP.
4. If clean closure cannot be achieved for the ESP, ESP will be subject to post-closure care, including the requirements for financial assurance.



**SECTION III: POST-CLOSURE FOR THE POND 1 LANDFILL UNIT**

**A. SUMMARY**

Hazardous waste management units where waste is left in place (e.g., landfills) must receive post-closure care for at least 30 years after the date the certification of closure is approved in writing by the Illinois EPA. Activities required during post-closure care include but are not limited to: (1) maintenance of final cover, (2) management of leachate, (3) monitoring, and as necessary, remediation of the groundwater, and (4) providing financial assurance for post-closure activities pursuant to Title 35 Illinois Administrative Code (35 IAC) Part 724.

Presently, there is one closed hazardous waste landfill at this facility which must receive post-closure care –the Pond 1 landfill. If it is determined by way of the closure plan contained in the “East Surge Pond Addendum to Section E” of the approved permit application that the East Surge Pond (ESP) cannot be clean closed (closure by removal), this permit shall be modified to incorporate closure and post-closure care for that unit as a landfill. This section describes the post-closure care requirements for the Pond 1 Landfill.

**B. UNIT IDENTIFICATION**

1. The Permittee shall provide post-closure care for the following hazardous waste management unit(s), as described in the approved permit application, subject to the terms and conditions of this permit:

Unit Designation	Capacity	Surface Area Dimensions of Unit	Description of Waste and Hazardous Waste No.
Pond 1 Landfill (D80)	100,000 yd <sup>3</sup>	4.1 acres (approximate)	Sediments and soil contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry

The Pond 1 Landfill covers approximately 4.1 acres over Pond 1, Pond 1A and the southern part of Pond 2. The unit contains approximately 100,000 yd<sup>3</sup> of contaminated sediment and soils from the closure of Ponds 1, 1A, 2, 2A, 3, 3A, and 4.

2. The location and horizontal extent of the landfill is identified in Figure B-2 of Attachment B to this permit. The lowest elevation of the sumps in the landfill is at or above 402 ft MSL. The highest elevation of the final cover system is at or below 432.99 ft MSL. The slopes of the final cover on the landfill shall not be steeper than 4H:1V or 2%. The landfill was designed and constructed to achieve

a minimum static slope factor of safety greater than or equal to 1.33 and a seismic factor of safety greater than or equal to 1.01.

3. Pond 1 Landfill has an engineered liner system consisting of several layers. From top to bottom (starting directly below the waste), these layers consist of:
  - a. One foot protective soil layer;
  - b. Geotextile fabric (filter);
  - c. One foot sand and gravel primary leachate detection and collection layer including leachate collection piping and leachate collection sumps;
  - d. 60 mil High Density Polyethylene (HDPE) geomembrane;
  - e. 0.25 inch Claymax geosynthetic clay liner (GCL);
  - f. One foot sand and gravel secondary leachate collection system including leachate collection piping and leachate collection sumps;
  - g. A 60 mil HDPE geomembrane;
  - h. Minimum of two feet of imported compacted clay; and
  - i. Minimum of one foot of recompacted in-situ clay.

The unit is protected from a 100-year flood event by a flood protection dike.

4. The cover system on the top of the Pond 1 landfill is constructed of the following layers, specified from the top to bottom:
  - a. One foot thick protective soil cover;
  - b. One foot thick compacted clay layer;
  - c. A geonet drainage layer;
  - d. A 60 mil HDPE geomembrane liner; and
  - e. Two foot thick compacted clay layer.
5. A survey plat indicating the location and dimensions of the Pond 1 Landfill and any other hazardous waste disposal units with respect to permanently surveyed benchmarks was prepared and certified by a professional land surveyor. The notes on the plat state the owner's and operator's obligation to restrict disturbance of

the Pond 1 Landfill in accordance with the applicable Subpart G regulations. These notes state:

- a. The waste materials contained in the Pond 1 Landfill are considered RCRA hazardous wastes; and are sediments and soils contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry.
  - b. Any material removed from the Pond 1 Landfill during future activities must be managed as a hazardous waste in accordance with 35 IAC Subtitle G: Waste Disposal.
  - c. The use of this area is restricted.
6. The Plat of Survey must be attached to the deed to the property and serves as an instrument which is normally examined during title search that will in perpetuity notify any potential purchaser of the property that:
- a. The waste material in the Pond 1 Landfill is considered a RCRA hazardous waste;
  - b. Use of the area is restricted; and
  - c. A survey plat and record of the type, location, and quantity of waste material in the Pond 1 Landfill was filed with the Illinois EPA and the County Recorder.
  - d. Documentation/information regarding the Document No., Parcel Identification Number (PIN) for the Pond 1 Parcel, and the Drawing No. filed with the Madison County Recorder's must be submitted as required in Condition VI.C.7 of this permit.
7. The permittee shall develop a scaled topographic drawing of each unit identified in Condition III.B.1 to determine the vertical and horizontal dimensions of each unit at least once every 10 years. If a topographic drawing of a unit has not been developed in the 10 years prior to the date of this permit, it must be developed within 90 days of the date of the effective date of this permit, and every 10 years thereafter. The topographic drawings shall be maintained as part of the operating record.

Each scaled topographic drawing shall be compared to the permitted dimensions for that unit. The Permittee shall submit the most recent survey and scale drawings of the permitted dimensions for the unit within 60 days of the effective date of this permit.

If a difference in elevation of more than 2 feet exists at any location on the unit,

the Permittee shall notify the Illinois EPA Bureau of Land Permit Section of this finding within 30 days of the most recent survey. The notification must include the most recent survey and scale drawings of the permitted dimensions for the unit, a discussion of why the difference exists, and a plan that includes a schedule for repairing the cover system to its permitted dimensions. Repairs to the cover system, and/or its components, may be considered a permit modification.

### **C. POST-CLOSURE CARE PERIOD**

1. The post-closure care period for the Pond 1 Landfill began on August 14, 1995, the date of completion of closure of the unit listed in Condition III.B.1 of this permit. August 14, 2025, marks the minimum requirement of thirty (30) years of Post-Closure Care.

Hazardous waste remains in the landfill, leachate continues to be generated and pumped out of the unit, and a groundwater corrective action program is required to address groundwater contamination at the site. Due to these site conditions, pursuant to 35 IAC 703.241, 724.131, 724.410 as well as Sections 12(a), 21(n), and 39(g) of the Environmental Protection Act, the Permittee must continue to provide post-closure care for the Pond 1 Landfill. Post-closure care shall be extended for additional 30 years or until such time as no unacceptable risks to human health and the environment are present in the Pond 1 Landfill unit, as determined by the Illinois EPA.

2. On or prior to August 14, 2024 (one year before August 14, 2025), the Permittee must submit a Class 2 Permit Modification request to Illinois EPA in accordance with 35 IAC 703.241(a)(2) and 35 IAC 703 Appendix A.E.2 to extend the Post-Closure Care of the Pond 1 Landfill for an additional thirty (30) years or until such time as no unacceptable risks to human health and the environment are present in the Pond 1 Landfill unit, as determined by the Agency, as specified in Condition III.C.1 above.
3. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After any administrative and judicial challenges to such restrictions have been exhausted, the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the hazardous waste disposal site is located.
4. The Permittee shall not allow the property where the unit(s) identified in Condition B.1 are located to be used in a way that could disturb the integrity of the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems unless the Illinois EPA finds, by way of a permit modification, that such use is necessary for either of the following reasons:



- a. It is necessary to the proposed use of the property, and will not increase the potential hazard to public health or the environment, or
  - b. It is necessary to reduce a threat to human health or the environment
5. The Illinois EPA may require the continuation of any of the security requirements during part or all of the post-closure period.

**D. INSPECTIONS**

1. The Permittee shall inspect the components, structures, and equipment at the site in accordance with the inspection schedule in the approved permit application and the conditions in this permit (Attachment H). The forms in Exhibit E-8 of the Post-Closure Plan in the approved permit application shall be used to document inspections and any repairs performed at the facility.
2. The Permittee shall inspect the facility at least quarterly or within 72 hours of any rain fall event of three (3) or more inches in 24 hours for evidence of any of the following:
  - a. Deterioration, malfunctions, or improper operation of run-on and run-off systems.
  - b. The presence of leachate in, and proper functioning of, the leachate collection and removal systems.
  - c. The deterioration of the liner or cover systems.
3. Appropriate corrective action shall be taken if problems; including erosion, blockage of the channels, slope failure, etc. are observed at any time. If corrective action is taken, the area involved shall be reinspected one month following completion of the work to ensure the corrective actions have adequately corrected the problem(s) noted.
4. The Permittee shall inspect the benchmarks used to identify the location of the hazardous waste management units (HWMUs) and solid waste management units (SWMUs) within 60 days of the effective date of this permit and thereafter in accordance with the Inspection Schedule in the approved permit application. Benchmarks shall be repaired and resurveyed whenever an inspection of the benchmarks indicates they have been damaged. The inspection results, repairs, and surveys of the benchmarks shall be maintained as part of the operating record.
5. Results of all inspections and a description of any remedial actions taken shall be documented in the Repair Log in the Operating Record and maintained for the entire post-closure period.



**E. MONITORING, MAINTENANCE, AND RECORDKEEPING**

1. The Permittee shall keep and maintain a written operating record that includes all the records, reports, notifications, monitoring data, testing or analytical data, and corrective action data required by 35 IAC 724.173 and the conditions in this permit, for the entirety of the post-closure care period. The operating record shall be kept on-site at the facility and available for Illinois EPA review.
2. The Permittee shall maintain and monitor the groundwater monitoring system and comply with the other applicable regulations of 35 IAC 724 Subpart F (Groundwater Protection) during the post-closure period.
3. The Permittee shall maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, and other events.
4. The Permittee shall prevent run-on from eroding or otherwise damaging the final cover. At a minimum, the run-on control system shall be capable of preventing flow onto the active portion of the landfill during peak discharge from a 24 hour, 25-year storm event.
5. The Permittee shall prevent run-off from eroding or otherwise damaging the final cover. At a minimum, the run-off management system shall be capable of collecting and controlling the volume of water resulting from a 24 hour, 25-year storm event.
6. The Permittee shall comply with the requirements for landfills described in the approved permit application and the conditions of this permit as follows:
  - a. Corrective action shall be taken if ponding has been observed, if cracks or erosion channels greater than one inch wide have formed for whatever reason, if gas, odor, vegetative or vector problems arise, if leachate pop-outs or seeps are present, or if vegetation with tap roots is found to be growing in areas which are not designed to accommodate such vegetation.
  - b. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements as required in Condition III.D.4.
  - c.
7. The Permittee shall maintain the leachate collection system (LCS), and leak detection system (LDS) in accordance with the design plans and specifications contained in the approved permit application and the conditions in this permit. The permittee shall:
  - a. Remove and clean the pumps from the LCS and LDS at least once every year.

- b. Remove sediment from the LCS and LDS collection pipes and sumps using a high-pressure jet at least once every 10 years.
    - c. Install and operate within 30 days of the effective date of this permit, a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11 (b).
8. The permittee shall remove leachate from the landfill until leachate is no longer detected in the LCS or LDS.
9. Leachate collected in the LCS and LDS, shall be managed in compliance with all applicable federal, state and local regulations. The leachate may be transferred to the City of Wood River Publicly Owned Treatment Works (POTW) by a vacuum truck in accordance with the Illinois EPA Water Pollution Control Permit No. 2020-EP-64994; the approved permit application; and the conditions in this permit.
10. The permittee shall collect a representative sample of leachate from the landfill and analyze it for all the constituents listed in 35 IAC 724 Appendix I. These samples shall be collected and analyzed annually in accordance with the sampling and test methods specified in the approved permit application. The results of the leachate quality testing data shall be submitted and maintained in the facility's operating record and submitted to the Illinois EPA by July 15 each year.
  - a. The Reduced List will be based on the four most recent complete 35 IAC 724 Appendix I analyses and include all parameters detected in any of the four Appendix I analyses. Starting the next sampling event after Illinois EPA approval, this Reduced List will be used in lieu of the Appendix I analysis for three out of four years, with the fourth-year reverting to a full Appendix I analysis. Any parameters not included on the existing Reduced List that are detected in the fourth-year Appendix I analysis shall be added to all future Reduced List analyses by means of a permit modification request. This cycle of three years of Reduced List, followed by one year of Appendix I analysis, will repeat for the remainder of the post-closure period.
  - b. If an analysis of the leachate from the landfill detects a parameter for which the groundwater is not being analyzed, the permittee shall submit a Class 1\* permit modification to the Illinois EPA BOL Permit Section in writing within 30 days of the leachate analysis to add the previously undetected parameter(s) to the groundwater monitoring list.
11. The permittee shall operate, monitor, and maintain the leachate collection system (LCS); and the leachate detection system (LDS) in accordance with the approved permit application and the following conditions:

- a. The elevation of leachate in the primary and secondary collection risers of the LCS and LDS of the Pond 1 Landfill shall be monitored weekly and recorded in feet above MSL.
  - b. Leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403' above mean sea level (MSL) for LCS).
  - c. All leachate removed from the LCS and LDS shall be managed as a hazardous waste.
  - d. The permittee shall record the amount of liquid removed from each LCS sump (in gallons) at least monthly. The results of the leachate quantity testing data from the LCS shall be maintained in the facility's operating record and submitted electronically to the Illinois EPA.
12. The permittee shall operate and maintain the alarm system as required in Condition III.E.7 (c). The alarm system shall immediately alert the permittee or their representative if there is a problem with the leachate collection or leak detection systems. Within 48 hours of an alarm, a technician will check the LCS and/or LDS and initiate any necessary corrective actions.

**F. REPORTING AND NOTIFICATION REQUIREMENTS**

1. The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 above must be submitted to the Illinois EPA Bureau of Land Permit Section in an electronic format. The information is to be submitted as fixed-width text files formatted as found in Attachment C to this permit. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA's website.
2. A completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) must accompany all Leachate Data Reports required by this permit. A copy of this form is provided in Attachment C to this permit. This form is not be used for permit modification requests. This form is also available on the Illinois EPA website.
3. The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 for the LCS and LDS shall be submitted to the Illinois EPA Bureau of Land Permit Section as part of the Leachate Data Quarterly Monitoring Report in accordance with the following schedule.

Data Collected

January – March

April – June

July – September

Results/ Report Submitted by:

May 1

August 1

November 1

October – December

February 1

4. The following Leachate Monitoring/Withdrawal Wells shall be used in leachate quality analysis required by Conditions III.E.10. For purposes of electronic reporting, the points will be labeled as shown below:

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
Primary Collection System Riser	PCRW
Primary Collection System Riser	PCRE
Secondary Collection System Riser	SCR1
French Drain Sump	FDS1

5. The following Leachate Monitoring/Withdrawal Well shall be used in leachate elevation and quantity monitoring required by Conditions III.E.11. For purposes of electronic reporting, the points will be labeled as shown below:

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
Primary Collection System Riser	PCRW
Primary Collection System Riser	PCRE
Secondary Collection System Riser	SCR1
French Drain Sump	FDS1

6. The permittee shall submit an original and one (1) copy of each Leachate Data Quarterly Monitoring Report required in Condition III.F.3 above. In addition to the electronic data, each report must include:

- a. A graphical representation of the volumes of leachate removed from the LCS and LDS each month. The leachate generation rates (gallons/month) from the LCS and LDS shall be presented on the same graph. The scale of the abscissa (time) shall be such that no more than one year of data (starting with January each year) is presented on each sheet of paper.
- b. A graphical representation of the elevations of the liquid level in the collection risers for the quarter. For each measurement, the graph needs to identify the following: the elevation of leachate over time, elevation of the top of liner, and elevation of the bottom of the cover system all in feet above MSL.

7. If the leachate quality analysis required in Condition III.E.10 detects a parameter for which the groundwater was not analyzed for in the last sampling event, the permittee shall submit a Class 1\* permit modification to the Illinois EPA BOL Permit Section in writing within 30 days of the leachate analysis to add the previously undetected parameter(s) to the groundwater monitoring list. .



**G. NOTICES AND CERTIFICATION**

1. A request to change the Post-Closure Plan must be submitted in the form of a permit modification request. This request must be in accordance with applicable requirements of 35 IAC Parts 702, 703 and 724 and must include a copy of the amended Post-Closure Plan for approval by the Illinois EPA.
2. If the Permittee or any subsequent owner or operator of the land upon which the Pond 1 Landfill listed in Condition III.B above is located wishes to remove hazardous waste, hazardous waste residue, the liner, or contaminated soil, they must request a modification to this RCRA post-closure permit in accordance with the applicable requirements in 35 IAC Parts 703, 705 and 724. At a minimum, the owner or operator must demonstrate that the removal of such material will satisfy the criteria of 35 IAC 724.217(c).
3. If the Permittee seeks to demonstrate that they should be allowed to end the post-closure care period (e.g., all waste has been removed, and leachate and groundwater monitoring results do not indicate a potential for migration of waste at levels which may be harmful to human health and the environment), the permittee shall submit an Uniform Environmental Covenant (UEC) for the future land use and management of the property on which the Pond 1 Landfill is located. The UEC shall be submitted at least one year prior to the date the permittee expects to submit the Certification of Completion of Post-Closure and must be approved by Illinois EPA.

Pursuant to Section 39(g) of the Environmental Protection Act and Uniform Environmental Covenant Act, the purpose of the UEC is to place restrictions upon the future use of the site necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment.

4. If the Permittee seeks to exit post-closure care, the Permittee shall submit the following documents to the Illinois EPA Bureau of Land Permit Section by registered mail no later than sixty (60) days after completion of the established post-closure care period for the Pond 1 Landfill listed in Condition III.B of this permit:
  - a. A properly completed Certification of Completion of Post-Closure Care Form provided in Appendix J to this permit that states the post-closure care for the Pond 1 Landfill was performed in accordance with the specifications in the approved post-closure plan in the approved permit application and the conditions in this permit. The owner and operator and a qualified Professional Engineer registered in the State of Illinois must sign the Certification Form.



- b. A Post-Closure Documentation Report that documents the post-closure care conditions and activities at your facility during the post-closure period. The Post-Closure Documentation Report must include the following:
- (1) Background information about the facility and the unit subject to the Post-Closure Certification. Describe the facility and RCRA permit history for the unit.
  - (2) A detailed description of the unit subject to the post-closure care certification that includes:
    - i. The unit's design, including liner system, sumps, leachate collection, leak detection, and gas systems, and cover system including stormwater run-off and run-on controls. Provide this information in both a narrative form and scale drawings.
    - ii. How the unit was operated and how it was closed.
    - iii. When the unit was operated and when it was closed.
    - iv. The wastes disposed of (including waste codes).
    - v. The amount of leachate pumped each year from each sump in the unit's leachate collection and leak detection systems during the post-closure period. Provide this information in both a table and graphically. Demonstrate the unit has met the requirements of 35 IAC 724.410(b)(2).
    - vi. A scaled map showing the location of unit within the facility boundary. Include all wells in the groundwater monitoring system for the unit on this map.
    - vii. Scaled drawings (plan view and cross-section) that show the horizontal and vertical extent of the unit at the time it was certified closed, every 10 years after it was closed, and at the time the Post-Closure Documentation Report is submitted. The scale of the plan view should be 1 inch = 200 feet. All design components of the unit must be shown on the drawings.

When the drawings are compared, if a difference in elevation of more than 2 feet exists at any location on the unit, the Post-Closure Documentation Report needs to indicate the reason for the change in elevation, and demonstrate it would not be a concern in the future.
    - viii. A survey of the unit when it was certified closed and at the time the Post-Closure Documentation Report is submitted. The surveys must be certified by a professional land surveyor.

- (3) A general discussion on the inspection and maintenance of, and repairs to, the cover system, leachate collection, leak detection, gas collection, stormwater run-off and run-on controls, wells in the groundwater monitoring system, and any corrective action system required for the unit or groundwater contamination associated with it. Describe any problems and/or repairs to these systems that were addressed over the post-closure care period in chronological order. Show the locations of each of the repairs to these systems during post-closure care on a scaled drawing of the unit.
        - (4) A discussion on the groundwater monitoring program, including any corrective measures that were completed during the post-closure care period, and a summary of the three (3) most recent years of groundwater data. Identify the horizontal and vertical extent of any groundwater contaminant plume from the unit that existed at the beginning of the post-closure period and every five (5) years after that. The facility must have complied with all requirements of 35 IAC 620 and 724, Subpart F, in order to certify completion of post-closure care activities.
        - (5) Colored photos of unit(s) at post-closure completion. Photo documentation of the unit should include at least one aerial (satellite) photo and photos of all design features of the unit.
        - (6) Completed Illinois EPA LPC-PA23 and 39i Forms.
      - c. Documentation that the UEC required by Condition III.G.3 above has been placed on the deed to the property on which the Pond 1 Landfill is located has been filed with the County Recorder's Office.
5. The certification of completion of post-closure care shall not be approved by the Illinois EPA until the permittee demonstrates that the UEC required by Condition III.G.3 above has been properly filed with the appropriate governmental office (e.g. State of Illinois, or County Recorder's office).
6. Within 60 days after receiving certification from the owner or operator and a qualified Professional Engineer that the post-closure care period has been completed for the Pond 1 Landfill listed in Condition III.B of this permit in accordance with the approved post-closure plan, the Illinois EPA shall notify the owner or operator that it is no longer required to maintain financial assurance for post-closure care of that unit unless the Illinois EPA determines that post-closure care has not been conducted in accordance with the approved post-closure plan. The Illinois EPA shall provide the owner or operator with a detailed written statement of any such determination that post-closure care has not been in accordance with the approved post-closure plan.

**H. POST-CLOSURE CARE COST ESTIMATE/FINANCIAL ASSURANCE**

1. The Permittee shall maintain financial assurance for post-closure care of the Pond 1 Landfill listed in Condition III.B.1 of this permit of at least \$2,364,068 in 2020 dollars until such time as it is required to be modified pursuant to Conditions VI.C.1(a) and VI.C.1 (d). A summary of the cost estimate for post-closure care is shown in Attachment G to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 IAC 724 Subpart H.
2. Post-closure care costs are determined by multiplying annual costs by the 30-year post-closure care period.

## **SECTION IV: GROUNDWATER CORRECTIVE ACTION PROGRAM**

### **A. SUMMARY**

Hazardous constituents released from the BP Riverfront facility have been detected in the groundwater at the point of compliance at concentrations which exceed the Groundwater Protection Standards, as well as groundwater quality standards established by Title 35 Illinois Administrative Code (35 IAC) 724.192. Therefore, a Corrective Action Program meeting the requirements of 35 IAC 724.200 must be implemented at the BP Riverfront facility.

The Corrective Action Program required by this permit includes:

1. Control of groundwater flow in the uppermost aquifer such that groundwater flow of the contaminated groundwater is towards the interior of the BP Main Plant facility. This control of groundwater flow will be accomplished by withdrawing sufficient quantities of groundwater from the uppermost aquifer through operation of Gradient Control Wells located at the BP Main Plant facility. Such flow control is necessary as a corrective action to address contaminants in groundwater from on-site releases of product or waste at the BP Riverfront facility and is the basis for the establishment of a Groundwater Management Zone (GMZ).
2. Verification that the flow of groundwater is adequately controlled as required by Condition IV.A.1 above.
3. Monitoring the quality and movement of the groundwater in the uppermost aquifer beneath the BP Riverfront facility to determine the effectiveness of the Corrective Action Program, as well as verify compliance with the GMZ.

### **B. IMPLEMENTATION**

1. The Permittee shall implement the Corrective Action Program established in this Permit upon the effective date of this Permit. On that date, the corrective action and groundwater monitoring requirements set forth in this Permit shall supersede those previously established.
2. The Permittee shall carry out the corrective actions specified in this Permit on the groundwater beneath the BP Riverfront facility. The uppermost aquifer at this facility is a sand and gravel aquifer located approximately 30 feet deep below the ground surface (hereinafter ft-bgs) and extending to a depth of about 101 to 113 ft-bgs to the top of the bedrock surface. This aquifer is commonly referred to as the "American Bottoms."
3. For the purposes of this Permit and in accordance with 35 IAC Part 620 regulations, the sand and gravel aquifer has been designated Class I: Potable



Resource Groundwater. The analytical results obtained from these groundwater monitoring wells shall be compared to the appropriate Class I concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1 or to established background values as appropriate.

4. At this time, the establishment of a Point of Compliance (as defined by 35 IAC 724.195) will be postponed until such time that the monitoring wells at the facility have attained the applicable concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1 and the GMZ expires. At that time, facility must submit a proposal for the establishment of a Point of Compliance which satisfies the regulatory requirements found in 35 IAC 724, Subpart F and reflects the current conditions at the facility.

### C. WELL LOCATIONS AND CONSTRUCTION

1. The Permittee shall maintain the groundwater monitoring wells identified in the table below to allow for the collection of groundwater samples from the uppermost aquifer. The location of these wells is specified in Figure C-2 of the approved permit application. All wells are gauged quarterly. Sampling frequencies vary and are specified below.

<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
<u>GMZ Boundary Wells (Gauging and Semi-Annual Sampling Network<sup>2</sup>)</u>					
G66D	RL-6C	ESP	70.00	361.38	366.38-361.38 <sup>H</sup>
G103	RL-3	PILF	39.00	386.27	396.43-386.27 <sup>C</sup>
G106	RL-6	ESP	45.28	385.29	395.15-385.29 <sup>C</sup>
G107	RL-7	ESP	39.00	388.36	398.59-388.36 <sup>C</sup>
G113	SWMU-14/MW-14A	Parcel C	53.30	369.64	378.20-369.64 <sup>H</sup>
G114	SWMU-14/MW-15	Parcel C	56.00	364.46	374.65-364.46 <sup>H</sup>
LOD1	LOD-1	LOD	31.10	393.48	403.32-393.48 <sup>C</sup>
LOD2	LOD-2	LOD	41.20	379.95	390.02-379.95 <sup>C</sup>
LOD5	LOD-5	LOD	28.50	393.61	401.87-393.61 <sup>C</sup>
LOD7	LOD-7	LOD	28.50	391.84	401.20-391.84 <sup>C</sup>
RL17B	RL-17B	LOD	55.00	363.82	373.98-363.82 <sup>H</sup>
<u>Observation Monitoring Wells (Gauging and Annual Sampling Network<sup>2</sup>)</u>					
G35L	C-25B	ESP	57.00	370.82	378.00-370.82 <sup>H</sup>
G104	RL-4	PILF	39.00	385.25	398.54-385.25 <sup>C</sup>
G115*	RL-15	WSP	52.00	376.18	380.51-376.18 <sup>H</sup>
G116	RL-16	WSP	52.00	375.35	379.08-375.35 <sup>H</sup>



<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
G119	RL-19	ESP	41.10	389.53	405.36-389.53 <sup>C</sup>
G401	T-1	WSP	41.50	370.86	379.76-370.86 <sup>H</sup>
R21L	RL-21BR	WSP	56.00	367.93	372.60-367.93 <sup>H</sup>
R529	P-29R	LOD	47.00	373.91	382.30-373.91 <sup>H</sup>

Observation Monitoring Wells (Annual Sampling Only Network<sup>3</sup>)

R21D	RL-21CR	WSP	71.00	352.82	356.90-352.82 <sup>H</sup>
LOD6	LOD-6	LOD	28.50	393.20	403.40-393.40 <sup>C</sup>
LOD9	LOD-9	LOD	28.50	394.12	404.12-394.12 <sup>C</sup>

Observation Monitoring Wells (Gauging Only Network<sup>4</sup>)

G030	C-20	TF	35.00	390.37	400.35-390.37 <sup>C</sup>
G033	C-23	POTW	35.00	393.54	403.55-393.55 <sup>C</sup>
G037	C-27	PNWL	34.00	393.94	404.04-393.94 <sup>P</sup>
G038	C-28	PNWL	35.69	393.70	403.90-393.80 <sup>P</sup>
G090	G090	PNWL	48.00	378.61	383.74-379.16 <sup>H</sup>
G091	G091	PNWL	66.50	359.14	382.27-377.69 <sup>H</sup>
G102	RL-2	LOD	34.0	388.78	398.78-388.78 <sup>C</sup>
G109	RL-9	ESP	39.00	388.45	398.45-388.45 <sup>P</sup>
G36R	C-26R	PNWL	34.4	392.18	402.48-392.48 <sup>P</sup>
G411	S-1	WSP	41.60	376.83	386.83-376.83 <sup>H</sup>
R034	C-24R	ESP	35.24	393.64	403.88-393.88 <sup>C</sup>
R66L	RL-6BR	ESP	55.30	377.06	382.16-377.06 <sup>H</sup>
G503	PANC-UP01	Parcel A	39.50	378.55	388.75-378.75 <sup>H</sup>
G504	PANC-UP02	Parcel A	39.00	372.06	382.06-372.06 <sup>H</sup>
G505	PANC-UP05	Parcel A	37.10	389.61	399.61-389.61 <sup>C</sup>
G506	PANC-UP09	Parcel A	27.30	389.29	399.49-389.49 <sup>C</sup>
G507	PANC-UP11	Parcel A	37.30	388.62	398.82-388.82 <sup>C</sup>
G508	SWMU4-MW01	Parcel A	30.98	395.10	405.10-395.10 <sup>P</sup>
G509	SWMU4-MW03	Parcel A	29.41	389.24	405.90-395.90 <sup>P</sup>
G510	SWMU4-MW04	Parcel A	32.62	388.96	405.57-395.57 <sup>P</sup>

Observation Monitoring Wells (LNAPL Monitoring Network<sup>5</sup>)

G105	R1-5	ESP	34.00	388.28	398.28-388.28 <sup>C</sup>
G512	SUMP-2	Parcel C	+	+	409.05-406.35 <sup>P</sup>

Observation Monitoring Wells (Sentinel Wells<sup>6</sup>)

G511	SWMU4-MW02	Parcel A	26.43	392.67	402.67-392.67 <sup>C</sup>
LOD1 <sup>2</sup>	LOD-1	LOD	31.10	393.48	403.32-393.48 <sup>C</sup>
LOD2 <sup>2</sup>	LOD-2	LOD	41.20	379.95	390.02-379.95 <sup>C</sup>
G029 <sup>7</sup>	C-19R	MP	24.52	393.98	404.31-394.31 <sup>C</sup>
G056**	G-16	MP	30.00	395.54	415.54-395.54 <sup>P</sup>

<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
G057 <sup>8</sup>	G-17	MP	35.02	391.90	411.90-391.90 <sup>C</sup>
G058 <sup>8</sup>	G-18	MP	36.00	391.27	411.27-391.27 <sup>C</sup>
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				

Notes

+ = Well construction information is incomplete

\* = Denotes Upgradient Well(s)

\*\* = Also an Observation Well under the BP Main Plant RCRA Permit. Groundwater sampling required until additional sentinel wells are installed and incorporated into the BP Riverfront RCRA Permit in accordance with January 19, 2023 Illinois EPA letter.

C = Wells fully or partially screened within the silty sandy layer of the Cahokia Sand facies are designated as "UMA C" uppermost aquifer wells.

H = Wells screened within the coarse sand and gravel of the Henry formation are designated as "UMA H" uppermost aquifer wells.

P = Wells within the Cahokia exhibiting perched behavior are designated as "Cahokia Perched" wells.

2 = GMZ Boundary

3 = Groundwater sampling only. Well will still be gauged when sampled in accordance with Condition IV.F.1; however, water level data will not be utilized for developing potentiometric surface maps or evaluation of hydraulic gradients as required under Condition IV.E.6 (3 Observation wells)

4 = Groundwater gauging only. Groundwater sampling not required (20 Observation wells).

5 = LNAPL monitoring only. Groundwater sampling not required (2 Observation wells).

6 = Sentinel wells required to be sampled semi-annually.

7 = Groundwater sampling required until revised GMZ approved and G029 is abandoned in accordance with January 19, 2023 Illinois EPA letter.

8 = Also an Observation Well under the Main Plant RCRA Permit.

9 = Additional sentinel wells to be installed and incorporated into RCRA Permit in accordance with January 19, 2023 Illinois EPA letter.

- The Permittee shall maintain the Gradient Control Wells identified in the table below to allow for the withdrawal of contaminated groundwater, as well as, the measurement of water levels to verify the flow of groundwater is adequately controlled as required by Condition IV.A.1 above.

IEPA Well No.	Facility Well No.	Area	Well Depth (ft-bgs)	Well Depth Elevation (ft MSL)	Well Screen Interval (ft MSL)
<u>Gradient Control Wells</u>					
G664	PW-64	MP	118.0	309.4	344.4 -309.4
G667	HPW-41	MP	105.0	322.6	347.6 - 322.6
G668	HPW-58	MP	115.0	318.0	358.0 – 318.0
G669	HPW-61	MP	118.0	314.55	345.05 – 314.55

Area Identification

P1LF = Pond 1 Landfill	LOD = Light Oils Dock
ESP = East Surge Pond	POTW = Publicly Owned Treatment Works
WSP = West Surge Pond	PNWL = Permitted Non-Hazardous Solid Waste Landfill
MP = Main Plant	PA = Parcel A
TF = Tank Farm	PC = Parcel C

3. Construction of each monitor well/piezometer must be in accordance with the diagram contained in Attachment C to this Permit, unless otherwise approved in writing by the Illinois EPA. All new monitoring wells/piezometers to be installed must be continuously sampled and logged on Illinois EPA boring logs as provided in Attachment C unless otherwise approved by the Illinois EPA.
4. The Permittee shall notify the Illinois EPA within thirty (30) days in writing if any of the wells identified in Conditions IV.C.1 and IV.C.2 are damaged or the structural integrity has been compromised causing the well not to serve its function or to act as a contaminant pathway. A proposal for the replacement of the subject well shall accompany this notification. The well shall not be plugged until the new well is on-line and monitoring data has been obtained and verified, unless the well is extremely damaged or would create a potential route for groundwater contamination. Prior to replacing the subject well, the Permittee shall obtain written approval from the Illinois EPA regarding the proposed installation procedures and construction.
5. Should any well become consistently dry or unserviceable, a replacement well shall be provided within ten (10) feet of the existing well. This well shall monitor the same zone as the existing well and be constructed in accordance with the current Illinois EPA groundwater monitor well construction standards at the time that the wells are replaced. A replacement well which is more than ten (10) feet from the existing well or which does not monitor the same geologic zone must be approved by the Illinois EPA and designated as a new well.

6. The Permittee shall submit boring logs, construction diagrams and datasheets from installation and development of a new or replacement well to the Illinois EPA at the address below within thirty (30) days of the date that installation of the well is completed. In addition, the Permittee shall submit certification that plugging, and abandonment of a well was carried out in accordance with the approved procedures to the Illinois EPA at the address below within thirty (30) days of the date that the well is plugged and abandoned. All pertinent information should be submitted to the appropriate State agencies.

Illinois Environmental Protection Illinois EPA  
 Bureau of Land -- #33  
 Permit Section  
 1021 North Grand Avenue East  
 Post Office Box 19276  
 Springfield, Illinois 62794-9276

7. All wells/piezometers shall be clearly identified and shall be equipped with protective caps and locks. Monitoring wells or piezometers located in high traffic areas must be protected with bumper guards.
8. All groundwater monitoring wells and piezometers not utilized in the approved groundwater monitoring system, but retained by the facility, must be constructed and maintained in accordance with 77 IAC 920 regulations. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Condition IV.C.4.

**D. GROUNDWATER PROTECTION STANDARD**

1. The following hazardous constituents and their concentration limits (35 IAC 620, Class I, Groundwater Quality Standards) comprise the Groundwater Protection Standard for the groundwater monitoring wells found in Conditions IV.C.1. (Total (unfiltered) values will be used for the comparison with the 35 IAC 620, Class I, Groundwater Quality Standards. Dissolved values shall be used for statistical evaluations required in Condition IV.H unless otherwise noted.)

<u>Field Parameters</u>	<u>Storet</u>	<u>Units</u>
pH	00400	
Specific Conductance	00094	micromhos/cm
Temperature of Water Sample	00011	(°F)
Turbidity	45626	Ntus
Depth to Water (below land surface)	72019	Feet
Depth to Water (below measuring point)	72109	ft bgs
Elevation of Groundwater Surface	71993	ft MSL



Elevation of Bottom of Well #	72020	ft MSL
Elevation of Measuring Point (Top of casing)##	72110	ft MSL

#Shall be determined during the first semi-annual sampling event each year.

##Shall be surveyed once every five (5) years, or at the request of the Illinois EPA, or whenever the elevation changes as required by Condition IV.I.9.a.

<u>Hazardous Constituents</u>	<u>Storet No. (Total)</u>	<u>Storet No. (Dissolved)</u>	<u>Concentration Limits (mg/L)</u>
Arsenic*	01002	01000	0.05
Barium	01007		2.0
Cadmium	01027		0.005
Chloride	00940	00941	200.0
Chrysene	34320		0.1
Lead*	01051	01049	0.0075
Sulfate	00945		400.0
Benzene	34030		0.005
Benzo(b)fluoranthene	34230		0.00018
Bis(2-ethylhexyl) phthalate	39100		0.006
Carbon Disulfide	81309		0.7
Ethylbenzene	78113		0.7
Toluene	34010		1.0
Total Xylenes	34020		10.0
Methyl Tertiary-Butyl Ether	46491		0.07
Phenols	46000		0.1
<u>Biogeochemical Analytes<sup>1</sup></u>			
Dissolved iron		01046	N/A
Dissolved manganese		01056	N/A
Dissolved sulfate		00946	N/A

\* = Constituents that must be sampled for both dissolved and total concentrations.

1 = To monitor natural attenuation conditions.

2. Alternate concentration limits may be established where the Permittee can determine a constituent will not pose a substantial hazard to human health or the environment as follows:



- a. Where a hazardous constituent has a standard in 35 IAC 620, the facility must apply for an adjusted standard as outlined in Section 28.1 of the Environmental Protection Act or reapply once corrective measures have been implemented pursuant to 35 IAC 620.450.
  - b. For those hazardous constituents without a 35 IAC 620 standard, the alternative concentration limits proposed by the facility must be approved by the Illinois EPA.
3. The Permittee must continue corrective action measures for as long as necessary, as determined by the Illinois EPA, to achieve compliance with the Groundwater Protection Standards. The Permittee may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if it can be demonstrated, based on data from the groundwater monitoring program, that the Groundwater Protection Standards found in Condition IV.D.1 have not been exceeded for a period of three (3) consecutive years.
  4. Prior to removal of any constituents identified in Condition IV.D.1, the facility must present leachate analytical results from the Pond 1 landfill to demonstrate these constituents are not present in leachate. Therefore, to request removal of barium, cadmium, sulfate, benzo(b)fluoranthene, carbon disulfide, total xylenes, and phenols, present a demonstration these constituents are not present in leachate. A leachate demonstration is also necessary to reduce the sampling frequency for chloride.

**E. GROUNDWATER CORRECTIVE ACTION PROGRAM**

The Permittee shall conduct the Corrective Action Program and perform groundwater monitoring detailed in this section, in accordance with the following:

1. The Permittee shall monitor the GMZ Boundary Wells and Observation Wells designated in Condition IV.C.1 on a semi-annual or annual basis (as indicated in Condition IV.C.1) for the hazardous constituents listed in Condition IV.D.1 above.
2. The GMZ must be monitored and maintained as follows:
  - a. The GMZ boundaries shall be defined as follows:
    - Western Boundary: LOD-1 and LOD-5;
    - Eastern Boundary: G103, G106 and G107;
    - Northern Boundary: LOD-2, G113 and G114;

- Southern Boundary: LOD-7 and G107.
  - Vertical Boundary: RL-17B and G66D.
- b. The results of monitoring the GMZ shall be submitted to the Illinois EPA semi-annually in accordance with the schedule found in Condition IV.I.2.
  - c. The GMZ expires when all groundwater monitoring wells within the GMZ have attained the appropriate Class I concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1.
  - d. The appropriate Class I concentration limits shall be considered attained when groundwater monitoring results meet the appropriate concentration limit for two (2) consecutive years.
  - e. An evaluation of the GMZ shall be submitted in a report for Illinois EPA review and approval, a minimum of every five (5) years, in accordance with the guidance document, "Re-evaluation of Groundwater Management Zones at RCRA Facilities" found at the Illinois EPA website. Statistical analysis required by IV.I must also be included.
3. The Corrective Action Program shall control the horizontal and vertical flow in the vertical column of water present in the uppermost aquifer beneath the facility and monitor the position and rate of migration of the Hydrocarbon Pool as follows:
- a. The pumping from the Gradient Control Wells (COD wells) shall maintain the cone of depression to ensure groundwater flow is adequately controlled in the uppermost aquifer.
  - b. The pumping rate from each Gradient Control Well (COD well) shall be recorded daily. This data shall be used to calculate the monthly average withdrawal rate for the Gradient Control System.
4. The Permittee shall monitor the groundwater horizontal and vertical gradients in the uppermost aquifer beneath the facility.
5. The Permittee shall record the following measurements and submit to the Illinois EPA semi-annually as required by Condition IV.I.2.
- a. A record of the amount of groundwater withdrawn each day by the groundwater withdrawal wells.
  - b. Quarterly monitoring of the piezometric head at wells in the uppermost aquifer identified in Conditions IV.C.1 and IV.C.2 above to demonstrate

that groundwater flow is properly controlled throughout the contaminated area requiring corrective action in the uppermost aquifer is being contained.

6. The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually from the monitoring wells listed in Condition IV.C.1.
7. The groundwater quality in the uppermost aquifer beneath the facility shall be monitored on a semi-annual or an annual basis in Condition IV.C.1 at each of the monitoring wells identified.
8. The GMZ Boundary Wells and Observation Monitoring Wells listed in Condition IV.C.1 shall be monitored for the constituents listed in Condition IV.E.1.
9. Due to the close proximity to the Hydrocarbon Pool (SWMU 7), the facility must propose a location for a new well or replacement well which will monitor the same geologic zone as monitoring well G119. The proposed location must be submitted for Illinois EPA review and approval prior to abandonment of well G119. BP must continue to pursue approval for replacement of G119 from the Corps of Engineers to satisfy replacement requirements from Illinois EPA, and provide updates in each semi-annual report required by Condition IV.I.2.

**F. GROUNDWATER ELEVATIONS**

1. The Permittee shall determine the groundwater surface elevation referenced to MSL at each well each time groundwater is sampled in accordance with Condition IV.I.3.
2. The Permittee shall report the surveyed elevation of stick-up and ground surface referenced to MSL once every five (5) years or at the request of the Illinois EPA, or whenever the elevation changes in accordance with Condition IV.I.9.
3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020), is to be reported at least annually. The mandatory measurement shall be taken during the first semi-annual sampling event each year.

**G. SAMPLING AND ANALYSIS PROCEDURES**

The Permittee shall follow the techniques and procedures described in Exhibit C-3 of Attachment B of the approved permit application, except as modified below, when

obtaining and analyzing samples from the groundwater monitoring wells described in Condition IV.C.1:

1. Samples shall be collected by the techniques described for low-flow sample collection in Exhibit C-3 of Attachment B of the approved permit application.
2. Samples shall be preserved, shipped and handled in accordance with the procedures specified in Exhibit C-3 of Attachment B of the approved permit application.
3. Samples shall be analyzed according to the procedures specified in Exhibit C-3 of Attachment B of the approved permit application, with the exception that the most current SW-846 Method states that field blanks must be tested for volatile organic compounds (VOCs), which includes Methyl Tertiary-Butyl Ether (MTBE).
4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Exhibit C-3 of Attachment B of the approved permit application.

#### **H. STATISTICAL METHODS**

The Permittee shall evaluate the quality of groundwater samples collected during semi-annual sampling events identified in Condition IV.E to determine trends and demonstrate effectiveness of corrective action as follows:

1. The GMZ Boundary Wells and Observation Monitoring Wells, as identified in Condition IV.C.1, shall be used for statistical evaluations of groundwater quality data as follows:
  - a. The groundwater quality data shall be statistically evaluated annually for the constituents identified in Condition IV.D.1, in accordance with Exhibit C-4 of the approved permit application.
  - b. The results of the statistical evaluations shall be discussed and included within the required five (5)-year GMZ Evaluation reports required by Condition IV.I.6.

#### **I. REPORTING AND RECORDKEEPING**

1. The Permittee shall enter all monitoring, testing and analytical data obtained in accordance with Conditions IV.D, IV.E, IV.F and IV.H into the operating record.
2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions IV.D, IV.E, IV.F and IV.H shall be collected



and reported as identified in the table below. All additional data required by the groundwater monitoring program (as specified in Conditions IV.D, IV.E, IV.F and IV.H) shall also be submitted to the Illinois EPA at the address listed in Condition IV.C.6 in accordance with this schedule.

<u>Sampling Event of Calendar Year</u>	<u>Samples to be Collected During the Months of</u>	<u>Results Submitted to the Illinois EPA by the Following</u>
First Quarter	January - February	August 1
Second Quarter	April - May	August 1
Third Quarter	July - August	February 1
Fourth Quarter	October - November	February 1

3. Groundwater surface elevation data measured pursuant to Condition IV.F.1, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition IV.I.2.
4. Groundwater withdrawal rates collected and calculated pursuant to Condition IV.E.3.b shall be submitted in accordance with the schedule identified in Condition IV.I.2.
5. Gradient control measurements collected pursuant to Condition IV.E.5 shall be submitted to the Illinois EPA as part of the second and fourth quarter reports as identified in Condition IV.I.2.
6. Statistical evaluations for the year, as required by Condition IV.H, shall be submitted to the Illinois EPA as a part of the required 5-year GMZ Evaluation reports required by Condition IV.E.2.e.
7. The Permittee shall report the groundwater flow rate and direction, as required by Condition IV.E.6, during the first and second semi-annual reports each year.
8. Groundwater quality samples collected to meet the requirements of Condition IV.E.8 shall be collected during the second and fourth quarter and submitted to the Illinois EPA as identified in Condition IV.I.2.
9. The Permittee shall report the surveyed elevation, as required by Condition IV.F.2, of the top of the well casing ("stick-up"), referenced to MSL, in accordance with the following schedule:
  - a. For wells identified in Condition IV.C.1 above, every five (5) years (during the second semi-annual sampling event), or at the request of the Illinois EPA, or whenever the elevation changes.
  - b. For any new wells, at the time of installation and reported in the as-built diagrams. Subsequent measurements shall be made every five (5) years



(during the second quarter sampling event) or whenever the elevation changes.

10. Elevation of the bottom of each monitoring well identified in Condition IV.C.1, referenced to MSL, is to be reported annually. This measurement shall be taken during the first semi-annual sampling event (Storet 72020).
11. Information required by Conditions IV.I.2, IV.I.3, IV.I.9 and IV.I.10 must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted as found in Attachment C of this permit, in accordance with the schedule found in Condition IV.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA's website.
12. The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. Only one (1) copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) copies of each notice or report you submit to the Illinois EPA. The LPC 592 form is not to be used for permit modification requests.
13. The Permittee shall report all information to the Illinois EPA in a form which can be easily reviewed. All submittals must contain tables of data, drawings, and text (as necessary) to accurately describe the information contained in the submittal.
14. The Permittee shall submit a written report semi-annually to the Illinois EPA, in accordance with the schedule found in Condition IV.I.2, which discusses the effectiveness of the corrective action program and place it in the operating record for the facility. Groundwater monitoring information required by Illinois EPA letters for all Parcels at the BP Riverfront facility shall be provided within the semi-annual report and separate reports are no longer required unless otherwise stated in Section VI (Special Conditions) of the Permit. At a minimum, the report must:
  - a. Address the information requirements in Conditions IV.C, IV.D, IV.E and IV.F
  - b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition IV.D.
  - c. Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.

15. If the Permittee determines that groundwater flow is not being adequately controlled, the Permittee shall:
  - a. Notify the Illinois EPA in writing within seven (7) days of the date that this determination is made;
  - b. Take actions as necessary to regain the control of groundwater flow as required by Condition IV.E.3.
  - c. Submit a written report to the Illinois EPA within thirty (30) days describing the actions taken to regain control of groundwater flow. In addition, the report must contain information which demonstrates that groundwater flow is being adequately controlled.
  - d. Submit a request for permit modification to the Illinois EPA within sixty (60) days describing any changes which must be made to the corrective action program to ensure that the groundwater flow is adequately controlled.

**J. REQUEST FOR PERMIT MODIFICATION**

1. If the Permittee determines that the Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724, Subpart F, the Permittee must, within ninety (90) days, submit an application for permit modification to the Bureau of Land of the Illinois EPA to make any appropriate changes to the program which will satisfy the regulations.
2. Conditions in this section of the permit may be modified by the Illinois EPA in accordance with 35 IAC 702.183 and 705.128 if there is cause for such modification, as defined in 35 IAC 702.184. Causes for modification in this section of the regulations include, but are not limited to, alterations to the permitted facility, additional information which would have justified the application of different permit conditions at the time of permit issuance, and new regulations.

## SECTION V: CORRECTIVE ACTION

### A. INTRODUCTION

1. In accordance with Section 3004 of RCRA and Title 35 Illinois Administrative Code (35 IAC) 724.201, the Permittee shall institute such corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any solid waste management unit (SWMU) at its facility in Wood River, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.
2. The original RCRA permit issued by Illinois EPA for this facility on September 30, 1993 required that the facility conduct corrective action on twelve (12) solid waste management units and one product release site. On, August 9, 2001, Illinois EPA approved a plan to expand the scope of the corrective action program at the facility to include all recognized conditions at the facility. To accomplish this, the facility was broken up into ten (10) land reuse investigation parcels so that corrective action at the facility could be addressed on a parcel-by-parcel basis.
3. The facility has completed a substantial amount of corrective action efforts to date at this facility. A summary of these completed efforts, based on the date that Illinois EPA approved workplans and reports associated with these efforts, as of January 2021, is provided in Condition V.C below.
4. The Permittee must develop and implement a Corrective Measures Program to protect human health and the environment from any of the SWMUs and areas of concern at the facility.
5. The Permittee must carry out interim measures in accordance with the terms, conditions, and requirements of this permit to address existing contamination at the facility until such time as a final corrective measure can be developed and implemented.
6. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs; or (2) future releases for existing SWMUs.
7. Investigation and remediation efforts carried out as part of the corrective action program implemented in accordance with this permit must meet the requirements of: (1) this permit, and the regulations cited herein; (2) Illinois EPA and USEPA guidance documents regarding such efforts; and (3) Illinois EPA letters regarding such activities.
8. The requirements of 35 IAC 620 and 742 must be met, when applicable, in establishing remediation objectives for corrective action. In addition, all corrective action efforts must meet the requirements of 35 IAC 724.201.

9. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of the Illinois Environmental Protection Act.
10. The Illinois EPA may modify this Section when it determines good cause exists for modification of a compliance schedule, such as an act of nature, strike, flood or materials shortage or other Force Majeure or events over which the Permittee has no control and for which there is no reasonably available remedy.

**B. CORRECTIVE ACTION REQUIREMENTS**

1. Twelve (12) SWMUs and one Product Release Site (PRS) were listed in the 1993 permit as units to be addressed by the facility's corrective action program; SWMU 10 was combined with SWMU 6 in 1994; and a SWMU 14 was added in 1994 (the Former Channel Seep Area). As of January 2021, the following list of SWMUs have been identified at the facility:

<u>SWMU/PRS</u>	<u>Name</u>
SWMU 1	Closed Disposal Facility
SWMU 2	West Surge Pond
SWMU 3	Temporary Surge Basin
SWMU 4	Butene Polymerization Waste Area
SWMU 5	Pond 5 Landfill Adjacent Area
SWMU 6	Tank D-700 Area (includes SWMU 10—Field North of Tank D-700)
SWMU 7	Hydrocarbon Pool
SWMU 9	Chemfix Pad Area
SWMU 11	Pond 5 Landfill
SWMU 12	Heavy Oils Dock
SWMU 13	Mississippi River Seep Area
SWMU 14	Former Channel Seep Area
PRS 1	Marathon Pipeline Area

2. A Phase I RCRA Facility Investigation report for the units above was approved by Illinois EPA on December 2, 1996. The Permittee and Illinois EPA subsequently expanded the scope of corrective action at this facility to all recognized environmental conditions (not just the units identified above) and divided the facility into ten (10) land reuse parcels for remediation and potential redevelopment. Market conditions and environmental priorities will guide the



schedule for investigating, remediating and redeveloping these parcels. The schedule for addressing these parcels is subject to Illinois EPA review and approval. A map of the BP Riverfront land reuse parcels is presented in Figure B-1 of Attachment B to this permit; these parcels are also identified as the following:

<u>Parcel</u>	<u>Name</u>
A	Barge Maintenance Area (BMA), North Channel Tract Areas (NCT), Butene Polymerization Waste Area (BPWA), South Channel Tract Area (SCT), Southwest Channel Tract Area (SWCT)
B	Light Oils Dock (LOD)
C	Former Channel Seep Area (FSCA)
D	Closed Disposal Facility (CDF)
E	Pond 1 Landfill
F	Temporary Surge Pond (TSP)
G	Mississippi River Seep Area (MRSA)
H	East Surge Pond (ESP)
I	West Surge Pond (WSP)
J	Permitted Nonhazardous Landfill (PNWL)

3. The Permittee plans to complete corrective action for the soil and groundwater at the facility through the parcel land reuse investigation remediation process. The goal in following this process is to obtain a no further action (NFA) determination for the entire parcel and address all recognized environmental conditions in the parcel. If the Permittee determines that redevelopment is not likely to occur in a given parcel, the Permittee may focus only on the SWMUs and PRS within the parcel. If the potential for redevelopment of the parcel becomes viable in the future, the Permittee may pursue an NFA determination for all recognized environmental conditions within the parcel at that time. The general process for investigation/remediation of each parcel (or for individual SWMUs/PRSs) is as follows:

- a. Current conditions will be established for the parcel.
- b. An Investigation Work Plan incorporating the current conditions will be developed and submitted to Illinois EPA for review and approval to investigate data gaps required to properly characterize the area.
- c. The investigation, focused on obtaining soil and any perched groundwater data, will be completed. It must be noted that the groundwater within the



uppermost aquifer beneath the facility is being addressed by the requirements of Section IV of this permit.

- d. The results of investigation will be analyzed; as well as all other data remediation objectives will be developed in accordance with 35 IAC 742; a comparison will be made between the data to the developed remediation objectives; and a determination will be made regarding the need for any remedial activities (including the establishment of engineered barriers and institutional controls).
- e. A report documenting the results of the efforts described in Items (c) and (d) above will be submitted to Illinois EPA for review and approval. This report will also identify any required remedial activities (including establishment of any required engineered barriers and/or institutional controls) needed to achieve the proposed remediation objectives.
- f. Based upon the results of its review of the Investigation Report, Illinois EPA will either:
  - (1) require that additional investigative efforts be conducted;
  - (2) issue a draft NFA letter for soil and perched groundwater (if applicable). This draft NFA will identify any required remedial activities (including establishment of an engineered barrier or institutional control) that must be completed before a final NFA letter can be issued. As necessary, the Permittee will conduct the required remedial activities and submit a report to Illinois EPA for review and approval documenting the results of these activities. Additional work must be conducted by the Permittee as necessary in accordance with plans and reports approved by Illinois EPA, until Illinois EPA determines that a final NFA letter can be issued.
  - (3) issue a final NFA letter for soil and perched groundwater (if applicable); or
  - (4) require some combination of the above efforts.
- g. Any engineered barriers and/or institutional controls required in the development of remediation objectives must be established before a No Further Action letter can be issued. Plans for establishing the required barrier/institutional control must be submitted to Illinois EPA for review and approval as well as reports documenting completion of these efforts. Any other proposed remedial efforts to achieve the established remediation objectives must also be completed before a final NFA letter can be issued.

4. Plans and reports associated with all aspects of corrective action at this facility must be submitted to Illinois EPA before being implemented.
5. The investigation efforts conducted at each area must be sufficient to characterize contamination associated with all the identified recognized environmental conditions present in the area. The parcel investigations will focus on soil and perched water.

**C. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED TO DATE**

1. As of February 2021, the Permittee has obtained NFA for the specific media at the following parcels and SWMUs:

<b>Parcel/ SWMUs Present in Parcel</b>	<b>NFA and Media</b>
Parcel A—Butene Polymerization Waste Area/SWMU 4	NFA letter for soil and perched-groundwater only was issued on March 8, 2005 (Log No. B-145-CA-46). ELUC was established for Parcel A (see Conditions IV.C. 2 and 3 below).
Parcel B—Light Oils Dock/SWMU 6, SWMU 10	NFA Letter for soils-only was issued by IEPA on October 22, 2009 (Log No. B-145-CA-69). Exclusion of perched-groundwater in this parcel was approved on 12/30/2004 (B-145-CA-48).
PRS 1	NFA letter for soils-only was issued for PRS 1 on December 2, 1996 (B-145-CA-1) (see Condition IV.D below).

2. As of February 2021, the following Environmental Land Use Control (ELUC) has been established following the NFA determinations by Illinois EPA and recorded with the Madison County Recorder’s Office as shown in the table below.

ELUC Recorded as Part of RFI for BP Riverfront Facility

<b>Area Name</b>	<b>Size (Acres)</b>	<b>Parcel ID for Site</b>	<b>Date of NFA Letter</b>	<b>County Recorder’s No. /Date Recorded</b>	<b>PIN/TAX ID</b>
Parcel A	64.8-AC (A-1= 63.92-AC; A-2 = 0.88-AC)	Parcel A, which includes Parcel A-1 and Parcel A-2	3/8/2005 (Log No B-145-CA-46)	2007R32644 June 15, 2007	PIN: 19-1-08-28-00-000-009; 19-1-08-28-00-000-009-.001; 19-1-08-29-00-000-07

3. ELUCs have been established in accordance with 35 IAC 742 as part of the completed corrective action efforts at this facility as summarized in Condition C.2 above. The ELUC places following restrictions on future activities at the facility:

- a. **Parcel A**  
 ELUC requires following restrictions: potable groundwater use restriction; no residential use; construction worker health and safety plan for any excavation required; limited access to soils in this area and requirements for soil screening of VOCs and documentation requirements; an engineered barrier at a location which requires 3' of clean soil (including following sampling locations: PASW0702BH02;PALD0109BH01;PASW0702BH06). Note: Certified copy of recorded ELUC was accepted by IEPA on January 14, 2008.

- 4. At Parcel E (Pond 1 Landfill), the Pond 1 Landfill was closed as a hazardous waste landfill in August 1995; post-closure care is being carried out in accordance with requirements of Section III of this permit.

**D. SUMMARY OF CORRECTIVE ACTION EFFORTS STILL TO BE COMPLETED**

- 1. A brief summary of corrective action efforts still to be completed at each parcel, as of June 2023, is presented by the table below. (Please note this is not a complete listing of SWMUs at the subject facility). In addition, for all Parcels and SWMUs, Corrective Action efforts must be completed in accordance with requirements of this permit and corrective action letters issued by Illinois EPA for all media of concern.

<b>Parcel/ SWMUs Present in Parcel</b>	<b>Corrective Action Efforts to be Completed</b>
Parcel A—Butene Polymerization Waste Area/SWMU 4	Groundwater in the upper most aquifer in the vicinity of this parcel must be investigated and remediated as necessary to meet the corrective action requirements.
Parcel B—Light Oils Dock/ SWMU 6; SWMU 10	Groundwater in the vicinity of this parcel must be investigated and remediated as necessary to meet the corrective action requirements.
Parcel C—Former Channel Seep Area/ SWMU 14	Corrective action for all media, including continued LNAPL Recovery, must be carried out to meet the corrective action requirements.
Parcel D—Closed Disposal Facility Landfill/SWMU 1	Corrective action activities, including leachate management; groundwater monitoring and maintenance of the phytoremediation system must be continued.
Parcel E—Pond 1 Landfill	Post-closure care being carried out in accordance with Section III of this permit must be continued.



<b>Parcel/ SWMUs Present in Parcel</b>	<b>Corrective Action Efforts to be Completed</b>
Parcel F—Temporary Surge Pond/ SWMU 3	Current conditions report and groundwater investigation workplan for this parcel must be submitted. Corrective action must be carried out in accordance with the Phase II/ III Work Plan (approved on August 9, 2001 by Illinois EPA) and meet the corrective requirements.
Parcel G— Mississippi River Seep Area (MRSA)/ SWMU 13	Land Reuse Investigation activities in accordance with IEPA's January 22, 2013 letter are in progress. MRSA Corrective Action Reports are being submitted as part of the Quarterly Riverfront Corrective Action Reports. Any remaining corrective action activities must be carried out to meet the corrective action requirements.
Parcel H—East Surge Pond (ESP)/ SWMU 8	The ESP must be operated in accordance with requirements of Section II of this permit. A proposed schedule to close the ESP in accordance with Condition II.F of this permit must be submitted to Illinois EPA within one (1) year of the effective date of this permit. The closure of the ESP must commence prior to the expiration date of this permit as required in Condition II.F.1 of this permit, unless otherwise approved of an alternative closure commencement date by Illinois EPA. If clean closure can't be achieved, this unit must be closed as a landfill and provided necessary post-closure care.
Parcel I—West Surge Pond (WSP)/ SWMU 2	The WSP is currently used for temporary storage of nonhazardous wastewaters. A Current conditions report and RCRA Investigation workplan for this area must be submitted.
Parcel J—Permitted Non-Hazardous Waste Landfill/ SWMU 5/ SWMU 11	Facility is currently providing post-closure care (maintenance of final cover, leachate management, and groundwater monitoring) in accordance with IEPA letter of April 27, 2005 and associated modifications. BP submits groundwater reports quarterly. Any additional corrective action activities must be conducted as necessary to meet the corrective action requirements.
SWMU 7— Hydrocarbon Pool	Further investigation and remediation must be conducted to meet the conditions of IEPA's Corrective Action approval letters for this unit. BP is awaiting USACE, WRDL, and IDOT access authorization for this area to conduct further required corrective action activities. Any remaining corrective action activities must be conducted to meet the corrective action requirements.
PRS-1—Marathon Pipeline Area	BP must continue to monitor groundwater in accordance with corrective action provisions of this permit.
Shallow Groundwater Beneath Facility	BP must continue to address shallow groundwater at the site to meet the corrective action requirements of this permit.
Groundwater Beneath Facility in the American Bottoms Aquifer	BP must continue to address the groundwater at the site in accordance with Section IV of this permit.

2. Within ninety (90) days of the date of the permit, the Permittee must submit a document summarizing the next step for the corrective action and proposed schedule for addressing each Parcel/SWMU listed in Condition V.D.1 above as a corrective action submittal.

**E. CORRECTIVE MEASURES REQUIREMENTS**

1. If it is determined that corrective measures must be taken at a SWMU, then the Permittee must implement a Corrective Measures Program (CMP) for such SWMUs in general accordance with the procedures set forth in Attachment E to this permit. The corrective measures implemented by the Permittee must be sufficient to ensure the appropriate requirements of 35 IAC 302, 620, 724, and 742 are met.
2. The types of corrective measures which may be implemented include, but are not limited to:
  - a. Removal of the contaminants or the contaminated media so that the remaining media meet remediation objectives developed in accordance with 35 IAC 742;
  - b. Closing the SWMU as a landfill by establishing a proper final cover over the SWMU and then providing proper long-term monitoring/maintenance/management of: (1) leachate; (2) subsurface gas; (3) final cover system; and (4) groundwater;
  - c. Establishing engineered barriers to restrict exposure to the contaminants remaining at the SWMU (necessary to certain remediation objectives developed in accordance with 35 IAC 742);
  - d. Establishing institutional controls to restrict activities at the facility, as necessary, to support remediation objectives established in accordance with 35 IAC 742.
3. The Corrective Measures Program described in Attachment E to this permit consists of five phases:
  - a. Phase I--conceptual design of the selected corrective measure;
  - b. Phase II--development of the final design plans for the corrective measure, including installation and operation/maintenance plans;
  - c. Phase III--actual construction/installation/implementation of the corrective measure;



- d. Phase IV--operation/maintenance/monitoring, as necessary, of the corrective measure to ensure it is being properly implemented and is properly protecting human health and the environment.
  - e. Phase V--demonstration/verification that the corrective measure has been completed and that the established remediation objectives have been achieved.
  - f. Phases may be combined or skipped, depending on the actual corrective measure selected. The overall CMP implemented at a given SWMU must: (1) be logical in nature; and (2) allow for Illinois oversight and approval throughout the entire process. As such, it will be necessary for the Permittee to submit workplans and reports regarding all aspects of corrective measures for the Illinois EPA review and approval prior to carrying out any corrective measure activity.
4. A Phase I CMP Workplan, or its equivalent, must be submitted to the Illinois EPA within ninety (90) days of the date that the Illinois EPA notifies the Permittee of the need for a CMP.
  5. Subsequent CMP related workplans and reports must be submitted to the Illinois EPA for review and approval in accordance with a schedule approved by the Illinois EPA.
  6. For units closed as landfills:
    - a. The Phase II report must include a plan for the construction of a final cover system as well as a post-closure care plan. The post-closure care plan must include provisions for (1) inspecting the final cover; (2) monitoring the groundwater and soil gas; and (3) taking corrective action if any problems are observed during the inspection/monitoring effort.
    - b. The Phase III report must document the construction of the approved final cover system and any other systems required for closure of the unit.
    - c. During Phase IV, quarterly reports must be submitted documenting the results of the inspection/monitoring efforts as well as any corrective measures taken in response to problems observed during these efforts. It will be necessary to submit plans to the Illinois EPA for review and approval to address any groundwater quality or gas migration problems.
    - d. The Phase V report will not be submitted until the post-closure care period has been completed. This report must demonstrate that all applicable post-closure requirements have been met and that the groundwater at the site meets the applicable standards.

7. Once all corrective measures have been completed, a report must be developed documenting all efforts and results associated with the completed measure, including, as appropriate, information demonstrating the approved remediation objectives for the project have been achieved.
8. The Illinois EPA's action on all CMP submittals shall be subject to the appeal provisions of Sections 39(a) and 40(a) of the Illinois Environmental Protection Act.

**F. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION**

1. The current cost-estimate for completing corrective action and groundwater remediation, including 20% contingency, at the BP Riverfront provided by the facility is \$10,359,514 in 2020 dollars as described in Attachment G. The Permittee shall prepare an updated cost estimate for the completion of any corrective action required under this permit in order to provide financial assurance for the approved amount of that cost estimate as required in Condition VI.C.1.c.
2. The Permittee shall demonstrate continuous compliance with 35 IAC 724.201 by providing documentation of financial assurance using a mechanism specified in 35 IAC 724.243, in at least the amount of the cost estimate required under Condition V.E.1 above. The words "completion of corrective action" shall be substituted for "closure and/or post-closure", as appropriate in the financial instrument specified in 35 IAC 724.251. The Illinois EPA may accept financial assurance for completion of corrective action in combination with another financial mechanism that is acceptable under 35 IAC 724.246.
3. At least once per year but no later than January 30 of each year, starting in 2024, the Permittee shall submit an updated estimate of the cost for completing corrective action at this facility to reflect the recent results of the program and the impacts these results have on determining what is needed to complete corrective action at the facility (such updates are also necessary to take into account such things as the completion of investigation efforts, the need for or completion of remediation, etc.). This estimate shall be submitted as a Class 1\* modification request and contain the following detailed information in support of the overall cost estimate:
  - a. A brief description of the various tasks which must be carried out to complete corrective action at the facility;
  - b. The estimated cost of completing each identified task;
  - c. A 20% adjustment for contingencies to the total estimated cost;
  - d. An identification of the resources needed to complete each task (type and amount) and the unit cost of each required resource;

- e. Justification for all values used in the developing all aspects of the estimate.
4. The cost estimate must be supported by a detailed breakdown of the estimated third-party cost for completing each required task. The amount of the various resources needed to complete each task must be provided, as well as the unit cost of these resources and an adjustment for contingencies. Justification for all data used in these calculations must also be provided.
5. The financial assurance requirements of 35 IAC 724.201 must also be met for any investigative or corrective action efforts carried out in accordance with Conditions G.1 or I below. Detailed cost estimates must be developed for any activities carried out under this Section and must accompany any workplan/report submitted to Illinois EPA for review and approval. Appropriate documentation of financial assurance in at least the amount of the approved cost estimate must be submitted to Illinois EPA within sixty (60) days after the cost estimates are approved.
6. All cost estimates prepared under the requirements of Conditions V.F.1 through V.F.5 above must be submitted as a Class 1\* permit modification request in accordance with 35 IAC 703.281.

**G. REQUIREMENTS FOR ADDRESSING NEWLY- IDENTIFIED SWMU(s) AND AREA(s) OF CONCERN (AOCs)**

1. The Permittee shall notify the Illinois EPA BOL Permit Section in writing of any newly-identified SWMU(s) and/or Area(s) of Concern (AOCs) discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30) calendar days after discovery. The notification shall provide the following information, as available:
  - a. The location of the newly-identified SWMU/AOC in relation to other SWMUs on a scaled map or drawing;
  - b. The type of unit and past and present function of the unit;
  - c. The general dimensions, capacities, and structural description of the unit (available drawings and specifications provided);
  - d. The period during which the unit was operated;
  - e. The specifics on all materials, including but not limited to, wastes and hazardous constituents, that have been or are being managed at the SWMU/AOC, to the extent available; and



- f. The results of any relevant available sampling and analysis which may aid in determining whether releases of hazardous wastes or hazardous constituents have occurred or are occurring from the unit.
2. If the submitted information demonstrates a potential for a release of hazardous waste or hazardous waste constituents from the newly identified SWMU/AOC, the Illinois EPA may request in writing, that the Permittee prepare a SWMU Assessment Plan and a proposed schedule of implementation and completion of the Plan for any additional SWMU(s) discovered subsequent to the issuance of this Permit. This SWMU Assessment Plan must also propose investigations, including field investigations if necessary, to determine the release potential to specific environmental media for the newly identified SWMU/AOC. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents from the newly-discovered SWMU(s)/AOC(s) to the environment.
3. Within ninety (90) calendar days after receipt of the Illinois EPA's request for a SWMU Assessment Plan, the Permittee shall submit a SWMU Assessment Plan to the Illinois EPA for review and approval.
4. After the Permittee submits the SWMU Assessment Plan, the Illinois EPA shall either approve, conditionally approve or disapprove the plan in writing. If the plan is approved, the Permittee shall begin to implement the plan within forty-five (45) calendar days of receiving such written notification or in according to the terms and schedule established within the plan and any conditions placed on it. If the plan is disapproved, the Illinois EPA shall notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revised plan.
5. The Permittee shall submit a report documenting the results of the approved SWMU Assessment Plan to the Illinois EPA in accordance with the schedule in the approved SWMU Assessment Plan. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan.
6. The Permittee must implement a Corrective Measures Program, as necessary, to properly address any contamination encountered during the assessment. Guidance regarding the implementation of this program will be provided at the time Illinois EPA notifies the Permittee of the need for such a program.

#### **H. FUTURE RELEASES FROM SWMUs**

There exists a potential that a release may occur in the future from SWMUs identified in the RFA which did not require any corrective action at the time that the RFA or RFI was completed. If the Permittee discovers that a release has occurred from such a SWMU in the future, then the Illinois EPA must be notified of this release within thirty (30) days

after its discovery following the procedures set forth in Condition V.G.1 above. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in Subsection E above. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

**I. INTERIM MEASURES/STABILIZATION**

The Permittee shall carry out interim measures/stabilization activities in order to prevent or mitigate the migration of a release of hazardous substances into the environment, and to provide adequate protection to public health, welfare and the environment.

1. At any time during the corrective action process, the Permittee may initiate interim measures for the purpose of preventing continuing releases and/or mitigating the results of releases and/or mitigating the migration of hazardous wastes or hazardous constituents. It shall not be necessary to conduct all phases of a RCRA Facility Investigation (RFI) or a Corrective Measures Study (CMS) prior to implementing an interim measure if the Illinois EPA and the Permittee agree that a problem can be corrected, or a release cleaned up, without additional study and/or without a formal corrective measures study.
2. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed interim measure to the Illinois EPA's BOL Permit Section for approval. This information shall include, at a minimum:
  - a. Objectives of the interim measures: how the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long-term solution at the facility;
  - b. Design, construction, and maintenance requirements;
  - c. Schedules for design and construction; and
  - d. Schedules for progress reports.
3. If the Illinois EPA determines that a release cannot be addressed without additional study and/or a formal CMS, then the Illinois EPA will notify the Permittee that these must be performed. Any proposal made under this provision or any other activity resulting from such proposal, including the invocation of dispute resolution, shall not affect the schedule for implementation of the other corrective action efforts being carried out at the facility or of any other portion of the permit.
4. If the Illinois EPA determines that interim measures are necessary to protect human health or the environment, the Permittee will be notified by way of a permit modification.



5. Consistent with the annual reporting requirements of this permit, the Permittee shall submit a report assessing the effectiveness of any interim measures being carried out in accordance with this permit. Based on a review of this report, the Illinois EPA reserves the right to require additional interim measures be carried out if it is determined that the interim measure is unable to protect human health and the environment. This annual report should at a minimum contain the following information regarding each system which comprises the interim measure:
  - a. A discussion of each system's operation during the year. This discussion should address: (1) actual daily, weekly and monthly flow rates through each system; (2) any periods when the systems were not operating; and (3) deviations from the design operating procedures for the system (such as problems with drawing an adequate vacuum, downtime due to equipment failure, etc.);
  - b. Results of all monitoring efforts carried out during the year;
  - c. A discussion of the effectiveness of the system supported as appropriate with data and calculations; and
  - d. Recommended changes, if any, which should be made to the system to improve its effectiveness.
6. The Illinois EPA reserves the right to require the Permittee to remove or treat soil if the Illinois EPA determines that contaminants are present in the soils at levels such that the remediation system is unable to protect human health and the environment. Remediation objectives for corrective measures will be established by the Illinois EPA at a later date.
7. The interim measure approved for a SWMU may not be sufficient to meet the final requirements for corrective action for remediation for the unit. The adequacy of the interim measure will be addressed upon Illinois EPA review and approval of the RFI Reports and the Corrective Measures Plan, as required by this permit. As such, the Permittee may be required to expand this interim measure as necessary to address existing or additional contamination detected through RFI investigations.
8. The Illinois EPA reserves the right to require revision and modification of the interim measures implemented by the facility should it be determined by the Illinois EPA through information obtained through facility monitoring that the interim measures approved by this portion of the permit are ineffective in protecting human health and the environment.

**J. REPORTING REQUIREMENTS**

1. A "Corrective Action Progress Report (formerly referred to as Riverfront RFI Progress Report by BP Products, North America)" shall be submitted summarizing the corrective action efforts completed at each parcel during each quarter of the calendar year. This report must also contain a general description of the corrective action efforts to be completed during the next quarter of the calendar year.

a. The reports should be submitted in accordance with the following schedule:

<u>Reporting Period</u>	<u>Report to be submitted by the following</u>
January – March	May 1
April – June	August 1
July - September	November 1
October - December	March 1**

\*\* The fourth quarter report must be combined with the Annual "Corrective Action Progress Report" (due by March 1 of every year)

b. Each Corrective Action Progress Report must contain:

- (1) a summary of activities completed at each parcel during the quarter, including information regarding the amount of free product/groundwater/leachate removed on a weekly basis from various units during the quarter;
- (2) a discussion of any problems encountered while conducting corrective action at each parcel during the quarter; and
- (3) A summary of the activities anticipated to be carried out during the next quarter.

c. The "MRSA Corrective Measures Quarterly Report" for each quarter, required by the Illinois EPA's letter dated January 12, 2006 and the "90-Day SWMU 7 Status Reports" shall be incorporated into each quarterly Corrective Action Progress Report and are no longer required to be submitted as separate reports.

d. An Annual Corrective Action Progress Report must be submitted to Illinois EPA by March 1 of each year which summarizes corrective action

program activities completed at the facility during the previous calendar year (i.e., the previous January 1 to December 31). Among other things, this report must contain a compilation/summary of the information in the quarterly reports for the year, what was completed during the year, and what must still be done in the next year and in the following years. The following shall be incorporated into the Annual Corrective Action Progress Report and separate reports are no longer required: The corrective action progress report for the fourth quarter (October – December of every year).

- e. The “Annual CDF Operations, Maintenance and Monitoring Report” (referred to as Annual CDF OM&M/ Liquid Level Report by BP Products North America Inc.)
2. Final reports must be submitted to Illinois EPA for review and approval when corrective action is complete for a given parcel. Such reports must be certified by a qualified professional engineer and a person of authority from the Permittee. This certification must meet the requirements of 35 IAC 702.126. These reports must contain be detailed in nature and contain sufficient information which (1) describes in detail all investigation/remediation efforts carried out in the parcel; and (2) the efforts were carried out in accordance with the approved plan and this permit.

## SECTION VI: SPECIAL CONDITIONS

### A. REQUIRED FORMS

- ii. The permittee shall provide a completed Illinois EPA permit application form LPC-PA23 with all additional information, permit modifications, and permit applications that are submitted to the Illinois EPA Bureau of Land.
- iii. The permittee shall submit current 39(i) certifications and supporting documentation with all applications for a permit.

Note: If the applicant wants additional staff to be able to send in future modifications, certifications, etc. those individuals should also send in an individual 39i certification form.

### B. REPOSITORY

1. The permittee shall maintain a repository at the Wood River Public Library, located at 326 E. Ferguson Avenue, Wood River, Illinois. The following information shall be sent to the repository:
  - a. A copy of the approved RCRA Post-Closure Renewal Permit.
  - b. All permit applications and permit modification requests.
  - c. All Illinois EPA responses to modification requests made to the RCRA Post-Closure Permit (Log No. B-145R2).

### C. COMPLIANCE SCHEDULE

1. Cost Estimates: Within ninety (90) days of the effective date of this Permit,
  - a. The Permittee shall submit revised post-closure cost estimates and financial assurance to meet the required minimum of thirty (30) years post-closure care costs for the Pond 1 Landfill, as stated in Condition III.H. as a Class 1\* permit modification.
  - b. The Permittee shall include the corrective action cost estimates for Parcel J/ SMWU 5 - the costs associated with the post-closure care of the Permitted Non-Hazardous Waste Landfill.
  - c. The Permittee must provide an updated cost estimate for the completion of any corrective action required under this permit in order to provide financial assurance for the approved amount of that cost estimate within



90 days of the date of the effective date of this permit, as required in accordance with Title 35 Illinois Administrative Code (35 IAC) 724.201.

- d. All estimated costs must be updated annually beginning with Year 2024.
2. Survey Plat: Within ninety (90) days of the effective date of this Permit,
    - a. The Permittee shall file the certified survey plat and record of the type/location/quantity of material in the Pond 1 Landfill with the Illinois EPA, the County Recorder, and any local zoning authority or authority with jurisdiction over local land use.
    - b. The Permittee must provide to the Illinois EPA a copy of the certified survey plat (at least in a size of 11" X 17" drawing) that includes the documents that the survey plat was placed in; with the County Recorder's Office and the local zoning authority.
  3. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit revised page(s) as a Class 1\* modification for Illinois EPA review and approval, which revises Section C.8 of the approved permit application to identify the monitoring wells specific to each monitoring program (i.e., identify the wells which must be monitored for the PNWL Program) and their groundwater quality.
  4. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a modification to the Corrective Action Section (Section V) of the Permit, for Illinois EPA review and approval, which provides written permission from any applicable off-site property owner acknowledging they accept a GMZ on their property. This documentation will serve to verify off-site property owners are aware and approve of a GMZ being present on their property.
  5. Within one (1) year of the effective date of this Permit, the Permittee shall submit a proposed schedule for implementing closure activities for the East Surge Pond (ESP) as required by Condition II.F.1 as a Class 1\* modification for Illinois EPA review and approval. In accordance with Condition II.G.3, a revised cost estimate for conducting closure of the ESP must be submitted with the proposed schedule.
  6. Any proposed corrective actions to address leachate at the Pond 1 Landfill as a result of Pond 1 Landfill assessment as described in Sections III. E.3.4 and III. E.4.3 of the approved permit application must be submitted as a permit modification request in accordance with Condition III.G.1 for Illinois EPA's review and approval. The permittee must verify that automated alarm system is in place for leachate detection as required in Condition III.E.7.(c) of the Permit. In addition, as a part of the study, an Action Leakage Rate (ALR) is recommended to be determined for Pond 1 Landfill for corrective action purposed.

7. Within thirty (30) days of the date of this permit, the Permittee must submit a draft deed restriction regarding the Pond 1 Parcel with a Plat of Survey, which will be attached to the deed to the property as described in Condition II.B.6.(d) of this permit as a Class 1\* permit modification request. Once the draft deed restriction is approved by Illinois EPA, the deed restriction must be filed with the Madison County Recorder's office. A certified copy of the recorded deed restriction with a Plat of Survey must be submitted to Illinois EPA as a Class 1 permit modification request within thirty (30) days of the Illinois EPA's approval of the draft document.
8. Within ninety (90) days of the date of the permit, the Permittee must submit a document summarizing the next step for the corrective action and proposed schedule for addressing each Parcel/SWMU listed in Condition V.D.1 of this permit as a corrective action submittal.

## SECTION VII: STANDARD CONDITIONS

### GENERAL REQUIREMENTS

1. **EFFECT OF PERMIT.** The existence of a RCRA permit shall not constitute a defense to a violation of the Environmental Protection Act or Subtitle G, except for development, modification or operation without a permit. Issuance of this permit does not convey property rights or any exclusive privilege. Issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or infringement of state or local law or regulations. (Title 35 Illinois Administrative Code (35 IAC) 702.181)
2. **PERMIT ACTIONS.** This permit may be modified, reissued or revoked for cause as specified in 35 IAC 703.270 through 703.273 and Section 702.186. The filing of a request by the Permittee for a permit modification or reissuance, or a notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition. (35 IAC 702.146)
3. **SEVERABILITY.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. (35 IAC 705.202)
4. **PERMIT CONDITION CONFLICT.** In case of conflict between a special permit condition and a standard condition, the special condition will prevail. (35 IAC 702.160)
5. **DUTY TO COMPLY.** The Permittee shall comply with all conditions of this permit except for the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the Environmental Protection Act and is grounds for enforcement action; permit revocation or modification; or for denial of a permit renewal application. (35 IAC 702.141 and 703.242)
6. **DUTY TO REAPPLY.** If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must apply for a new permit at least 180 days before this permit expires, unless permission for a later date has been granted by the Illinois EPA. (35 IAC 702.142 and 703.125)
7. **PERMIT EXPIRATION.** This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 35 IAC 703.181-703.209) and through no fault of the Permittee the Illinois EPA has not issued a new permit as set forth in 35 IAC 702.125.

8. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (35 IAC 702.143)
9. DUTY TO MITIGATE. In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. (35 IAC 702.144)
10. PROPER OPERATION AND MAINTENANCE. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory, and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. (35 IAC 702.145)
11. DUTY TO PROVIDE INFORMATION. The Permittee shall furnish to the Illinois EPA, within a reasonable time, any relevant information which the Illinois EPA may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Illinois EPA, upon request, copies of records required to be kept by this permit. (35 IAC 702.148)
12. INSPECTION AND ENTRY. The Permittee shall allow an authorized representative of the Illinois EPA, upon the presentation of credentials and other documents as may be required by law, to:
  - a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location. (35 IAC 702.149)



13. **MONITORING AND RECORDS. (35 IAC 702.150)**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix A of 35 IAC 721. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, latest versions; Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, latest versions; or an equivalent method as specified in the approved Waste Analysis Plan.
  - b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report or application. These periods may be extended by request of the Illinois EPA at any time. The permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.
  - c. Records of monitoring information shall include:
    - i. The date(s), exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical technique(s) or method(s) used; and
    - vi. The result(s) of such analyses. (35 IAC 702.150)
14. **REPORTING PLANNED CHANGES.** The permittee shall give written notice to the Illinois EPA as soon as possible of any planned physical alterations or additions to the permitted facility. In general, proposed changes to the facility will need to be submitted to the Illinois EPA as permit modification request that complies with the requirements of 35 IAC 703.280. (35 IACs 702.152(a))
15. **CONSTRUCTION CERTIFICATION.** For a new hazardous waste management facility, the permittee shall not commence treatment, storage or disposal of hazardous waste; and for a facility being modified the permittee shall not treat, store or dispose of hazardous waste in the modified portion of the facility, until:

- a. The permittee has submitted to the Illinois EPA by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
  - b.
    - i. The Illinois EPA has inspected the modified or newly constructed facility and finds it is in compliance with the condition of the permit; or
    - ii. If, within 15 days of the date of submission of the letter in paragraph (a), the permittee has not received notice from the Illinois EPA of its intent to inspect, prior inspection is waived and the permittee may commence treatment, storage or disposal of hazardous waste. (35 IAC 703.247)
16. **ANTICIPATED NONCOMPLIANCE.** The Permittee shall give advanced written notice to the Illinois EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements, regulations, or the Act. (35 IAC 702.152(b))
17. **TRANSFER OF PERMITS.** This permit may not be transferred by the permittee to a new owner or operator unless the permit has been modified or reissued pursuant to 35 IAC 703.260(b) or 703.272. Changes in the ownership or operational control of a facility must be made as a Class 1 modification with the prior written approval of the Illinois EPA. The new owner or operator shall submit a revised permit application no later than 90 days prior to the scheduled change. (35 IAC 703.260)
18. **MONITORING REPORTS.** Monitoring results shall be reported at the intervals specified in the permit. (35 IAC 702.152(d))
19. **COMPLIANCE SCHEDULES.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than specified in 35 IAC 702.162. (35 IAC 702.152(e))
20. **TWENTY-FOUR HOUR REPORTING.**
- a. The Permittee shall report to the Illinois EPA any noncompliance with the permit which may endanger health or the environment. Any such information shall be reported verbally within 24 hours from the time the Permittee becomes aware of the following circumstances. This report shall include the following:
    - i. Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies.
    - ii. Information concerning the release or discharge of any hazardous waste or of a fire or explosion at the hazardous waste management facility, which could threaten the environment or human health outside the facility.

- b. The description of the occurrence and its cause shall include:
    - i. Name, address, and telephone number of the owner or operator;
    - ii. Name, address, and telephone number of the facility;
    - iii. Date, time, and type of incident;
    - iv. Name and quantity of material(s) involved;
    - v. The extent of injuries, if any;
    - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where applicable; and
    - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
  - c. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Illinois EPA may waive the five day written notice requirement in favor of a written report within fifteen days. (35 IAC 702.152(f) and 703.245(b))
21. **OTHER NONCOMPLIANCE.** The Permittee shall report all instances of noncompliance not otherwise required to be reported under Standard Conditions 18, 19 and 20, at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Standard Condition 20. (35 IAC 702.152(g))
  22. **OTHER INFORMATION.** Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Illinois EPA, the Permittee shall promptly submit such facts or information. (35 IAC 702.152(h))
  23. **REPORTING REQUIREMENTS.** The following reports required by 35 IAC 724 shall be submitted in addition to those required by 35 IAC 702.152 (reporting requirements):
    - a. **Manifest discrepancy report:** if a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days after receiving the waste, the permittee must immediately submit to the Illinois EPA a

letter describing the discrepancy and attempts to reconcile it and a copy of the manifest or shipping paper at issue. (35 IAC 724.172(b))

- b. Unmanifested waste report: The permittee must submit to the Illinois EPA within 15 days of receipt of unmanifested waste an unmanifested waste report on EPA form 8700-13B. (35 IAC 724.176)
  - c. Annual report: an annual report must be submitted covering facility activities during the previous calendar year. (35 IAC 724.175)
24. SUBMITTAL OF REPORTS OR OTHER INFORMATION. All written reports or other written information required to be submitted by the terms of this permit shall be sent to:
- Illinois Environmental Protection Illinois EPA  
Bureau of Land  
Permit Section - #33  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276
25. SIGNATORY REQUIREMENT. All permit applications, reports or information submitted to the Illinois EPA shall be signed and certified as required by 35 IAC 702.126. (35 IAC 702.151)
26. CONFIDENTIAL INFORMATION. Any claim of confidentiality must be asserted in accordance with 35 IAC 702.103 and 35 IAC 161.
27. DOCUMENTS TO BE MAINTAINED AT FACILITY SITE. The Permittee shall maintain at the facility, until closure is complete, the following documents and amendments, revisions and modifications to these documents:
- a. Waste analysis plan as required by 35 IAC 724.113(b) and this permit.
  - b. Personnel training documents and records as required by 35 IAC 724.116(d) and this permit.
  - c. Contingency plan as required by 35 IAC 724.153(a) and this permit.
  - d. Closure plan as required by 35 IAC 724.212(a) and this permit.
  - e. Cost estimate for facility closure as required by 35 IAC 724.242(d) and this permit.
  - f. Operating record as required by 35 IAC 724.173 and this permit.
  - g. Inspection schedules as required by 35 IAC 724.115(b) and this permit.



28. **WASTE MINIMIZATION.** The Permittee shall certify at least annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that one generates to the degree determined by the Permittee to be economically practicable, and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment, in accordance with 35 IAC 724.173(b)(9).

#### **GENERAL FACILITY STANDARDS**

29. **NOTICE OF WASTE FROM A FOREIGN SOURCE.** The permittee who has arranged to receive hazardous waste from a foreign source must notify the Illinois EPA in writing at least four weeks in advance of the date the waste is expected at the facility. (35 IAC 724.112(a))
30. **NOTICE OF WASTE FROM OFF-SITE.** The Permittee who receives hazardous waste from an off-site source (except where the Permittee is also the generator), must inform the generator in writing that the permittee has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the facility operating record. (35 IAC 724.112(b))
31. **GENERAL WASTE ANALYSIS.** The Permittee shall comply with the procedures described in the approved waste analysis plan. (35 IAC 724.113)
32. **SECURITY.** The Permittee shall comply with the security provisions of 35 IAC 724.114(b) and (c).
33. **GENERAL INSPECTION REQUIREMENTS.** The Permittee shall follow the approved inspection schedule. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 35 IAC 724.115(c). Records of inspections shall be kept as required by 35 IAC 724.115(d).
34. **PERSONNEL TRAINING.** The Permittee shall conduct personnel training as required by 35 IAC 724.116 and shall maintain training documents and records as required by 35 IAC 724.116(d) and (e).
35. **GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE.** The Permittee shall comply with the requirements of 35 IAC 724.117.
36. **CLOSURE REQUIREMENTS FOR ACCUMULATION AREAS.** The Permittee shall close containers storage areas, tanks, drip pads, or containment buildings used for the accumulation of on-site generated hazardous waste in accordance with the requirements identified at 35 IAC 722.117(a)(8).

### PREPAREDNESS AND PREVENTION

37. DESIGN AND OPERATION OF FACILITY. The Permittee shall maintain and operate the facility to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. (35 IAC 724.131)
38. REQUIRED EQUIPMENT. The Permittee shall equip the facility with the equipment set forth in the approved contingency plan, as required by 35 IAC 724.132.
39. TESTING AND MAINTENANCE OF EQUIPMENT. The Permittee shall test and maintain the equipment specified in the contingency plan and this permit as necessary to assure its proper operation in time of emergency. Such testing and maintenance activities are set forth in the approved inspection schedule. (35 IAC 724.133)
40. ACCESS TO COMMUNICATIONS OR ALARM SYSTEM. The Permittee shall maintain access to the communications or alarm system as required by 35 IAC 724.134.
41. REQUIRED AISLE SPACE. The Permittee shall maintain aisle space as required by 35 IAC 724.135 and National Fire Protection Association (NFPA) requirements.
42. ARRANGEMENTS WITH STATE AND LOCAL AUTHORITIES AND EMERGENCY RESPONSE CONTRACTORS. The Permittee shall attempt to make emergency response arrangements with State and local authorities and agreements with State emergency response teams and emergency response contractors and equipment suppliers as required by 35 IAC 724.137. If State or local officials refuse to enter in preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

### CONTINGENCY PLAN

43. IMPLEMENTATION OF PLAN. The provisions of the contingency plan must be carried out by the Permittee immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment (35 IAC 724.151(b)). At a minimum, this includes any fire or explosion which occurs in an area where hazardous waste is being managed (treated, stored or disposed) (35 IAC 703.241). Within 15 days of any incident that requires implementation of the contingency plan, the owner or operator must submit a written report to the Illinois EPA as required by 35 IAC 724.156(j).
44. COPIES OF PLAN. A copy of the contingency plan, including any revisions, must be maintained at the facility and submitted to all local police and fire departments, hospitals and state and local emergency response teams as required by 35 IAC 724.153.
45. AMENDMENTS TO PLAN. The Permittee shall review and immediately amend, if necessary, the contingency plan, as required by 35 IAC 724.154.

46. EMERGENCY COORDINATOR. A trained emergency coordinator shall be available at all times in case of an emergency as required by 35 IAC 724.155 and 724.156.

#### **MANIFEST SYSTEM RECORD KEEPING AND REPORTING**

47. MANIFEST SYSTEM. The Permittee shall comply with the manifest requirements of 35 IAC 724.171, 724.172 and 724.176.
48. OPERATING RECORD. The Permittee shall maintain a written operating record at the facility in accordance with 35 IAC 724.173.
49. ANNUAL REPORT. The Permittee shall prepare and submit an annual report to the Illinois EPA prior to March 1st of each year in accordance with the requirements of 35 IAC 724.175.

#### **CLOSURE**

50. PERFORMANCE STANDARD. The Permittee shall close the facility as required by 35 IAC 724.211 and in accordance with the approved closure plan.
51. AMENDMENT TO CLOSURE PLAN. The Permittee must amend the closure plan whenever there is a change in the expected year of closure or whenever a change in the facility operation plans or facility design affects the closure plan pursuant to 35 IAC 724.212(c).
52. NOTIFICATION OF CLOSURE. The Permittee shall notify the Illinois EPA at least 60 days prior to the date it expects to begin closure. (35 IAC 724.212(d))
53. TIME ALLOWED FOR CLOSURE. After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste and complete closure activities in accordance with the schedule(s) specified in the closure plan. (35 IAC 724.213)
54. DISPOSAL AND/OR DECONTAMINATION OF EQUIPMENT. When closure is completed, the Permittee shall decontaminate and/or dispose of all facility equipment and structures as required by the approved closure (35 IAC 724.214) plan.
55. CERTIFICATION OF CLOSURE. When closure is completed, the Permittee shall submit certification to the Illinois EPA in accordance with 35 IAC 724.215 that the facility has been closed as specified by the approved closure plans.
56. COST ESTIMATE FOR FACILITY CLOSURE. The Permittee's original closure cost estimate, prepared in accordance with 35 IAC 724.242, must be:

- a. Adjusted for inflation 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 724.243. However, if the owner/operator is using the financial test or corporate guarantee, it must be updated for inflation within 30 days after close of the firm's fiscal year, and before the submission of updated information to the Illinois EPA as specified in Section 724.243(f).
  - b. Revised no later than 30 days after the Illinois EPA has approved a request to modify the closure plan, if the change in the closure plan increases the cost of closure.
  - c. Kept on record at the facility and updated. (35 IAC 724.242)
  - e. Made immediately available to Illinois EPA personnel upon Illinois EPA request.
  - f. Maintained at the value approved by Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.
57. **FINANCIAL ASSURANCE FOR FACILITY CLOSURE.** The Permittee shall demonstrate compliance with 35 IAC 724.243 by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by the previous Permit Condition. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.243.
- Financial assurance documents submitted to Illinois EPA should be directed to the following address:
- Illinois Environmental Protection Illinois EPA  
Bureau of Land #24  
Financial Assurance Program  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276
58. **LIABILITY REQUIREMENTS.** The Permittee shall demonstrate continuous compliance with the requirements of 35 IAC 724.247 and the documentation requirements of 35 IAC 724.251.
59. **INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS.** The Permittee shall comply with 35 IAC 724.248 whenever necessary.



### LAND DISPOSAL RESTRICTIONS

60. **DISPOSAL PROHIBITION.** Any waste identified in 35 IAC Part 728, Subpart C, or any mixture of such a waste with nonrestricted wastes, is prohibited from land disposal unless it meets the standards of 35 IAC Part 728, Subpart D, or unless it meets the requirements for exemptions under Subpart C. "Land disposal" means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, or vault intended for disposal.
61. **DILUTION PROHIBITION.** The Permittee shall not in any way dilute a restricted waste or residual from treatment of a restricted waste as a substitute for adequate treatment in order to achieve compliance with 35 IAC 728, Subpart D (35 IAC 728.103).
62. **WASTE ANALYSIS.**
  - a. The Permittee must test his waste or extract developed, using the test method identified in Appendix I of 40 CFR Part 268, or use knowledge of the waste, to determine if the waste is restricted from land disposal.
  - b. For any waste with treatment standards expressed as concentrations in the waste extract, the Permittee must test the treatment residues or an extract of such residues developed using the test method described in Appendix I of 40 CFR Part 268, to assure that the treatment residues or extract meet the applicable treatment standard.
  - c. If the treatment residues do not meet the treatment standards, or if the Permittee ships any restricted wastes to a different facility, the Permittee shall comply with the requirements applicable to generators in 35 IAC 728.107 and 728.150(a)(1).
63. **STORAGE RESTRICTIONS**
  - a. The Permittee shall not store hazardous wastes restricted from land disposal under 35 IAC Part 728, Subpart C unless such wastes are stored only in containers or tanks, and are stored solely for the purpose of the accumulation of such quantities as is necessary to facilitate proper recovery, treatment, or disposal, and: (1) each container is clearly marked to identify its contents and the date each period of accumulation begins; (2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, as required by 35 IAC 728.150.
  - b. The Permittee must comply with the operating record requirements of 35 IAC 724.173.

64. NEW DETERMINATIONS OF PROHIBITED WASTES

Wastes which are prohibited from land disposal under 35 IAC Part 728, Subpart C, or for which treatment standards have been established under 35 IAC 728, Subpart D, subsequent to the date of issuance of this permit, shall be subject to the conditions number 59 through 62 above.

**POST-CLOSURE**

65. CARE AND USE OF PROPERTY. The Permittee shall provide post-closure care for the facility as required by 35 IAC 724.217 and in accordance with the approved post-closure plan.
66. AMENDMENT TO POST-CLOSURE PLAN. The Permittee must amend the post-closure plan whenever a change in the facility operation plans or facility design affects the post-closure plan or when an unexpected event has occurred which has affected the post-closure plan pursuant to 35 IAC 724.218(d).
67. COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 IAC 724.244, must be:
- a. Adjusted for inflation either 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year. This permit condition is applicable throughout the entirety of the post-closure care period.
  - b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of the post-closure plan.
  - d. Kept on record at the facility and updated. (35 IAC 724.244).
  - e. Maintained at the value approved by Illinois EPA with annual adjustment for inflation during the post-closure care period and cannot be decreased unless approved by the Illinois EPA in a permit modification.
68. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 IAC 724.245 and 703.241(a)(2) by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by the Permit Condition 67. This financial assurance shall be maintained at such value throughout the post-closure care period and shall be adjusted accordingly pursuant to Permit Condition 67. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.245.

Financial assurance documents submitted to Illinois EPA should be directed to the following address:

Illinois Environmental Protection Illinois EPA  
Bureau of Land #24  
Financial Assurance Program  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

69. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS. The Permittee shall comply with 35 IAC 724.248 whenever necessary.

**SECTION VIII: REPORTING AND NOTIFICATION REQUIREMENTS**

The reporting and notification requirements of each section of the RCRA permit are summarized below. This summary table is provided to “highlight” the various reporting and notification requirements of this permit but is not meant to supersede the requirements of the various sections of this permit.

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
II.B.2	Notify Illinois EPA if the wastewater/ leachate sent to ESP is found hazardous	Immediately
II.D	Notify Illinois EPA of unknown level drop or leaking dike	Within 7 days after problem is detected
II.F.1	Submit to the Illinois EPA of a proposed schedule for the commencement of closure activities to close the ESP	Within 1 year of the effective date of this permit.
II.F.2	Notify Illinois EPA closure of ESP begins and submit a sampling and analysis plan.	180 days prior to date of closure of ESP begins
II.F.5	Submit Certification of Closure	Within 60-day of completion of closure
III.F.3 -6	Submit to the Illinois EPA the Leachate Data Quarterly Monitoring Report; and additional data as per the condition	May 1; August 1; Nov 1; and Feb 1 of each year
III.F.7	Submit Class 1* Modification Request when previously undetected parameter in leachate is detected.	Within 30 days of leachate analysis.
III.G.2	Request permit modification to remove the liner or hazardous wastes	Prior to removing the liner or wastes
III.G.4.	Certify to the Illinois EPA that post-closure was performed in accordance with the approved post-closure plan	Within 60 days of the completion of the post-closure care period
IV.D.4	Notify Illinois EPA if any of the wells identified in Condition IV.D.1 and IV.D.2 are damaged, or the structural integrity has been compromised	Within 30 days of the date the damage is detected



<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
IV.D.6	Provide Illinois EPA boring logs, construction diagrams, and data sheets from new or replacement wells	Within 30 days of the date installation is complete
IV.J.2	Groundwater monitoring data required each quarter, and additional data required in Conditions IV.F., IV.G, and IV.I.	Semi-annually
IV.J.3	Collect quarterly groundwater surface elevation data	Semi-annually
IV.J.4	Quarterly groundwater withdrawal rates	Semi-annually
IV.J.5	Gradient control measurements.	Semi-annually
IV.J.6	Statistical evaluations, as required by Condition V.F.2.e	Every 5-years in GMZ Evaluation
IV.J.7	Groundwater flow rate and direction in the uppermost aquifer.	Semi-annually
IV.J.8	Collect groundwater samples per Condition IV.F.8 and depict the extent of dissolved contamination to define the extent of contamination.	Semi-annually
IV.J.9	The surveyed elevation of the top of well casing.	Every 5 years.
IV.J.10	Elevation of the bottom of each monitoring well.	Annually during the second quarter sampling event.
IV.J.11	Electronic Reporting	Semi-annually
V.F.3	Submit annual Cost Estimate for Corrective Action	By January 30 each year
V.G.1	Notify Illinois EPA of Newly Identified SWMU/AOC	Within 30-day of discovery
V.G.3	Submit to the Illinois EPA a SWMU Assessment Plan	Within 90 days of Illinois EPA's request
V.H.1	Notify Illinois EPA of a new releases from a SWMU	Within 30 days of such discovery

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
VII.11	Information requested by Illinois EPA and copies of records required to be kept by this permit.	Reasonable time.
VII.14	Notify Illinois EPA of planned physical alterations or additions	At least 15 days prior to planned change
VII.16	Notify Illinois EPA of changes which may result in permit noncompliance	Advanced written notice to the Illinois EPA
VII.17	Application for permit modification indicating permit is to be transferred.	No later than 90 days prior to scheduled change in ownership
VII.19	Submission of any information required in a compliance schedule.	As per Section VI.C of the renewal permit
VII.20	Report to Illinois EPA any non-compliance which may endanger health or environment	
	- via telephone	Within 24 hours after discovery
	- in writing	Within 5 days after discovery
VII.21	Report all other instances of noncompliance	March 1 of each year along with Annual Report
VII.29	Notify Illinois EPA in writing of expected receipt of hazardous waste from foreign source	At least 4 weeks prior to receipt of waste.
VII.43	Implementation of Contingency Plan.	Immediately upon incident
	Notify appropriate state and local agencies with designated response roles.	Within 15 days of incident
	Notify appropriate local officials.	Immediately, if emergency coordinator's assessment indicates evacuation of local area is advisable.
	Notify the Illinois EPA via telephone if emergency coordinator determines there has been a release, fire or explosion which could threaten human health or the environment, outside the facility	Immediately after determination made

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
	Report to Illinois EPA details regarding incident which required implementation of contingency plan	Within 15 days after event
VII.49	Submit annual report required by 35 IAC 724.175.	March 1 of each year
VII.51	Application for permit modification amending closure plan.	Whenever there is a change that affects the closure plan
VII.52	Notify Illinois EPA of intention/ expectation of closure	At least 60 days prior to beginning closure
VII.56.a and VII.67.a	Adjust closure and post-closure cost estimates for inflation	Within 60 days before anniversary date, or within 30 days after close of the firm's fiscal year
VII.56.b and VII.67.b	Revision of closure and post-closure cost estimates	Withing 30 days of the close of the company's fiscal year
VII.59 and VII.69	Notify Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings.	Within 10 days after commencement of proceeding.

**ATTACHMENT A**

**IDENTIFICATION OF APPROVED PERMIT APPLICATION**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**





**ATTACHMENT A  
IDENTIFICATION OF APPROVED PERMIT APPLICATION**

1. RCRA Post-Closure Draft Renewal Application dated May 17, 2018.
2. "RCRA Part B Permit Renewal Application" dated August 3, 2018 (completely replaced May 2018 draft application).
3. "Response to Illinois EPA Comments dated July 19, 2019" dated September 3, 2019.
4. "Response to Illinois EPA Comments dated May 5, 2020" dated June 19, 2020.
5. Additional Information, dated April 8, 2021.
6. Additional Information for B-145R2- Riverfront Property Renewal Application, dated June 22, 2021.
7. Supplemental Pond 1 Landfill Information to Section E, dated November 24, 2021.
8. Additional Information for B-145R2- Replacement Page, Cone of Depression (COD) Well G669/HPW61 Repairs, dated May 10, 2022.
9. Additional Information for B-145R2- Replacement Page, for Section B and Section C, dated April 12, 2023.



**ATTACHMENT B**

**LOCATION MAP & DRAWING OF PERMITTED UNITS**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



Figure B-1: Site Location map





Figure B-3: East Surge Pond





**ATTACHMENT C**

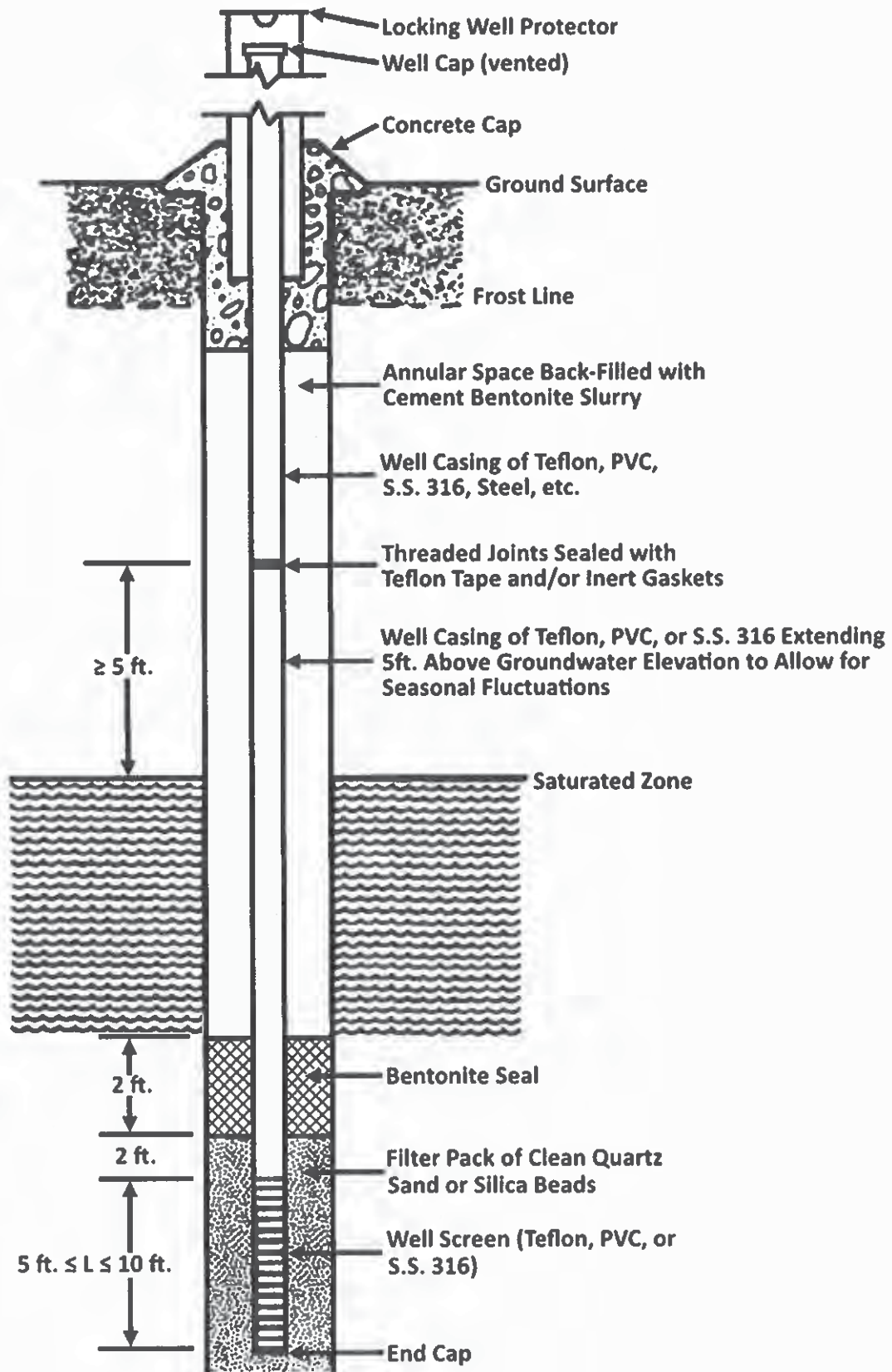
**GROUNDWATER MONITORING ATTACHMENTS (Section IV)**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

# Monitoring Well Diagram





**ILLINOIS EPA MONITOR WELL PLUGGING AND ABANDONMENT PROCEDURES**

		Well Construction	Plugging Procedure
		I-A ...if backfilled with cement grout above bentonite seal and/or sandpack:	<ol style="list-style-type: none"> <li>1. Cut casing off at desired depth.</li> <li>2. Mix neat cement slurry (5 gal. water per 94 lb. bag cement).</li> <li>3. Insert tremi pipe (1" i.d. pvc) into well and extend to bottom.</li> <li>4. Slowly pump slurry under low pressure through tremi pipe.</li> <li>5. Slowly withdraw tremi pipe - making sure bottom of pipe remains below pure slurry.</li> <li>6. Continue slow pumping until all formation water and the watery slurry mix is displaced from top of casing.</li> </ol>
		I-B ...if backfilled with soft sediments (cuttings) above bentonite seal and/or sandpack:	<ol style="list-style-type: none"> <li>1. Knock out and remove thin surface concrete plug, if present.</li> <li>2. Re-auger entire length of well.</li> <li>3. Remove well casing from re-augured borehole.</li> <li>4. Mix neat cement slurry (5 gal. water per 94 lb. bag cement).</li> <li>5. Insert tremi pipe (1" i.d. pvc) into augers and extend to bottom.</li> <li>6. Slowly pump slurry under low pressure through tremi pipe.</li> <li>7. Continue slow pumping until all formation water and the water slurry mix is displaced from top of casing.</li> <li>8. Slowly withdraw tremi pipe - making sure bottom of pipe remains below pure slurry.</li> <li>9. Pull a flight of augers (5" if in unstable materials and hole collapse is likely or 10" if in competent material and collapse is unlikely).</li> <li>10. Top off cement slurry after each flight is removed.</li> </ol>
		I-C ...if monitor well construction is unknown:	<ol style="list-style-type: none"> <li>1. Follow procedures in I-A.</li> </ol>
II. Bedrock Wells	II-A ...All bedrock monitor wells:		<ol style="list-style-type: none"> <li>1. Cut casing off at desired depth.</li> <li>2. Mix neat cement slurry (5 gal. water per 94 lb. bag cement).</li> <li>3. Insert tremi-pipe (1" i.d. pvc) into well and extend to bottom.</li> <li>4. Slowly pump slurry under low pressure through tremi pipe.</li> <li>5. Slowly withdraw pipe making sure bottom of pipe remains below pure slurry.</li> <li>6. Continue slow pumping until all formation water and the watery slurry mix is displaced from top of casing.</li> </ol>





Site Number: \_\_\_\_\_

County: \_\_\_\_\_

Site Name: \_\_\_\_\_

Well #: \_\_\_\_\_

State \_\_\_\_\_

Plane Coordinate: X \_\_\_\_\_ Y \_\_\_\_\_ (or) Latitude: ° ' " Longitude: ° ' " Borehole #: \_\_\_\_\_

Surveyed by: \_\_\_\_\_

IL Registration #: \_\_\_\_\_

Drilling Contractor: \_\_\_\_\_

Driller: \_\_\_\_\_

Consulting Firm: \_\_\_\_\_

Geologist: \_\_\_\_\_

Drilling Method: \_\_\_\_\_

Drilling Fluid (Type): \_\_\_\_\_

Logged By: \_\_\_\_\_

Date Started: \_\_\_\_\_ Date Finished: \_\_\_\_\_

Report Form

Completed By: \_\_\_\_\_

Date: \_\_\_\_\_

**ANNULAR SPACE DETAILS**

Type of Surface Seal: \_\_\_\_\_

Type of Annular Sealant: \_\_\_\_\_

Installation Method: \_\_\_\_\_

Setting Time: \_\_\_\_\_

Type of Bentonite Seal – Granular, Pellet, Slurry  
(Choose One)

Installation Method: \_\_\_\_\_

Setting Time: \_\_\_\_\_

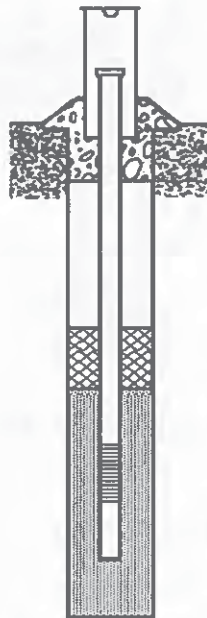
Type of Sand Pack: \_\_\_\_\_

Grain Size: \_\_\_\_\_ (Sieve Size)

Installation Method: \_\_\_\_\_

Type of Backfill Material: \_\_\_\_\_  
(if applicable)

Installation Method: \_\_\_\_\_



Elevations  
(MSL)\*

Depth (.01ft.)  
(BGS)

Top of Protective

Top of Riser Pipe

Ground Surface

Top of Annular Sealant

Static Water Level  
(After Completion)

Top of Seal

Top of Sand Pack

Top of Screen

Bottom of Screen

Bottom of Well

Bottom of Borehole

\* Referenced to a National Geodetic Datum

**WELL CONSTRUCTION MATERIAL**

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

**CASING MEASUREMENTS**

Diameter of Borehole (inches)	
ID of Riser Pipe (inches)	
Protective Casing Length (feet)	
Riser Pipe Length (feet)	
Bottom of Screen to End Cap (feet)	
Screen Length (1 <sup>st</sup> slot to last slot) (feet)	
Total Length of Casing (feet)	
Screen Slot Size**	

\*\*Hand-Slotted Well Screens are Unacceptable



# Illinois Environmental Protection Illinois EPA

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

**Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.**

Facility Name: \_\_\_\_\_

Facility Address: \_\_\_\_\_

Site ID #: \_\_\_\_\_ Fed ID #: \_\_\_\_\_

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

LPC-160 Forms

Groundwater

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

Semi-Annual

Annual

Biennial

Leachate

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

Semi-Annual

Annual

Biennial

Groundwater Data (without LPC-160 Forms)

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

Annual

Semi-Annual

Biennial

Well Construction Information

Well Construction Forms, Boring Logs and/or Abandonment Forms

Well Survey Data (e.g., Stick-up Elevation Data)

Notice of Statistically Significant Evidence of Groundwater Contamination (35 IAC 724.198)

Notice of Exceedance of Groundwater Concentration Limit (35 IAC 724.199(h))

Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater (35 IAC 724.199(i))

Gas Monitoring Reports

Other (identify)

\_\_\_\_\_  
\_\_\_\_\_

**Formatting Requirements for the 01 Record of the Electronically Submitted Groundwater and Leachate Data**  
(the 01 Record portion of the LPC-160 is included for example purposes)

**ILLINOIS ENVIRONMENTAL PROTECTION ILLINOIS EPA  
DIVISION OF LAND POLLUTION CONTROL  
CHEMICAL ANALYSIS FORM**

Page 1 of \_\_\_\_

RECORD CODE							TRANS CODE
L	P	C	S	M	0	1	A
1					7		8

REPORT DUE DATE \_\_\_\_/\_\_\_\_/\_\_\_\_  
36 M D Y 41

FEDERAL ID NUMBER \_\_\_\_\_

SITE INVENTORY NUMBER	9 _____ 18	MONITOR POINT NUMBER	19 22
REGION _____	CO. _____	DATE COLLECTED	____/____/____ 23 M D Y 28
FACILITY NAME _____			

**FOR IEPA USE ONLY**

LAB \_\_\_\_\_  
29

DATE RECEIVED \_\_\_\_/\_\_\_\_/\_\_\_\_  
42 M D Y 47

BACKGROUND SAMPLE (X) \_\_\_\_\_ TIME COLLECTED \_\_\_\_ : \_\_\_\_  
54 (24 Hr. Clock) 55 H M 58

UNABLE TO COLLECT SAMPLE \_\_\_\_\_  
(see Instructions) 59

MONITOR POINT SAMPLED BY \_\_\_\_\_  
(see Instructions) 60 OTHER (SPECIFY) \_\_\_\_\_

SAMPLE FIELD FILTERED - INORGANICS (X) \_\_\_\_\_ ORGANICS (X) \_\_\_\_\_  
61 62

SAMPLE APPEARANCE \_\_\_\_\_  
63

COLLECTOR COMMENTS \_\_\_\_\_  
103

LAB COMMENTS \_\_\_\_\_  
150

II 532 1213  
LPC 160 12/2011

This Illinois EPA is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$25,000 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3<sup>rd</sup> Edition, September 1986 or equivalent methods approved by the Illinois EPA. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

\*Only Key punch with Data in Column 35 or Columns 38-47



**KEY:**

<u>Spaces Numbered</u>	<u>Description</u>	<u>Format</u>
Spaces 1-7	Record Code	LPCSM01
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	G000
Spaces 23-28	Date Collected	000000
Space 29	Lab	
Spaces 30-35	Filler	
Spaces 36-41	Report Due Date	000000
Spaces 42-47	Date Received	000000
Spaces 48-53	Filler 2	
Space 54	Background Sample	
Spaces 55-58	Time Collected	0000
Space 59	Unable to Collect Sample	
Space 60	Monitoring Point Sampled By	
Space 61	Field Filtered – Inorganic	
Space 62	Field Filtered – Organic	
Spaces 63-102	Sample Appearance	
Spaces 103-142	Collector Comments	
Spaces 143-149	Filler 3	
Spaces 150-159	Lab Comments	

**Formatting Requirements for the 02 Record of the Electronically Submitted Groundwater and Leachate Data**  
(the 02 Record portion of the LPC-160 is included for example purposes)

RECORD CODE L P C S M 0 2 | TRANS CODE A (COLUMNS 9-29 FROM ABOVE)  
 1 | | | | | | | 7 | | | | | | | 8

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	Remarks See Inst.	Replicate	< or >	Value
Q	TEMP OF WATER (unfiltered ° F)	<u>0</u> <u>0</u> <u>0</u> <u>1</u> <u>1</u> 30 34	<u>35</u>	<u>36</u>	<u>37</u>	38 _____ • _____ 47
Q	SPEC COND (unfiltered µmhos)	<u>0</u> <u>0</u> <u>0</u> <u>9</u> <u>4</u>	—	—	—	_____ • _____
Q	pH (unfiltered units)	<u>0</u> <u>0</u> <u>4</u> <u>0</u> <u>0</u>	—	—	—	_____ • _____
Q	ELEV OF GW SURF (ft ref MSL)	<u>7</u> <u>1</u> <u>9</u> <u>9</u> <u>3</u>	—	—	—	_____ • _____
Q	DEPTH OF WATER (ft below LS)	<u>7</u> <u>2</u> <u>0</u> <u>1</u> <u>9</u>	—	—	—	_____ • _____
A	BTM WELL ELEV (ft ref MSL)	<u>7</u> <u>2</u> <u>0</u> <u>2</u> <u>0</u>	—	—	—	_____ • _____
Q	DEPTH TO WATER FR MEA PT (ft)	<u>7</u> <u>2</u> <u>1</u> <u>0</u> <u>9</u>	—	—	—	_____ • _____
		_____	—	—	—	_____ • _____
		_____	—	—	—	_____ • _____

IL 532 1213  
LPC 160 12/2011

This Illinois EPA is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$25,000 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Illinois EPA. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

\*Only Keypunch with Data in Column 35 or Columns 38-47

**Key:**

<u>Spaces Numbered</u>	<u>Description</u>	<u>Format</u>
Spaces 1-7	Record Code	LPCSM02
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	
Spaces 23-28	Date Collected	
Space 29	Lab	
Spaces 30-34	STORET Number	
Space 35	Remarks	
Space 36	Replicate	
Space 37	< or >	
Space 38-47	Value	



**ATTACHMENT D**

**CORRECTIVE ACTION ATTACHMENTS (Section V)**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**D-1. Summary of Corrective Action and Permit Related Submittals at BP/Riverfront**

The following is a list of the corrective action related submittals which have been made to date by BP and that the Illinois EPA approved them. Each submittal was assigned a log number by Illinois EPA and is presented in the order it was received.

Log No.	Topic of Submittal	Date Approved
----	GMZ Proposal	4/6/94
CA-1	RFI Phase I Wkpln and PRS Corrective Action Plan (for 10 SWMUs and 1 PRS).	9/7/94
CA-1	RFI Phase I Report	12/2/96
CA-2	Conceptual Phase II/III Wkplan (for 10 SWMUs and 1 PRS)	8/6/97
CA-3	FCSA Characterization Report	10/7/97
CA-4	LOD Monitoring Program	1/14/98 (disapproved)
CA-5	Updated GMZ	1/14/98 (disapproved)
CA-6	Phase II Workplan for the CDF and MRSA.	8/7/98
CA-7	CDF Cover Evaluation Workplan	6/10/98
CA-8	CDF Well Evaluation Workplan	11/18/98
CA-9	FCSA Phase II workplan	Superseded by CA-15
CA-10	Updated GMZ	12/5/00 (disapproved)
CA-11	LOD Characterization Report	2/26/01 (disapproved)
CA-12	CDF Cover Evaluation Report	9/7/99
CA-13	CDF and MRSA Phase II/III report	8/17/00
CA-14	Workplan for Vegetative Cover Pilot Study at CDF.	6/15/99
CA-15	FCSA Phase II Workplan, Revision 1	Superseded by CA-20
CA-16	CDF Well Evaluation Report	11/28/00
CA-17	Tree Hydraulic Control Pilot Study Workplan -CDF	10/5/99
CA-18	CDF Slurry Wall Investigation Workplan	5/10/01
CA-19	Plan to Remove 36" and 72" Outfalls (FCSA)	8/2/00
CA-20	36" and 72" Outfall Removal Report (at FCSA); and Phase II/III RFI for FCSA	11/13/03
CA-21	Response to IEPA's CA-13 letter re: the CDF/ MRSA	Superseded by CA-26&27
CA-22	Response to Cond. 8 of IEPA's CA-16 letter re: CDF	6/4/01
CA-23	Proposed GW Program for CDF	Superseded by CA-29
CA-24	Phase II/III Workplan (for 10 SWMUs and 1 PRS).	8/9/01
CA-25	Initial CA725 Determination	2/11/02
CA-26	CMP Report for CDF	1/10/02
CA-27	Determination of Class II GW for MRSA	2/6/02
CA-28	CMP Report for MRSA	2/6/02
CA-29	GW Monitoring Program for CDF	9/13/02
CA-30	CA750 Determination	6/11/02
CA-31	Re-Evaluation of GMZ	4/24/02
CA-32	Parcel A workplan	9/5/02
CA-33	FCSA, Class II Determination	9/5/02
CA-34	FCSA RFI Phase II report	11/13/03



Log No.	Topic of Submittal	Date Approved
CA-35	Comments on IEPA's 2/11/02 CA725 approval letter (B-147-CA-25)	6/14/02
CA-36	CDF CMP Report, Addendum 1	6/14/02
CA-37	CCR/Ph II RFI Wkpln, Parcel B and SW Chan Tract	11/15/02
CA-38	Revised Schedule for completing CA	11/14/02
CA-39	Phase II RFI Work Plan -Hydrocarbon Pool (SWMU 7)	1/29/03
CA-40	MRSA Stage 1 Corrective Measures Report	6/4/03
CA-41	CM Design Report for the MRSA	4/28/03
CA-42	Revised Schedule for completing CA	Superseded by CA-48
CA-43	FCSA Trench Interim Measures Const. Report	11/13/03
CA-44	CDF Stage 1 CM Liquid Extraction System Installation	10/30/03
CA-45	CDF 2003 Phytoremediation Status Report	10/11/05
CA-46	Parcel A Investigation Report and Closure Plan	3/8/05
CA-47	Phase I CMP for FCSA	10/28/05
CA-48	Revised CA Schedule	12/30/04
CA-49	Interim Measures to Seal Joints of 84" Sewer at FCSA	4/12/05
CA-50	Phase II RFI Report for SWMU 7 (Hydrocarbon Pool)	1/11/06
CA-51	MRSA Corrective Action Completion Report (Sheet Pile)	1/12/06
CA-52	Extension request for submittal of Final Construction Report for MRSA Sheet Pile Wall/Interceptor Trench	12/16/04
CA-53	Response to IEPA Letter dated 12/15/04 regarding Permitted Non-hazardous Waste Landfill (PNWL).	4/27/05
CA-54	Revised CA Schedule (response to CA-48 letter)	9/21/05
CA-55	Document of recording of Ordinance & MOU for Parcel A	5/1/07
CA-56	Request to postpone replacement of G101 in FCSA.	11/20/06
CA-58	Plan to move forward and status of the FCSA	1/4/07
CA-59	Establishing Background Values for PNWL	8/1/06
CA-60	Submittal assigned this log number subsequently determined not to be associated with this corrective action program and was removed from the tracking system.	1/19/2023
CA-61	FCSA Underground Pipeline Inv Work Plan	Rec'd 3/17/07, Combined with CA-64
CA-62	Draft ELUC for Parcel A and documentation of removal of impacted soil from Barge Maintenance Area	5/1/07
CA-63	Parcel B Land Reuse Investigation Report & Closure Plan	Comments provided by IEPA on 1/24/07(soil) and 5/11/09(gw)
CA-64	Corrective Measures Study for SWMU 7	6/12/09
CA-65	Revised background values for PNWL	8/21/07
CA-66	Proposed GW monitoring locations for PNWL and well abandonment forms for G07S and G12S at PNWL	5/20/09
CA-67	Final Corrective Measures Plan for the CDF	8/1/07
CA-68	Re-Evaluation of GMZ	Rec'd 4/25/07
CA-69	Revised Appendix J and Figure 6-1 for Parcel B.	Rec'd 6/1/07
CA-70	Recorded ELUC for Parcel A	1/14/08
CA-71	Statistical Proposal for CDF	9/31/09

Log No.	Topic of Submittal	Date Approved
CA-72	White Paper - Vertical Parceling	Rec'd 7/2/07
CA-73	Improvements to the FCSA Interim Measures	Rec'd 8/24/07
CA-74	Demo that PNWL exceedances of background values are not due to significant change in gw quality	5/20/09
CA-75	Proposed BG Values for Well G11S at PNWL.	5/20/09
CA-76	Demo for GW Monitoring at PNWL.	5/20/09
CA-77	Final Design and Construction Work Plan for CDF	11/18/08
CA-78	GW Demonstration PNWL on exceedance of background not significant	5/20/09
CA-79	Groundwater Demonstration and PNWL.	5/20/09
R-CA-1	Demo that PNWL exceedances of background are not due to significant change in gw quality	5/20/09
R-CA-2	Parcel A Uppermost Aquifer GW Data Inventory within Butene Polymerization Waste Area	Rec'd 12/16/08
R-CA-3	Demo that PNWL exceedances of background are not due to significant change in gw quality	Rec'd 4/13/09
R-CA-4	Response to IEPA's 3/31/09 Vertical Parceling Letter.	Rec'd 6/01/09
R-CA-5	Construction Document Report - Final Corrective Measure-CDF	Rec'd 6/29/09
R-CA-6	Revised Background Values for PNWL	Rec'd 7/20/09
R-CA-7	Demo that PNWL exceedances are not due to significant changes in gw quality.	1/19/2010
R-CA-8	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	1/9/2010
R-CA-9	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-10	Response to 10/02/09 Letter regarding FCSA (see B-145-CA-73 above)	1/10/2011
R-CA-11	Proposal to Remove FPH and MNA program @ SWMU 7	3/16/2011
R-CA-12	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill. Also includes an Assessment Monitoring Plan	12/17/2012
R-CA-13	Site Wide Geology Report (note: the approval letter for this report is different than the 12/17/12 letter addressing several submittals associated with the PNWL and log numbers CA-9, 12, 16, 24, 26, 28 and 29)	12/17/2012
R-CA-14	Corrective Measure to address FPH plume at LOD Area (different letter than the 3/6/13 letter for CA-15 and CA-17)	3/6/2013
R-CA-15	Summary of GW Removal Activities in Parcel B/FCSA	3/6/2013 (disapproval)
R-CA-16	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-17	Revised Pages of Parcel B (FCSA) Land Reuse Investigation	3/6/2013 (Disapproval)
R-CA-18	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-19	CCR Workplan Uppermost Aquifer for Parcel A	6/15/16

Log No.	Topic of Submittal	Date Approved
R-CA-20	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-21	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill (4Q, 2010)	12/17/2012
R-CA-22	Proposed background value for PNWL	12/17/2012
R-CA-23	Annual Observation Monitoring Program, Evaluation of SSIs associated with the Riverfront GW Monitoring Program	7/24/2014
R-CA-24	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-25	Additional information regarding SWMU 7 submitted in response to IEPA's 3/6/11 letter (see R-CA-11 above)	03/26/14
R-CA-26	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 2Q 2011	12/17/2012
R-CA-27	Semi-Annual Observation Monitoring Program, Evaluation of SSIs associated with the Riverfront GW Monitoring Program	7/24/2014
R-CA-28	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 3Q 2011	12/17/2012
R-CA-29	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4Q 2011	12/17/2012
R-CA-30	Parcel G Current Report/Characterization Workplan	01/22/2013
R-CA-31	Background values for Wells G090 and G091 at PNWL	12/17/2012
R-CA-32	Semi-Annual Observation Monitoring Program, Evaluation of SSI's associated with the Riverfront GW monitoring program	7/24/2014
R-CA-33	Re-evaluation of GMZ	8/28/13
R-CA-34	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill--1Q12	03/26/14
R-CA-35	Request to incorporate Annual Liquid Level Report into Annual CDF OM&M Report	Rec'd 05/30/12
R-CA-36	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill 2Q 2012	03/26/14
R-CA-37	SSIs identified during 2Q 2012 for CA groundwater monitoring program	7/24/2014
R-CA-38	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 3Q 2012	03/26/14
R-CA-39	Ext request for responding to 12/17/12 letter re: PNWL (see R-CA-9, 12, 16, 18, 20, 21, 22, 24, 24, 26, 28, 29 and 31 above)	2/19/15
R-CA-40	Ext request for responding to 12/17/12 letter re: Sitewide Geology Report and ROST Study (see R-CA-13 above)	11/26/14



Log No.	Topic of Submittal	Date Approved
R-CA-41	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill Q4 2012	03/26/14
R-CA-42	Evaluation of SSIs for the CA groundwater monitoring program	7/24/2014
R-CA-43	Figures in response to 12/17/12 IEPA Letter re: PNWL	2/19/2015
R-CA-44	Response to 12/17/12 letter re: PNWL. Includes gw demo, revised b/g values and proposed assessment monitoring plan	2/19/2015
R-CA-45	Response to comments for the Sitewide Geology Report (see R-CA-13 and R-CA-40 above)	11/26/2014
R-CA-46	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	2/19/2015
R-CA-47	Response to 8/28/13 IEPA comments on Reevaluation of the GMZ (see R-CA-33 above)	7/15/2014
R-CA-48	Response to IEPA letters of March 6, 2013 (regarding the Light Oils Dock) and January 10, 2011 (regarding the Former Channel Seep Area)	5/20/2016
R-CA-49	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4 Q 2013	3/2/2015
R-CA-51	Demonstration that exceedances of BG values at the PNWL are not associated with the landfill	3/2/2015
R-CA-52	Response to Conditions 4-9 of 3/26/14 IEPA Letter RE: SWMU 7 (see R-CA-25 above)	3/31/2015
R-CA-53	Response to Condition 3&10 of 3/26/14 Letter Re: SWMU7 & MNA Status Update (see R-CA-25 above)	3/31/2015
R-CA-54	SWMU 7 Progress Report	3/31/2015
R-CA-55	Monitored Natural Attenuation Status Report @ SWMU 7	3/31/15
R-CA-56	Updated O&M Manual for MRSA	Rec'd 9/4/14
R-CA-57	Request to incorporate the annual liquid report into the Annual OM&M report for the CDF	Rec'd 9/22/14
R-CA-58	Supplemental gw sampling and gw demo report for the PNWL	3/2/2015
R-CA-59	Response to IEPA's 7/15/14 letter regarding the GMZ evaluation 1 (see R-CA-47 above)	1/19/2023
R-CA-60	2nd Progress Report re: LNAPL recovery efforts at SWMU 7	3/31/2015
R-CA-61	Response to Comments re: Site-Wide Geology Report	Appr'd (Amy Butler)
R-CA-62	SWMU 7 update regarding hydrocarbon gauging, hydrocarbon recovery activities and MNA monitoring	3/31/2015
R-CA-63	Progress Report for LNAPL Recovery Efforts at SWMU 7	8/26/2016
R-CA-64	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 1Q15	4/10/17
R-CA-65	Levee Access Status Update/Extension Request for Work at SWMU 7	8/26/2016
R-CA-66	Benzene Results for G090 and G116 @ PNWL	Rec'd 6/17/2015
R-CA-67	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-68	Evaluation of Potential Statistically Significant Increase	Rec'd 4/23/2015

Log No.	Topic of Submittal	Date Approved
R-CA-69	SWMU 7 Hydrocarbon Recovery 90-Day Update	8/26/2016
R-CA-70	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-71	90-day progress report for LNAPL recovery activities at SWMU 7	8/26/2016
R-CA-72	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4Q2015	4/10/2017
R-CA-73	SWMU 7 Hydrocarbon Recovery Update	8/26/2016
R-CA-74	Request to Consolidate Required Reports	Rec'd 1/19/2016
R-CA-75	SWMU 7 Monitored Natural Attenuation Status Report	8/26/2016
R-CA-76	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-77	Response to Condition 2 of IEPA 5/20/16 letter (see R-CA-48—pertains to the Light Oils Dock and Former Channel Seep Area)—requests extension for submitting proposed ELUC for Parcel B	Rec'd 8/16/2016
R-CA-78	Response to Conditions 3 and 4 of IEPA 5/20/16 letter (seeB-14 R-CA-48—pertains to the Light Oils Dock and FCSA)	Rec'd 6/1920/16
R-CA-79	Response to Conditions 2 thru 5 of IEPA 6/15/16 letter (seeB-145 R-CA-19 regarding Parcel A)	04/12/2019
R-CA-80	Parcel B ELUC	Rec'd 10/17/2016
R-CA-81	Response to IEPA's 8/26/16 letter regarding SWMU 7	Rec'd 10/2520/16
R-CA-82	Follow-Up to PNWL 7 Day Notification of BG Exceedances—3Q16	4/10/17
R-CA-83	30 Day Demonstration Report	4/10/17
R-CA-84	Repairs Made to Observation Well R110	Rec'd 3/21/2017
R-CA-85	1Q2017 PNWL 30-day Demonstration Report	Rec'd 7/14/2017
R-CA-86	4Q2016 Demonstration Report	Rec'd 4/24/2017
R-CA-87	30-Day Demonstration Report	Rec'd 8/14/2017
R-CA-88	30-Day Groundwater Demonstration Report	Rec'd 11/13/2017
R-CA-89	Parcel A Groundwater Report	04/12/2019
R-CA-90	Plan for Groundwater Monitoring Plan for Compliance Commitment Agreement	Rec'd 1/22/18
R-CA-91	4Q17 PNWL 30-day Demonstration Report	Rec'd 2/26/18
R-CA-92	4Q2017 demonstration report (SSIE)	08/06/19
R-CA-93	1Q2018 PNWL GW Demo Report	Rec'd 5/23/18
R-CA-94	GW Monitoring Optimization Report	Rec'd 6/29/18
R-CA-95	2Q2018 PNWL GW Demo Report	Rec'd 8/10/18
R-CA-96	PNWL 3Q18 10-Day Notification	04/19/2019
R-CA-97	Site-wide Arsenic/ Inorganic Demo Report	06/24/2019
R-CA-98	PNWL 4Q19 30-Day GW Demo Report	04/19/2019
R-CA-101	PNWL 1Q19 Demo Report	Rec'd 05/23/2019
R-CA-102	4th quarter demonstration report (Statistically Significant Increase Evaluation)	02/08/2020
R-CA-103	2Q19 PNWL 30-Day GW Demo Report	Rec'd 08/22/2019



<b>Log No.</b>	<b>Topic of Submittal</b>	<b>Date Approved</b>
R-CA-104	Site-wide update regarding site-wide inorganics and metals evaluation	Rec'd 11/06/2019
R-CA-105	2nd quarter demonstration report (Statistically Significant Increase Evaluation)	Rec'd 10/28/2019
R-CA-106	3Q19 PNWL 30-Day Groundwater Demonstration Report	Rec'd 11/25/2019
R-CA-107	Evaluation of SSI for semiannual groundwater monitoring	02/28/2020
R-CA-108	4Q19 PNWL 30-Day Groundwater Demonstration Report	Rec'd 02/25/2020
R-CA-109	Proposed modification to 2Q 2020 GW Gauging & Monitoring in response to COVID-19 pandemic	Rec'd 05/19/2020
R-CA-110	4th Quarter 2019 Demonstration Report	Rec'd 05/21/2020
R-CA-111	1 Q20 PNWL 30-Day Demonstration Report	Rec'd 05/26/2020
R-CA-112	3rd quarter 2020 PNWL 30-day GW demonstration report	Rec'd 11/23/2020
R-CA-113	Site-wide inorganics and metal evaluation work plan update	Rec'd 12/01/2020
R-CA-114	GMZ Reevaluation Report	Rec'd 12/21/2020
R-CA-115	30-Day GW Demonstration Report. Permitted Non-Hazardous Waste Landfill - Third Quarter 2021	Rec'd 11/29/2021
R-CA-116	Results of the Site-Wide Inorganics & Metals Evaluation Report submitted on 12-20-18	Rec'd 1/26/2022
R-CA-117	Proposed upgrades to the Cone of Depression (COD) Well System, Additional information received on 5/2/2022, 8/1/2022	Rec'd 3/16/2022
R-CA-118	Monitoring Well Condition	Rec'd 3/21/2022
R-CA-119	1Q22 30-Day GW Demonstration Report for the permitted non-hazardous waste Landfill (PNWL)	Rec'd 05/26/2022
R-CA-120	Proposed alternative for riverfront sentinel wells and abandonment of current riverfront sentinel wells	Rec'd 7/18/2022
R-CA-121	Cone of Depression (COD) Well G669/HPW61 Repairs	Rec'd 05/09/2022
R-CA-122	Proposed sentinel well locations	Rec'd 2/22/2022
R-CA-123	4Q21 30-day demonstration report for the PNWL	Rec'd 2/25/2022
R-CA-125	Groundwater management zone hydraulic gradient control notification	Rec'd 3/16/2022
R-CA-126	2nd Semi-Annual 2021 Demonstration Report	Rec'd 5/3/2022
R-CA-127	Monitoring Well Condition Letter for G35D and G403	Rec'd 5/1/2022



Figure D-2



**ATTACHMENT E**

**CORRECTIVE MEASURES PROGRAM REQUIREMENTS**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

## ATTACHMENT E

### CORRECTIVE MEASURES PROGRAM REQUIREMENTS

#### 1.0 INTRODUCTION/PURPOSE

RCRA Corrective Action projects typically consist of two phases: (1) A RCRA Facility Investigation (RFI) where an investigation is conducted at the solid waste management units (SWMU's) of concern at a facility; and (2) implementation of corrective measures needed to properly address any contaminant encountered during the RFI. This document has been developed to outline the procedures to be carried out to implement a corrective measure program.

#### 2.0 BRIEF OVERVIEW OF A RCRA CORRECTIVE MEASURES PROGRAM

Typically, at the end of an RFI, the concentration of contaminants present in the soil/sediments/groundwater/surface waters at a SWMU or other area of concern is compared to remediation objectives developed in accordance with Title 35 Illinois Administrative Code (35 IAC) 742. If the contaminant levels are above these objectives, then some type of corrective measure must be completed to achieve these objectives. In addition, certain corrective measures may need to be carried out to support the established remediation objectives (i.e., the establishment of engineered barriers and/or institutional controls). However, at a unit where waste or high levels of contamination remains, a decision may be made to close the unit as a landfill and then provide post-closure rather than removing the material and/or achieving remediation objectives developed in accordance with 35 IAC 742.

To allow for a logical and orderly progression in developing and implementing necessary corrective measures, the Corrective Measures Program (CMP) being carried out in accordance with this RCRA permit should be carried out in five phases which build on each other. It is not necessary for a corrective measures program at a given SWMU or other areas of concern to follow these five phases step-by-step; rather, phases can be combined and/or skipped, depending on the actual remedial measure selected. The overall CMP implemented must set forth a logical path for its implementation and allow for Illinois EPA oversight and approval throughout the entire process.

A brief discussion of the five phases of a CMP is as follows:

1. Phase I is the conceptual design of the selected corrective measure(s).
2. Phase II is the development of final design plans for the corrective measure, including installation and operation/maintenance plans.
3. Phase III is the actual construction/installation of the selected corrective measure.



4. Phase IV is the operation, maintenance, and monitoring of the selected corrective measure to ensure it is properly protecting human health and the environment.
5. Phase V is the final demonstration/verification that the implemented corrective measure achieved the approved remedial objectives.

Sections 3.0 through 7.0 which follow provide a more detailed discussion of each of these five phases. Section 8.0 has been developed to describe the corrective measures program which may be used in lieu of the afore-mentioned five phase procedure when soil removal is the selected remedy. It must be noted that work plans, reports, etc. must be developed to document how the Permittee carries out the required corrective measures program at each SWMU or other areas of concern. All such documents must be reviewed and approved by Illinois EPA prior to their implementation.

### **3.0 PHASE I OF THE CMP**

Phase I of the CMP includes selection of the corrective measure to be taken and developing a basis for completing the final design of the measure. This effort should be documented in a Conceptual Design Report which describes the proposed corrective measure for each SWMU and other areas of concern and provides a conceptual design for these measures. The main criteria for Illinois EPA review is whether the proposed corrective measures are able to achieve the final cleanup objectives previously established by the Permittee and the Illinois EPA and/or provide the necessary institutional controls to prevent the migration of contaminants from the SWMU of concern. Based upon a review of the Conceptual Design Report, the Illinois EPA may approve the corrective measures, require revisions to the proposed corrective measures, or require that a totally new corrective measures proposal be submitted to the Illinois EPA.

The Conceptual Design Report should contain the following sections:

1. Introduction/Purpose. This section should contain: (1) general background information regarding the project; (2) the purpose and goals of the submittal; and (3) the scope of the project.
2. Existing Site Conditions. This section should contain a summary of the investigative activities conducted for each of the units of concern. Investigation analytical results should be provided in tabular form, and maps depicting both the horizontal and vertical extent of contamination at the site should be provided.
3. Evaluation for Potential Future Migration. Based on the existing site conditions, a conceptual model of the site should be developed and presented in this section. The potential for additional future migration of contamination for each of the units of concern must then be evaluated, especially those units which have been determined to have released hazardous waste/hazardous constituents to the groundwater. It may be helpful to develop conceptual models for contaminant migration. Of special concern in this evaluation are (1) the physical properties of the contaminants (solubility, volatility,

mobility, etc.); and (2) existing site conditions (types of soil present, location of contamination, hydrology, geology, etc.).

4. **Corrective Measures Objectives.** This section should discuss the general objectives of the proposed corrective measure to be constructed/installed, and the ability of the proposed corrective measure to achieve the established remediation objectives (unless the selected corrective measure is closure as a landfill which will require proper establishment of a final cover and proper post-closure care of the closed unit.
5. **Identification of Options Available.** This section should contain a brief discussion of the various options available to achieve the corrective measures objectives for each unit. This discussion should identify: (1) a general overview of each option available, including how the option will achieve the stated objective; (2) the advantages associated with each option; (3) the disadvantages associated with each option and (4) an estimate of the cost associated with choosing each remedial option.
6. **Description of Selected Corrective Measure.** This section should contain a qualitative discussion of the corrective measure chosen, along with the rationale which was used to select this measure from all those identified initially. This discussion should include documentation that the selected corrective measure will be effective.
7. **Identification of Design Criteria.** This section should identify what information must be available to design the selected corrective measure.
8. **Review of Available Information.** This section should contain an evaluation of the existing information to ensure that it is sufficient to complete the design of the selected corrective measure. If insufficient information is available, then the report should contain procedures for collecting the required additional information.
9. **Procedures for Completing the Design.** This section should contain a description of the procedures which will be followed to complete the design of the corrective measure. This should include as appropriate:
  - a. Identification of the references and established guidance which will be used in designing the selected corrective measure. Justification for the selection of this procedure should also be provided.
  - b. A description of the procedures which will be used to complete the design of the corrective measure.
  - c. Identification of assumptions to be used in the design, and the impact these assumptions have on the overall corrective measure;
  - d. Significant data to be used in the design effort;

- e. Identification and discussion of the major equations to be used in the design effort (including a reference to the source of the equations);
- f. Sample calculations to be used in the design effort;
- g. Conceptual process/schematic diagrams;
- h. A site plan showing a preliminary layout of the selected corrective measure;
- i. Tables giving preliminary mass balances;
- j. Site safety and security provisions.

This information will form the technical basis for the detailed design of the remedial measure and the preparation of construction plans/specifications.

10. Identification of Required Permits. This section should identify and describe any necessary permits associated with the selected corrective measure, as well as the procedures which will be used to obtain these permits.
11. Long lead Procurement Considerations. This section should identify any elements/components of the selected corrective measure which will require a large amount of time to obtain/install. The following issues should also be discussed: (1) the reason why it will take a large amount of time to obtain/install the item; (2) the length of time necessary for procurement and (3) recognized sources of such items.
12. Project Management. This section should contain information regarding the procedures and personnel which will be involved in completing the design of the selected corrective measure. A schedule for completing the design should also be provided.

#### **4.0 PHASE II OF THE CMP**

Once the Illinois EPA approves the Conceptual Design Report, the facility should complete the design of the approved corrective action (Phase II of the CMP). Upon final completion of the design, a Final Design Report, consisting of final plans, specifications, construction work plan, etc., must be submitted to the Illinois EPA for review and approval.

Several documents must be submitted to the Illinois EPA as part of Phase II of the CMP. The following text describes the expected contents of the various documents which should be developed and submitted to the Illinois EPA as part of Phase II of the CMP.

1. Final Design Report and Construction Work Plan. The Final Design Report and Construction Work Plan must contain the detailed plans, specifications and drawings needed to construct the corrective measure. In addition, this document must contain (1) calculations, data etc., in support of the final design; and (2) a detailed description of the overall management strategy, construction quality assurance procedures and schedule for

constructing the corrective measure. It must be noted that the approved Conceptual Design Report forms the basis for this final report. The information which should be provided in this document includes:

- a. **Introduction/Purpose.** This portion of the document should: (1) provide background information regarding the project, (2) describe the purpose and goals of the project, and (3) describe the scope of the project.
- b. **Detailed Plans of the Design System, including the following:**
  - 1) Plan views;
  - 2) Section and supplementary views which, together with the specifications and general layouts, facilitate construction of the designed system;
  - 3) Dimensions and relative elevations of structures;
  - 4) Location and outline form of the equipment;
  - 5) Ground elevations; and
  - 6) Descriptive notations, as necessary, for clarity.
- c. **Technical Specifications.** Complete technical specifications for the construction of the system, including, but are not limited to, the following:
  - 1) All construction information, not shown in the drawings, which is necessary to inform the contractor in detail as to the required quality of materials, workmanship, and fabrication of the project;
  - 2) The type, size, strength, and operating characteristics of the equipment;
  - 3) The complete requirements for all mechanical and electrical equipment, including machinery, valves, piping and jointing of pipe;
  - 4) Electrical apparatus, wiring and meters;
  - 5) Construction materials;
  - 6) Chemicals, when used;
  - 7) Miscellaneous appurtenances;
  - 8) Instruction for testing materials and equipment as necessary; and
  - 9) Availability of soil boring information.



- d. **Project Management.** A description of the construction management approach, including the levels of authority and responsibility, lines of communication and qualifications of key personnel who will direct corrective measures construction/installation must be provided in the work plan.
  - e. **Construction Quality Assurance/Quality Control.** A construction quality assurance/quality control plan describing the procedures which will be followed to ensure the corrective measure is constructed/installed in accordance with the approved plans and specifications.
  - f. **Schedule.** The work plan must contain a schedule for completion of all major activities associated with construction/installation of the selected corrective measures. All major points of the construction/installation should be highlighted.
  - g. **Waste Management Practices.** This portion of the document should identify the wastes anticipated to be generated during the construction/installation of the corrective measures and provide a description of the procedures for appropriate characterization and management of these wastes.
  - h. **Required Permits.** Copies of permit applications submitted to other Bureaus of the Illinois EPA for the selected corrective measure must be provided in the report. If it is determined that no permit is required for construction/installation and implementation of the corrective measures, rationale and justification must be provided to support this contention.
  - i. **Cleanup Verification.** The report must contain the procedures which will be followed that the approved remediation objectives have been achieved when operation of the system is completed.
2. **Operation and Maintenance Plan.** An Operation and Maintenance Plan must be developed and submitted as part of Phase II of the CMP. This plan should outline the procedures for performing operations, long term maintenance, and monitoring of the corrective measure.
- a. **Introduction and Purpose.** This portion of the document should provide a brief description of the facility operations, scope of the corrective measures project, and summary of the project objectives.
  - b. **System Description.** This portion of the document should provide a description of the corrective measure and significant equipment, including manufacturer's specifications. This portion of the permit should also include a narrative of how the selected system equipment is capable of complying with the final engineered design of the corrective measure.



- c. **Operation and Maintenance Procedures.** This portion of the document should provide a description of the normal operation and maintenance procedures for the corrective measures system, including:
  - 1) Description of tasks for operation;
  - 2) Description of tasks for maintenance;
  - 3) Description of prescribed treatment or operation conditions; and
  - 4) Schedule showing the frequency of each operation and maintenance task.
- d. **Inspection Schedule.** This portion of the document should provide a description of the procedures for inspection of the corrective measures system, including problems to look for during the inspection procedure, specific inspection items, and frequency of the inspections.
- e. **Waste Management Practices.** This portion of the document should provide a description of the wastes generated by the corrective measure, and the appropriate procedures for proper characterization/management of these wastes.
- f. **Contingency Procedures.** This portion of the document should provide a description of the procedures which will address the following items:
  - 1) System breakdowns and operational problems including a list of redundant and emergency backup equipment and procedures;
  - 2) Alternative procedures (i.e., stabilization) which are to be implemented in the event that the corrective measure fails. The alternative procedures must be able to prevent release or threatened releases of hazardous wastes/hazardous constituents which may endanger human health and the environment, or exceed cleanup standards.
  - 3) Notification of facility and regulatory personnel in the event of a breakdown in the corrective measures, including written notification identifying what occurred, what response action is being taken and any potential impacts on human health and the environment.

## **5.0 PHASE III OF THE CMP**

Once the final design report is approved by the Illinois EPA, construction/installation of the approved corrective measure must commence. During this period, quarterly reports should be submitted which contain the following information:

- 1. Summary of activities completed during the reporting period;
- 2. An estimate of the percentage of the work completed;

3. Summaries of all actual or proposed changes to the approved plans and specifications or its implementation;
4. Summaries of all actual or potential problems encountered during the reporting period;
5. Proposal for correcting any problems; and
6. Projected work for the next reporting period.

Upon completion of construction/installation of the approved corrective measure, a Construction Completion Report must be submitted to the Illinois EPA documenting that these efforts were carried out in accordance with the Illinois EPA approved plans and specifications. This report should contain a thorough description of the efforts that went into constructing/installing the corrective measure and demonstrate that the procedures in the Illinois EPA approved Final Design Report were followed during this effort. Such a report should be formatted in a logical and orderly manner and contain the following information:

1. An introduction discussing the background of the project and the purpose and scope of the corrective measure described in the report.
2. Identification of the plans, technical specifications and drawings which were used in constructing/installing the corrective measure. These specifications and drawings should have been approved by the Illinois EPA during Phase II.
3. Identification of any variations from the Illinois EPA approved plans, technical specifications and drawings used in construction/installing the corrective measure. Justification regarding the need to vary from the approved plans and specifications must also be provided.
4. A description of the procedures used to construct/install the corrective measure, including the procedures used for quality assurance and quality control.
5. As built drawings, including identification of any variations from the approved plans, technical specifications and drawings.
6. A summary of all test results from the construction/installation effort, including quality assurance/quality control testing.
7. Actual test results, including quality assurance/quality control test results. These results should be located in an attachment/appendix and be well organized.
8. Identification of any test results which did not meet the specified value and a description of the action taken in response to this failure, including re testing efforts.
9. Photographs documenting the various phases of construction.

10. A detailed discussion of how the construction/installation effort met the requirements of the approved Final Design Report.
11. A certification meeting the requirements of 35 IAC 702.126 by an independent qualified, licensed professional engineer and by an authorized representative of the owner/operator.

#### **6.0 PHASE IV OF THE CMP**

Once the corrective measure has been constructed/installed, it must be operated, maintained and monitored in accordance with the approved plans and specifications (this is Phase IV of the CMP). During this period, quarterly reports must be submitted to the Illinois EPA documenting the results of these efforts. These reports include the following:

1. **Introduction.** -- A brief description of the facility operations, scope of the corrective measures project, and summary of the project objectives.
2. **System Description.** -- A description of the corrective measures constructed/installed at the site, and identify significant equipment. Describe the corrective measure and identify significant equipment.
3. **Monitoring Results.** -- A description of the monitoring and inspection procedures to be performed on the corrective measures. A summary of the monitoring results for the corrective measures, including copies of any laboratory analyses which document system effectiveness, provide a description of the monitoring procedures and inspections performed, and include a summary of the monitoring results for the corrective measure. Copies of all laboratory analytical results which document system monitoring must be provided.
4. **Effectiveness Determination.** -- Calculations and other relevant documentation which demonstrates the effectiveness of the selected corrective measure in remediating/stabilizing contamination to the extent anticipated by the corrective measures final design. Copies of relevant analytical data should be provided to substantiate this determination.
5. **System Effectiveness Recommendation.** -- Based upon the results of the effectiveness determination required under Item 4 above, recommendations on continued operation of the corrective measure must be provided. If the corrective measure is not performing in accordance with the final design, a recommendation on revisions or expansion of the system should be provided.

## **7.0 PHASE V OF THE CMP**

Once all corrective measures have been completed, a report must be developed documenting all the efforts which were carried out as part of implementing the corrective measure and demonstrating, as appropriate, that the approved remediation objectives have been achieved. This report should contain a compilation of all previous reports and also contain sufficient information to demonstrate that the approved remediation objectives have been achieved. It must be noted that such a report will not be developed for a unit closed as a landfill until the post-closure care period has been completed.

## **8.0 PROCEDURES WHICH SHOULD BE FOLLOWED WHEN SOIL REMOVAL IS THE SELECTED CORRECTIVE MEASURE**

Sections 2.0 through 6.0 above describe the procedures which should be followed when it is necessary to design some type of physical corrective measure (e.g., a final cover system, some type of treatment system, etc.). However, such detail is not necessary if excavation/removal is selected as the remedial action for the contaminated soil encountered at the site. In general, a work plan should be developed for this effort (for Illinois EPA review and approval) which fully describes each step to be used in removing the contaminated soil from the property. This includes a description of (1) the equipment utilized in the removal effort, (2) the pattern followed in removing the soil; (3) the depth to which the soil will be removed; (4) management of the soil on-site after it is removed from the ground; (5) loading areas; (6) the ultimate destination of the soil; and (7) any other steps critical to the removal effort.

One way to conduct a soil removal effort is to collect and analyze a sufficient number of soil samples to clearly determine the horizontal and vertical extent of soil contamination prior to conducting the soil removal effort. The boundaries of soil which must be removed are defined by the Illinois EPA established cleanup objectives for the project. Soil excavation must extend to sample locations where soil test results indicate that the remediation objectives are met. Closure verification sampling is not necessary in such cases, if a registered professional engineer oversees the soil removal effort and certifies that the remediation limits extend to these boundaries.

Another way to conduct a soil removal effort is to collect and analyze a limited number of soil samples prior to the soil removal effort and to rely mainly on field observation to determine the extent of the soil removal. In such cases closure verification sampling is necessary. Soil samples must be collected for analysis from the bottom and sidewalls of the final excavation. The following sampling/analysis effort is necessary to demonstrate that the remaining soil meets the established cleanup objectives:

1. A grid system should be established over the excavation.
2. Samples should be collected from the floor of the excavation at each grid intersection, including intersections along the perimeter of the excavation.



3. Samples should be collected at 6"-12" below the ground surface (bgs) along the excavation sidewalls at each grid intersection around the excavation perimeter. Samples must also be collected at the midpoint of the excavation wall at each grid intersection along the excavation perimeter.
4. Collection/analysis of all required samples must be in accordance with the procedures set forth in the approved plan.
5. Soil samples which must be analyzed for volatile organic compounds (VOCs) must be collected in accordance with the procedures set forth in Method 5035 of SW-846. In addition, such samples must be collected 6"-12" beneath the floor/sidewalls of the excavation to minimize the possibility of volatilization of the contaminants prior to the collection of the samples.
6. No random sampling may be conducted to verify achievement of cleanup objectives have been met.
7. Additional soil must be removed, as necessary, until it can be demonstrated that the remaining soil in and around the area of concern meets the established cleanup objectives. Additional samples must be collected and analyzed in accordance with the procedures described above from areas where additional soil has been removed.



**ATTACHMENT F**

**CONSTRUCTION CERTIFICATION**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT F  
Construction Certification**

This statement is to be completed by both the owner/operator and the registered professional engineer upon completion of construction in accordance with 35 IAC Section 702.126. Submit one copy of the certification with original signatures and two additional copies. Forward these certification statements and any information required by the permit to the following address:

Illinois Environmental Protection Illinois EPA  
Bureau of Land #33  
Permit Section  
1021 North Grand Avenue East  
Springfield, Illinois 62702

FACILITY NAME: BP Products North America, Inc.

IEPA's SITE CODE: LPC #1191155009

U.S. EPA ID NO.: ILD980503106

PART B PERMIT LOG #145R2

PERMIT (OR MODIFICATION) ISSUANCE DATE:

PERMIT CONDITION NO. REQUIRING CERTIFICATION:

The \_\_\_\_\_ has been constructed in accordance with the specifications in the Permit. Documentation that the construction was in accordance with the permit is contained in the enclosed report. I certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature of Owner/Operator

Name and Title

\_\_\_\_\_  
Signature of Registered P.E.

Name of Registered P.E. and  
Illinois Registration Number

Date

(P.E. SEAL)

**ATTACHMENT G**

**CLOSURE, POST-CLOSURE AND CORRECTIVE ACTION COST ESTIMATE**  
**SUMMARY**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT G**  
**CLOSURE, POST-CLOSURE, AND CORRECTIVE ACTION**  
**COST ESTIMATE SUMMARY**

These estimates are based on using 2020 dollars and include the cost of: (1) activities carried out each year (i.e., annual costs); and (2) one-time or non-annual costs. Post-closure care for Pond 1 Landfill requires the cost of the 30-year of post-closure care and one time certification cost. The East Surge Pond is currently operated to store nonhazardous wastewaters including the nonhazardous leachate from the adjacent onsite Permitted Non-Hazardous Waste Landfill in accordance with this permit. The ESP must be eventually closed in accordance with a plan approved by the Illinois EPA. The approved corrective action cost estimates account for costs associated with Parcels A, B, C, D, F, G, I, SWMU 7, PRS-1 and groundwater corrective action for the Riverfront facility.

**COST ESTIMATES**

ACTIVITY	Pond 1 Landfill (HWMU)	East Surge Pond	BP Riverfront SWMUs
Closure		\$538,420	
Post-Closure	\$2,364,068 in 2020 *		
SWMUs and Groundwater Corrective Action			\$10,359,514



**ATTACHMENT H**

**POST-CLOSURE INSPECTION SCHEDULE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT H  
POST-CLOSURE INSPECTION SCHEDULE**

**Inspection Schedule**

Post-closure inspections for the Pond 1 Landfill will be conducted on a weekly, quarterly and an after-storm event basis. Documentation of all inspections, surveys, repairs performed, or replacements required to properly maintain the facility will be recorded on the inspection logs/repair logs and stored as a part of the Operations, Maintenance, and Monitoring (OM&M) Manual. The OM&M Manual will be maintained at the BP Main Plant Office or a local Waste Management, Inc., office or storage facility. General post-closure inspection procedures will include the following:

1. Visually inspect the perimeter fence and all gates. Check for fence integrity and note any areas of damage. Note the working condition of each gate and check to ensure that all locks and other security systems are in place and functioning.
2. Visually inspect each benchmark. Report any missing benchmarks and note any damage to the benchmarks.
3. Visually inspect the landfill cover, drainage system, and surrounding areas. Note any evidence of cover erosion, settling, or vegetative stress. Also note any unusual conditions such as odors, ponded water, or bubbling. Report any areas requiring further inspection or repairs so arrangements can be made to efficiently make all necessary repairs.
4. Visually inspect each leachate collection riser and note any damage. Check and record the liquid level in each riser. If the liquid level is found to be approaching or above the maximum acceptable level, make arrangements for leachate removal. Record the amount withdrawn, if applicable.
5. Visually inspect each groundwater well protective casing for damage. Check the protective casing and lock to ensure they are functioning and have not been tampered with. Note area around wells for erosion, settling or negative stress.
6. Visually inspect any required safety and emergency equipment. Report missing and/or damaged equipment.
7. Visually inspect the run-on and run-off control measures. Note any erosion, missing riprap, or other disrepair.

Following each inspection, a copy of the inspection log will be sent to the appropriate BP personnel for review. Arrangements will also be made to repair or replace any items in order to maintain the site at a condition equal to that in the application.

### **Post-Closure Maintenance (Pond 1 Landfill)**

Maintenance activities will respond to the needs determined from the inspections. Items that may require repair include:

- Flood Protection Dike;
- security control fencing;
- areas of differential settlement, subsidence and displacement;
- slopes damaged by erosion;
- run-on and run-off control structures;
- leachate collection systems; and
- benchmarks

Groundwater monitoring wells will be repaired or replaced as needed and will be decommissioned upon Illinois EPA approval.

The final cover system will be mowed at least annually and fertilized as needed (except for areas where shrubbery or other structures are present).

Corrective action for the cover materials will be taken if the following problems occur:

- ponding;
- cracks greater than one inch wide;
- gas problems;
- odor problems;
- larger areas of dead or stressed vegetation (areas greater than 50 square feet);
- vegetation with taproots growing in areas not designed to accommodate such;
- vector problems; or
- leachate pop outs or seeps.

Corrective action measures for these types of problems could include regrading, addition of soils to repair cracks or to eliminate ponding, or re-seeding to re-establish vegetation.

### **Maintenance (East Surge Pond)**

Maintenance activities will respond to the needs determined from the inspections. Items that may require repair include:

- water level staff gauge;
- lift station pumps/ sumps;
- gates/ valves; culverts
- dredging
- dikes
- vegetation
- clay liner



**ATTACHMENT I**

**CERTIFICATION OF COMPLETOPN OF CLOSURE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**





## Illinois Environmental Protection Illinois EPA

### CERTIFICATION OF COMPLETION OF RCRA CLOSURE

BP Products North American Inc./Riverfront Property (1191155009) – Madison County

USEPA ID: ILD980503106

RCRA Permit Log No. B-145R2

To meet the requirements of 35 IAC 725.215, this statement is to be completed by both a responsible officer of the owner/operator (as defined in 35 IAC 702.126) and by a qualified professional engineer upon completion of closure of the East Surge Pond (ESP). Submit one copy of the certification with original signatures and two additional copies.

The hazardous waste management unit, known as the East Surge Pond (ESP), at BP Products North American Inc./Riverfront Property has been closed in accordance with the specifications in the approved closure plan. A report documenting that closure has been carried out in accordance with the approved closure plan is attached.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS5/44(h))

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**Facility Name**

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**Printed Name of Responsible Officer**

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**Signature of Owner/Operator    Date**  
**Responsible Officer**

---

**Printed Title of Responsible Officer**

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**Signature of Licensed P.E.    Date**

---

**Printed Name of Licensed P.E. and  
Illinois License Number**

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**Mailing Address of P.E.:**

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**Licensed P.E.'s Seal:**

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**ATTACHMENT J**

**CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



## Illinois Environmental Protection Illinois EPA

### CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE

BP Products North American Inc./Riverfront Property (1191155009) – Madison County

USEPA ID: ILD980503106

RCRA Permit Log No. B-145R2

To meet the requirements of 35 IAC 724.220, this statement is to be completed by both a responsible officer of the owner/operator (as defined in 35 IAC 702.126) and by a qualified professional engineer upon completion of post-closure care of the Pond 1 Landfill. Submit one copy of the certification with original signatures and two additional copies.

The hazardous waste management unit closed as a landfill, known as the Pond 1 Landfill, has been closed in accordance with the specifications in the approved closure plan. Post-Closure care required for the Pond 1 Landfill has been provided and completed in accordance with the RCRA Permit. A report documenting that required post-closure care have been carried out and completed in accordance with the approved post-closure care plan is attached.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS/44(h))

---

**Facility Name**

---

**Printed Name of Responsible Officer**

---

**Signature of Owner/Operator    Date**  
**Responsible Officer**

---

**Printed Title of Responsible Officer**

---

**Signature of Licensed P.E.    Date**

---

**Printed Name of Licensed P.E. and  
Illinois License Number**

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**Mailing Address of P.E.:**

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**Licensed P.E.'s Seal:**

# **EXHIBIT B**



**Remediation Management Services Company**

30 S. Wacker Dr. Ste 900  
Chicago, IL 60606

Mobile: (847) 346-7112  
Michelle.Knapp@bp.com

August 23, 2023

Mr. Brad Frost  
Office of Community Relations (#5)  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Re: 1191155009 - Madison County  
BP Products North America Inc. – Riverfront Facility  
USEPA ILD980503106  
Log No. B-145R2  
RCRA Administrative Record  
Public Notice Comments for Draft Permit

Dear Mr. Frost:

On behalf of BP Products North America Inc. (bp), Remediation Management Services Company (RMSC) is submitting to the Illinois Environmental Protection Agency (Illinois EPA) comments on the Draft Hazardous Waste Resource Conservation and Recovery Act (RCRA) Permit (Draft Permit) for the BP Wood River Riverfront Facility in Wood River, Madison County, Illinois. bp's comments on the Draft Permit are presented in italicized font. The proposed text revisions for the Draft Permit are presented in red-line strikeout format.

If you have any questions regarding the comments provided, please contact me at (847) 346-7112.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michelle Knapp', written in a cursive style.

Michelle Knapp  
Liability Manager  
Remediation Management Services Company

Enclosure: Public Notice Comments for Draft RCRA Permit

cc: Illinois EPA Bureau of Land, Division of Land Pollution Control, Permit Section  
Becky Raftery, bp Legal



Public Notice Comments for Draft RCRA Permit

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page	Comment	Reference / Proposed Revision(s)
<b>FACT SHEET</b>		
<b>II. Description of Facility</b>		
<b>A. General</b>		
1 of 7	<p>1<sup>st</sup> paragraph, 4<sup>th</sup> and 5<sup>th</sup> sentences:  <i>Please revise to clarify the property now owned by Kinder Morgan Phoenix Holdings, LLC (KMPH) is no longer a portion of the Main Plant facility. Please remove the detail regarding operations at the KMPH facility as it is no longer a portion of the Main Plant facility.</i></p>	<p>In addition, it was used for the management of refinery waste. Currently, Kinder Morgan Liquids Terminal LLC (KMLT) operates and Kinder Morgan Phoenix Holdings, LLC (KMPH) owns a storage and distribution facility for gasoline and petroleum distillates at a site which was formerly a portion of the Main Plant facility but that was sold to KMPH and will be subject to a separate RCRA Permit. <del>Distribution operations are managed via pipelines, aboveground storage tanks at the Main Plant, and barge operations on the Mississippi River.</del></p>
<b>B. Site Description</b>		
2 of 7	<p>2<sup>nd</sup> paragraph, 2<sup>nd</sup> sentence:  <i>Please add references to the Main Plant facility and revise "riverfront property" to "Riverfront facility" for clarification.</i></p>	<p>The Riverfront facility is adjacent to, and its operation was associated with the former Amoco Refinery in Wood River. This 569-acre former refinery (Main Plant facility) is located due east of the Riverfront facility <del>riverfront property</del>. Route 143, East Rand Avenue, South Sixth Street, and Illinois Route 3 bound the former refinery (Main Plant facility) on the north, south, east, and west sides, respectively.</p>

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page	Comment	Reference / Proposed Revision(s)		
<b>III. Hazardous Waste Management Activities</b>				
<b>A. Description of Units</b>				
<b>1. Surface Impoundment – East Surge Pond (ESP)</b>				
3 of 7	<p>Table</p> <p><i>Please revise to clarify there are no sediments or soil with K048 above the ESP liner. Remove second closing parentheses.</i></p>	<table border="1"> <tr> <td><u>Description of Hazardous Waste &amp; Waste Numbers</u></td> </tr> <tr> <td>Sediments and soil below the liner contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry}</td> </tr> </table>	<u>Description of Hazardous Waste &amp; Waste Numbers</u>	Sediments and soil below the liner contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry}
<u>Description of Hazardous Waste &amp; Waste Numbers</u>				
Sediments and soil below the liner contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry}				
3 of 7	<p>2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence:</p> <p><i>Please revise to clarify treatment and placement of sludges into the landfills.</i></p>	<p>The majority of the sludges were removed and treated by the Chemfix process prior to placement in the Permitted Non-Hazardous Waste Landfill (PNWL, or Pond 5 landfill). However, the heavier hazardous sludges and the majority of the impacted soils in these ponds could not be placed in the PNWL and were subsequently removed and placed in the Pond 1 Landfill (this unit is further discussed below).</p>		
3 of 7	<p>3<sup>rd</sup> paragraph, last sentence:</p> <p><i>Please remove the word influent.</i></p>	<p>In the event this level is exceeded, influent water can be diverted to the Temporary Surge Basin or the West Surge Pond.</p>		
<b>2. Post-Closure Care – Pond 1 Landfill</b>				
N/A	<p>Pg. 11 through 18 of the pdf</p> <p><i>Please remove duplicate Fact Sheet.</i></p>	<p>Not Applicable</p>		

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
<p style="text-align: center;"><b>HAZARDOUS WASTE RCRA PERMIT – RIVERFRONT FACILITY</b>                      LPC No. 1191155009                      ILD980503106</p>		
<p><b>I. General Facility Description</b></p>		
<p>I-2</p>	<p><b>C. Description of Hazardous Waste Management Activities</b></p> <p>1<sup>st</sup> paragraph, 4<sup>th</sup> and 5<sup>th</sup> sentences:</p> <p><i>Please revise to indicate that Kinder Morgan Phoenix Holdings (KMPH) owns and operates this former portion of the Main Plant facility.</i></p> <p><i>Please revise to clarify that the property now owned by KMPH is no longer a portion of the Main Plant facility.</i></p> <p><i>Please remove the detail regarding operations at the KMPH facility as it is no longer a portion of the Main Plant facility.</i></p>	<p>Presently, Kinder Morgan Liquid Terminals LLC (KMLT) <del>owns</del>operates, and Kinder Morgan Phoenix Holdings (KMPH) <del>operates</del>owns, a storage and distribution facility for gasoline and petroleum distillates at a site which was formerly a portion of the Main Plant facility but was sold to KMPH and will be subject to a separate RCRA Permit. <del>for gasoline and petroleum distillates. Distribution operations are carried out via pipelines and aboveground tanks at the Main Plant.</del> The Main Plant and Riverfront facilities were owned by Amoco Oil Company until the company merged with BP in 1999.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
I-2	<p>3<sup>rd</sup> paragraph, 3<sup>rd</sup> sentence:</p> <p><i>Please add a space after the “” following (DAF) float in the third sentence of the third paragraph.</i></p>	<p>From 1977 to 1981, Amoco stored Dissolved Air Flotation (DAF) float, a listed hazardous waste, in Ponds 1, 1A, 2, 2A, 3, 3A and 4 of the former series of wastewater treatment ponds.</p>
I-3	<p>Condition 2, 4<sup>th</sup> sentence:</p> <p><i>Please add Permit reference to define “wastewater from the Main Plant.”</i></p>	<p><del>These wastewaters include wastewater from the Main Plant are defined in Condition II. B. 1. Wood River Wastewater Treatment Plant, and non-hazardous leachate from the Pond 5 landfill, also known as the Permitted Non-Hazardous Waste Landfill (PNWL).</del></p>



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
1-3	<p>Last 2 paragraphs:</p> <p><i>Please remove the second period at the end of the third sentence in the third paragraph.</i></p> <p><i>In the first sentence of the fourth paragraph, revise the word “at” to “the” and revise to clarify corrective action is required at the facility. However, bp does have the option to remove a parcel from the Land Reuse program, whereby Corrective Action would only apply to SWMUs and PRSS and would not include recognized environmental conditions.</i></p>	<p>As part of the general corrective action program, the facility has been broken up into ten parcels and the SWMUs in each parcel have individual focus.:</p> <p>This permit allows/requires BP to carry out <del>at</del>the following activities at the Riverfront facility: (1) continue storing/treating non-hazardous wastewaters in the ESP until closure activities begin; (2) provide post-closure care for the Pond 1 Landfill; (3) conduct <del>optional</del>corrective action, as appropriate, <del>on the</del> <del>recognized environmental conditions</del> at the facility; and (4) implement a groundwater monitoring/corrective action program.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
<b>II. Surface Impoundment</b>		
<b>A. Summary</b>		
II-1	Third Paragraph, 2 <sup>nd</sup> sentence:  <i>Please add the word "to" between allowed and be.</i>	Although some residual soil contamination may remain in the ESP during the delay of closure period, no new hazardous wastes are allowed to be placed in the unit.
<b>B. Description of Surface Impoundment and Wastes</b>		
II-1	B. Condition 1, 1 <sup>st</sup> sentence:  <i>Please revise language to the 80-million-gallon capacity / 2-ft freeboard.  (a) Please add "industrial" sewage to account for process wastewater. Please add a "t" to BP "Main Plan."  (c) Please define or clarify "seepage water from the Riverfront facility."</i>	The Permittee may only store/treat non-hazardous wastewaters in total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic and industrial sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plant and Riverfront facilities; (b) groundwater pumped as part of BP's hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility.

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
11-2	<p>Condition 2, a:</p> <p><i>Please revise to clarify this sample is the first discharge of wastewater sent to the ESP from Pond 3A.</i></p> <p><i>Please define required analytes or add reference to the Condition with requirements.</i></p>	<p>a. Collect/analyze a sample of the first discharge of wastewater from Pond 3A sent to the ESP each quarter of the calendar year in accordance with Condition II.B.2.c.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

<p>II-2</p>	<p>Condition 2, b: As this is a new requirement, please confirm the following: 1) that PNWL leachate sampling is necessary; 2) what actions are required if no PNWL leachate is generated/discharged; and 3) what documentation is required if no PNWL leachate is discharged.  Please consider the proposed revision to require a quarterly sample of the PNWL leachate discharge as it is not possible to guarantee collection of the "first" PNWL leachate discharge.  Please revise the number formatting if the sample requirements apply to the samples required under both II.B.2.a and</p>	<p>b. Two composite samples of the <del>first</del> leachate discharge, one from the manifolded pipe of odd numbered sumps and one from the even numbered sumps of the PNWL, sent to the East Surge Pond each quarter of the calendar year <u>in accordance with Condition II.B.2.c.</u></p> <p>c. These samples must be analyzed for all the characteristics of hazardous waste set forth in 35 IAC 721, Subpart C. The results of these efforts must be documented in the facility's operating record.</p>
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BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
	<p>II.B.2.b. and add reference to II.B.2.c.</p> <p>Please clarify if electronic records meet the definition of "operating record" throughout the Permit.</p>	
II-3	<p><b>C. Design and Operating Requirements</b></p> <p>Condition 2:</p> <p>Please clarify if there is an exception to the 2-foot freeboard requirement in the case of Force Majeure events.</p>	<p>A minimum of two feet of freeboard must be maintained at all times in the ESP. <u>Illinois EPA may modify this requirement when it determines cause exists, such as Force Majeure or events over which the Permittee has no control.</u></p>
II-3	<p>Condition 3:</p> <p>Please add period to last sentence.</p>	<p>This adjusted standard allows the Permittee to continue using the ESP for the storage/treatment of non-hazardous wastewaters until they decide to close the impoundment in accordance with 35 IAC 724.</p>
II-4	<p><b>E. Inspections</b></p> <p>Condition 3:</p> <p>Please include reference to Illinois Administrative Code.</p>	<p>If the ESP is taken out of service for more than six months, then prior to returning to service, the Permittee shall obtain a certification from a qualified Professional Engineer registered in the State of Illinois that the surface impoundment and the flood-protection dike, including that portion of any dike which provides freeboard, have structural integrity in accordance with 35 IAC 724.326(c).</p>



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
<b>F. Closure Requirements</b>		
II-4	<p>Condition 1, 2<sup>nd</sup> and 3<sup>rd</sup> sentences:  Please clarify or define "non-closure activity."</p>	<p>The proposed schedule for closure of the ESP required in this section must include and consider any additional non-closure activities associated with the ESP. Any additional non-closure activities associated with the ESP must commence at least five (5) years prior to the expiration of this permit so that the required RCRA closure activities of the ESP may commence prior to the expiration date of this permit unless approved otherwise by Illinois EPA.</p>
II-4	<p>Condition 2, 4<sup>th</sup> sentence:  Please capitalize "p" in Environmental Protection Act.</p>	<p>Illinois EPA review of this plan will be subject to the permit appeal provisions contained in Sections 39(a) and 40(a) of the Illinois Environmental Protection Act.</p>
II-6	<p>Condition 5, i:  Please add a ", between geologic cross-sections and groundwater monitoring data.</p>	<p>As appropriate and available: boring logs; well construction diagrams; geologic cross-sections; groundwater monitoring data; and information about any groundwater remediation effort.</p>
<b>III. Post-Closure for the Pond 1 Landfill Unit</b>		
<b>B. Unit Identification</b>		
III-2	<p>Condition 4:  Please revise description of cover system to include the Geotextile fabric layer between the 1-ft thick compacted clay layer and the geonet drainage layer.</p>	<p>The cover system on the top of the Pond 1 landfill is constructed of the following layers, specified from the top to bottom:                      a. One foot thick protective soil cover;                      b. One foot thick compacted clay layer;                      c. Geotextile fabric;                      d. A geonet drainage layer;                      e. A 60 mil HDPE geomembrane liner; and                      f. Two foot thick compacted clay layer.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
III-3	<p>Condition 5, b: <i>Please revise to include exception for delisting.</i></p>	<p>Any material removed from the Pond 1 Landfill during future activities must be managed as a hazardous waste in accordance with 35 IAC Subtitle G: Waste Disposal unless material has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.</p>
<b>D. Inspections</b>		
III-5	<p>Condition 4, 1<sup>st</sup> sentence: <i>A recent inspection of the benchmark locations at the Riverfront facility could not locate the markers; please consider the proposed revision.</i></p>	<p>The Permittee shall inspect the benchmarks used to identify the location of the hazardous waste management units (HWMUs) and solid waste management units (SWMUs) within 60 days of the effective date of this permit and thereafter in accordance with the Inspection Schedule in the approved permit application. <u>If benchmarks cannot be located or confirmed, then the Permittee shall have the appropriate benchmark(s) reestablished by a licensed surveyor within 90 days of the effective date of this permit.</u></p>
<b>E. Monitoring, Maintenance, and Recordkeeping</b>		
III-6	<p>Condition 1: <i>Please clarify if electronic records meet the definition of "written operating record."</i></p>	<p>The Permittee shall keep and maintain a written operating record that includes all the records, reports, notifications, monitoring data, testing or analytical data, and corrective action data required by 35 IAC 724.173 and the conditions in this permit, for the entirety of the post-closure care period. The operating record shall be kept on-site at the facility and available for Illinois EPA review.</p>

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
III-6	<p>Conditions 4 and 5, 2<sup>nd</sup> sentence:                      Please remove references to “run-on control system” and “run-off management system” as the landfill is not active; or define and clarify when applicable to the Pond 1 Landfill.</p>	<p>4. The Permittee shall prevent run-on from eroding or otherwise damaging the final cover. <del>At a minimum, the run-on control system shall be capable of preventing flow onto the active portion of the landfill during peak discharge from a 24-hour, 25-year storm event.</del></p> <p>5. The Permittee shall prevent run off from eroding or otherwise damaging the final cover. <del>At a minimum, the run-off management system shall be capable of collecting and controlling the volume of water resulting from a 24-hour, 25-year storm event.</del></p>
III-6 and III-7	<p>Condition 7:                      Please consider the following:                      The Pond 1 Landfill does not have a current permanent pumping system for leachate extraction. Leachate is removed via vacuum truck. A draft delisting petition for the Pond 1 Landfill leachate has been submitted for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board (IPCB).</p>	<p>7. The Permittee submitted a draft delisting petition dated June 30, 2023 for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board. Within 30 days of Illinois Pollution Control Board approval or denial of this petition, the Permittee shall submit a Compliance Plan to Illinois EPA, proposing a schedule to comply with the requirements stated below, as applicable::</p> <p>a. <del>The Permittee shall install and maintain the leachate collection system (LCS) with pumps, and leak detection system (LDS) in accordance with the design plans and specifications contained in the Illinois EPA approved permit application Compliance Plan and the conditions in this permit. The permittee shall:</del></p> <p>b. The LCS will maintain leachate levels within the collection risers at a depth such that leachate does not exceed one (1) foot above the liner.</p> <p>a-c. Remove and clean the pumps from the LCS and LDS at least once every year.</p> <p>b-d. Every 10 years, the permittee will use a camera to inspect the collection risers and sump for sediment build-up. If 10% or more of the screened interval is silted-in, the permittee shall remove sediment from the LCS and LDS collection riser pipes and sumps using a high-pressure jet or equivalent method at least once every 10 years.</p> <p>e-e. Install and operate within 30 days of the effective date of this permit, a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11 (b).</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

<p>III-7</p>	<p>Condition 10, a and b: <i>As this is a new requirement, and the Permittee has conducted previous rounds of leachate characterization sampling to support a delisting petition, please clarify or revise based on the following:</i></p> <p><i>In lieu of analyzing annual samples for the 35 IAC 724 Appendix I parameters for the first four years, bp proposes to analyze the first annual sample for the Appendix I parameters and submit these results to Illinois EPA along with results from previous samples collected by bp and/or the Publicly Owned Treatment Works (POTW) that collectively comprise the 35 IAC 724 Appendix I parameters, and use</i></p>	<p>The permittee shall collect a representative sample of leachate from the landfill and analyze it for all the constituents listed in 35 IAC 724 Appendix I. These samples shall be collected and analyzed annually in accordance with the sampling and test methods specified in the approved permit application. The results of the leachate quality testing data shall be submitted and maintained in the facility's operating record and submitted to the Illinois EPA by July 15 each year.</p> <p>a. The Reduced List will be based on the four most recent complete 35 IAC 724 Appendix I analyses and include all parameters detected in any of the four Appendix I analyses. Starting the next sampling event after Illinois EPA approval, this Reduced List will be used in lieu of the Appendix I analysis for three out of four years, with the fourth-year reverting to a full Appendix I analysis. Any parameters not included on the existing Reduced List that are detected in the fourth-year Appendix I analysis shall be added to all future Reduced List analyses by means of a permit modification request. This cycle of three years of Reduced List, followed by one year of Appendix I analysis, will repeat for the remainder of the post-closure period.</p> <p>i. <u>For the first cycle, the Permittee may utilize results from the first annual sample analyzed for all Appendix I parameters in conjunction with previous results from samples collected by the Permittee and/or the Publicly Owned Treatment Works (POTW) that collectively comprise the Appendix I parameters, if available, to propose the first Reduced List for Illinois EPA approval.</u></p>
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BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
	<p><i>these results to propose a Reduced List for Illinois EPA approval, then subsequent implementation during the second annual sampling event.</i></p>	
<p>III-8</p>	<p>Condition 11, b:                      Please consider the following:                      A draft delisting petition for the Pond 1 Landfill leachate has been submitted for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board. A 30-day deadline from the date of approval or denial of the delisting petition is requested for submittal of a Compliance Plan for implementation of any leachate management systems and adherence to Condition III.E.11.b.</p>	<p>In accordance with the Compliance Plan referenced in Condition III.E.7, leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403' above mean sea level (MSL) for LCS).</p>



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)										
III-8	<p>Condition 11, c: <i>Please revise to include exception for delisting.</i></p>	<p>All leachate removed from the LCS and LDS shall be managed as a hazardous waste unless leachate has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.</p>										
<p><b>F. Reporting and Notification Requirements</b></p>												
III-8	<p>Condition 3: <i>Please confirm this new data reporting requirement is necessary. If so, please consider allowing this data to be reported in the quarterly Corrective Action Progress Report required in Condition V.J.1 rather than a standalone report.</i></p>	<p>The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 for the LCS and LDS shall be submitted to the Illinois EPA Bureau of Land Permit Section as part of the Leachate Data Quarterly Monitoring Report in accordance with the following schedule.</p> <table border="0"> <tr> <td><u>Data Collected</u></td> <td><u>Results/ Report Submitted by:</u></td> </tr> <tr> <td>January – March</td> <td>May 1</td> </tr> <tr> <td>April – June</td> <td>August 1</td> </tr> <tr> <td>July – September</td> <td>November 1</td> </tr> <tr> <td>October – December</td> <td>February 1</td> </tr> </table>	<u>Data Collected</u>	<u>Results/ Report Submitted by:</u>	January – March	May 1	April – June	August 1	July – September	November 1	October – December	February 1
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**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
III-9	<p>Condition 6: <i>Please clarify the number of copies required. This Condition states that an original and one (1) copy is required for this report whereas Condition IV.1.12 states that one (1) original and a minimum of two (2) copies are required for each notice or report submitted to the Illinois EPA.</i></p> <p><i>Please confirm that this new reporting requirement for graphical representations of leachate removal volumes and liquid level elevations should start with the data generated following the effective date of the permit.</i></p>	<p>6. The permittee shall submit an original and one (1) copy of each Leachate Data Quarterly Monitoring Report required in Condition III.F.3 above.</p> <p>a. A graphical representation of the volumes of leachate removed from the LCS and LDS each month. The leachate generation rates (gallons/month) from the LCS and LDS shall be presented on the same graph. The scale of the abscissa (time) shall be such that no more than one year of data (starting with January each year) is presented on each sheet of paper.</p> <p>b. A graphical representation of the elevations of the liquid level in the collection risers for the quarter. For each measurement, the graph needs to identify the following: the elevation of leachate over time, elevation of the top of liner, and elevation of the bottom of the cover system all in feet above MSL.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
<b>IV. Groundwater Corrective Action Program</b>		
<b>A. Summary</b>		
IV-1	<p>Condition 1, 1<sup>st</sup> sentence: <i>Please revise to match language in current Permit.</i></p> <p>Condition 1, 3<sup>rd</sup> sentence: <i>Please revise to match language from current Permit.</i></p>	<p>Control of groundwater flow in the uppermost aquifer such that groundwater flow in the Riverfront Groundwater Management Zone is towards the interior of the <del>of the contaminated groundwater is towards the interior of the</del> BP-Main Plant facility.</p> <p>Such flow control is necessary as a corrective action to prevent contaminant migration of <del>address</del> <del>contaminants in groundwater from</del> on-site releases of product or waste, beyond the boundaries of the <del>at</del> the BP-Riverfront facility and is the basis for the establishment of a Groundwater Management Zone (GMZ).</p>
<b>C. Well Locations and Construction</b>		
IV-2	<p>Condition 1, 2<sup>nd</sup> sentence: <i>Please revise to reference the figure showing the well network for the approved optimized Groundwater Corrective Action Monitoring Program.</i></p>	<p>The location of these wells is specified in Figure C-27 of the approved permit application.</p>

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

IV-2 and -3	Condition 1:  Please revise well construction information to match what was provided in permit renewal application replacement pages.  Please move IEPA Well No. LOD5 from the gauging and semi-annual sampling network to the gauging and annual sampling network to align with the approved optimized Groundwater Corrective Action Monitoring Program.  Please revise IEPA Well No. RL17B to L17B to meet 4-digit requirement and prevent confusion IEPA Well No. RL-17. Currently, IEPA Well No. RL17B is truncated to RL17 in Storet EDD files submitted to Illinois EPA.	IEPA Well No.	Facility Well No.	Area	Well Depth (ft-bgs)	Well Depth Elevation (ft MSL)	Well Screen Interval (ft MSL)
<u>GMZ Boundary Wells (Gauging and Semi-Annual Sampling Network<sup>2</sup>)</u>							
G66D							
RL-6C							
ESP							
70.00							
361.38							
366.38-361.38 <sup>H</sup>							
G103							
RL-3							
P1LF							
39.00							
386.27							
396.4327-386.27 <sup>C</sup>							
395.15-385.29396.57-							
386.57 <sup>C</sup>							
G106							
RL-6							
ESP							
45-2844.00							
385.29386.57							
G107							
RL-7							
ESP							
39.00							
388.36							
398.5936-388.36 <sup>C</sup>							
378.20-369.64381.00-							
371.00 <sup>H</sup>							
G113							
SWMU-14/MW-14A							
Parcel C							
53-3051.94							
369.64371.00							
G114							
15							
Parcel C							
56.00							
364.46							
374.6546-364.46 <sup>H</sup>							
LOD1							
LOD-1							
LOD							
31.1000							
393.4858							
403.3258-393.4858 <sup>C</sup>							
390.0215-							
LOD2							
LOD-2							
LOD							
41.200							
379.95380.15							
379.9580.15 <sup>C</sup>							
LOD5							
LOD-5							
LOD							
28.50							
393.61							
401.87-393.61 <sup>E</sup>							
LOD7							
LOD-7							
LOD							
28-5029.14							
391.8420							
401.20-391.841.20 <sup>C</sup>							
RL17B							
RL-17B							
LOD							
55-0054.84							
363.8298							
373.98-363.8298 <sup>H</sup>							
<u>Observation Monitoring Wells (Gauging and Annual Sampling Network<sup>2</sup>)</u>							
G35L							
C-25B							
ESP							
57-0056.82							
371.00370.82							
378.00-370.82373.00 <sup>H</sup>							
G104							
RL-4							
P1LF							
39-0036.00							
385.25388.25							
385-25 <sup>C</sup>							
380.51381.18-							
376.18 <sup>H</sup>							
G115*							
RL-15							
WSP							
52.00							
376.18							
G116							
RL-16							
WSP							
52.00							
375.35							
379.08380.35-375.35 <sup>H</sup>							
G119							
RL-19							
ESP							
41-1040.00							
389.53391.80							
389.53 <sup>C</sup>							
385.86-380.86379.76-							
370.86 <sup>H</sup>							
G401							
T-1							
WSP							
41.50							
380.86370.86							
LOD5							
LOD-5							
LOD							
30.24							
391.87							
401.87-391.87 <sup>C</sup>							

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

<p>Please revise Facility Well No. SUMP-2 to SUMP-8 for IEPA Well No. G512 included in the well network approved in the optimized Groundwater Corrective Action Monitoring Program.</p> <p>Please correct miscellaneous typos as noted.</p>	<table border="1"> <tr> <td>R211</td> <td>RL-21BR</td> <td>WSP</td> <td>56-0054-01</td> <td>369.92367-93</td> <td>374.92-369.92372-60-367.93<sup>H</sup></td> </tr> <tr> <td>R529</td> <td>P-29R</td> <td>LOD</td> <td>48.6147-00</td> <td>372.30373-91</td> <td>382.30-372.30373-91<sup>H</sup></td> </tr> <tr> <td><b>IEPA Well No.</b></td> <td><b>Facility Well No.</b></td> <td><b>Area</b></td> <td><b>Well Depth (ft-bgs)</b></td> <td><b>Well Depth Elevation (ft MSL)</b></td> <td><b>Well Screen Interval (ft. MSL)</b></td> </tr> <tr> <td colspan="6"><u>Observation Monitoring Wells (Annual Sampling Only Network<sup>3</sup>)</u></td> </tr> <tr> <td>R21D</td> <td>RL-21CR</td> <td>WSP</td> <td>70.2471-00</td> <td>353.58352-82</td> <td>358.58-353.58356-90-352.82<sup>H</sup></td> </tr> <tr> <td>LOD6</td> <td>LOD-6</td> <td>LOD</td> <td>28.50</td> <td>393.20</td> <td>403.40-393.40<sup>C</sup></td> </tr> <tr> <td>LOD9</td> <td>LOD-9</td> <td>LOD</td> <td>28.50</td> <td>394.12</td> <td>404.12-394.12<sup>C</sup></td> </tr> <tr> <td colspan="6"><u>Observation Monitoring Wells (Gauging Only Network<sup>4</sup>)</u></td> </tr> <tr> <td>G030</td> <td>C-20</td> <td>TF</td> <td>39.1035-00</td> <td>386.27390-37</td> <td>406.27-386.27400-35-390.37<sup>C</sup></td> </tr> <tr> <td>G033</td> <td>C-23</td> <td>POTW</td> <td>35.00</td> <td>393.54</td> <td>403.55-393.55<sup>C</sup></td> </tr> <tr> <td>G037</td> <td>C-27</td> <td>PNWL</td> <td>34.00</td> <td>393.94</td> <td>404.04-393.94<sup>P</sup></td> </tr> <tr> <td>G038</td> <td>C-28</td> <td>PNWL</td> <td>35.69</td> <td>393.70</td> <td>403.90-393.80<sup>P</sup></td> </tr> <tr> <td>G090</td> <td>G090</td> <td>PNWL</td> <td>48.00</td> <td>378.61</td> <td>383.74-379.16<sup>H</sup></td> </tr> <tr> <td>G091</td> <td>G091</td> <td>PNWL</td> <td>66.50</td> <td>359.14</td> <td>382.27-377.69<sup>H</sup></td> </tr> <tr> <td>G102</td> <td>RL-2</td> <td>LOD</td> <td>34.0</td> <td>388.78</td> <td>398.78-388.78<sup>C</sup></td> </tr> <tr> <td>G109</td> <td>RL-9</td> <td>ESP</td> <td>39.00</td> <td>388.45</td> <td>398.45-388.45<sup>P</sup></td> </tr> <tr> <td>G36R</td> <td>C-26R</td> <td>PNWL</td> <td>34.4</td> <td>392.18</td> <td>402.48-392.48<sup>P</sup></td> </tr> <tr> <td>G411</td> <td>S-1</td> <td>WSP</td> <td>41.60</td> <td>376.83</td> <td>386.83-376.83<sup>H</sup></td> </tr> <tr> <td>R034</td> <td>C-24R</td> <td>ESP</td> <td>35.24</td> <td>393.64</td> <td>403.88-393.88<sup>C</sup></td> </tr> <tr> <td>R66L</td> <td>RL-6BR</td> <td>ESP</td> <td>55.30</td> <td>377.06</td> <td>382.16-377.06<sup>H</sup></td> </tr> <tr> <td>G503</td> <td>PANC-UP01</td> <td>Parcel A</td> <td>39.50</td> <td>378.55</td> <td>388.75-378.75<sup>H</sup></td> </tr> <tr> <td>G504</td> <td>PANC-UP02</td> <td>Parcel A</td> <td>39.00</td> <td>372.06</td> <td>382.06-372.06<sup>H</sup></td> </tr> <tr> <td>G505</td> <td>PANC-UP05</td> <td>Parcel A</td> <td>37.10</td> <td>389.61</td> <td>399.61-389.61<sup>C</sup></td> </tr> <tr> <td>G506</td> <td>PANC-UP09</td> <td>Parcel A</td> <td>27.30</td> <td>389.29</td> <td>399.49-389.49<sup>C</sup></td> </tr> <tr> <td>G507</td> <td>PANC-UP11</td> <td>Parcel A</td> <td>37.30</td> <td>388.62</td> <td>398.82-388.82<sup>C</sup></td> </tr> <tr> <td>G508</td> <td>SWMU4-MW01</td> <td>Parcel A</td> <td>30.98</td> <td>395.10</td> <td>405.10-395.10<sup>P</sup></td> </tr> </table>	R211	RL-21BR	WSP	56-0054-01	369.92367-93	374.92-369.92372-60-367.93 <sup>H</sup>	R529	P-29R	LOD	48.6147-00	372.30373-91	382.30-372.30373-91 <sup>H</sup>	<b>IEPA Well No.</b>	<b>Facility Well No.</b>	<b>Area</b>	<b>Well Depth (ft-bgs)</b>	<b>Well Depth Elevation (ft MSL)</b>	<b>Well Screen Interval (ft. MSL)</b>	<u>Observation Monitoring Wells (Annual Sampling Only Network<sup>3</sup>)</u>						R21D	RL-21CR	WSP	70.2471-00	353.58352-82	358.58-353.58356-90-352.82 <sup>H</sup>	LOD6	LOD-6	LOD	28.50	393.20	403.40-393.40 <sup>C</sup>	LOD9	LOD-9	LOD	28.50	394.12	404.12-394.12 <sup>C</sup>	<u>Observation Monitoring Wells (Gauging Only Network<sup>4</sup>)</u>						G030	C-20	TF	39.1035-00	386.27390-37	406.27-386.27400-35-390.37 <sup>C</sup>	G033	C-23	POTW	35.00	393.54	403.55-393.55 <sup>C</sup>	G037	C-27	PNWL	34.00	393.94	404.04-393.94 <sup>P</sup>	G038	C-28	PNWL	35.69	393.70	403.90-393.80 <sup>P</sup>	G090	G090	PNWL	48.00	378.61	383.74-379.16 <sup>H</sup>	G091	G091	PNWL	66.50	359.14	382.27-377.69 <sup>H</sup>	G102	RL-2	LOD	34.0	388.78	398.78-388.78 <sup>C</sup>	G109	RL-9	ESP	39.00	388.45	398.45-388.45 <sup>P</sup>	G36R	C-26R	PNWL	34.4	392.18	402.48-392.48 <sup>P</sup>	G411	S-1	WSP	41.60	376.83	386.83-376.83 <sup>H</sup>	R034	C-24R	ESP	35.24	393.64	403.88-393.88 <sup>C</sup>	R66L	RL-6BR	ESP	55.30	377.06	382.16-377.06 <sup>H</sup>	G503	PANC-UP01	Parcel A	39.50	378.55	388.75-378.75 <sup>H</sup>	G504	PANC-UP02	Parcel A	39.00	372.06	382.06-372.06 <sup>H</sup>	G505	PANC-UP05	Parcel A	37.10	389.61	399.61-389.61 <sup>C</sup>	G506	PANC-UP09	Parcel A	27.30	389.29	399.49-389.49 <sup>C</sup>	G507	PANC-UP11	Parcel A	37.30	388.62	398.82-388.82 <sup>C</sup>	G508	SWMU4-MW01	Parcel A	30.98	395.10	405.10-395.10 <sup>P</sup>
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LOD9	LOD-9	LOD	28.50	394.12	404.12-394.12 <sup>C</sup>																																																																																																																																																								
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G030	C-20	TF	39.1035-00	386.27390-37	406.27-386.27400-35-390.37 <sup>C</sup>																																																																																																																																																								
G033	C-23	POTW	35.00	393.54	403.55-393.55 <sup>C</sup>																																																																																																																																																								
G037	C-27	PNWL	34.00	393.94	404.04-393.94 <sup>P</sup>																																																																																																																																																								
G038	C-28	PNWL	35.69	393.70	403.90-393.80 <sup>P</sup>																																																																																																																																																								
G090	G090	PNWL	48.00	378.61	383.74-379.16 <sup>H</sup>																																																																																																																																																								
G091	G091	PNWL	66.50	359.14	382.27-377.69 <sup>H</sup>																																																																																																																																																								
G102	RL-2	LOD	34.0	388.78	398.78-388.78 <sup>C</sup>																																																																																																																																																								
G109	RL-9	ESP	39.00	388.45	398.45-388.45 <sup>P</sup>																																																																																																																																																								
G36R	C-26R	PNWL	34.4	392.18	402.48-392.48 <sup>P</sup>																																																																																																																																																								
G411	S-1	WSP	41.60	376.83	386.83-376.83 <sup>H</sup>																																																																																																																																																								
R034	C-24R	ESP	35.24	393.64	403.88-393.88 <sup>C</sup>																																																																																																																																																								
R66L	RL-6BR	ESP	55.30	377.06	382.16-377.06 <sup>H</sup>																																																																																																																																																								
G503	PANC-UP01	Parcel A	39.50	378.55	388.75-378.75 <sup>H</sup>																																																																																																																																																								
G504	PANC-UP02	Parcel A	39.00	372.06	382.06-372.06 <sup>H</sup>																																																																																																																																																								
G505	PANC-UP05	Parcel A	37.10	389.61	399.61-389.61 <sup>C</sup>																																																																																																																																																								
G506	PANC-UP09	Parcel A	27.30	389.29	399.49-389.49 <sup>C</sup>																																																																																																																																																								
G507	PANC-UP11	Parcel A	37.30	388.62	398.82-388.82 <sup>C</sup>																																																																																																																																																								
G508	SWMU4-MW01	Parcel A	30.98	395.10	405.10-395.10 <sup>P</sup>																																																																																																																																																								



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)	
		G509	SWMU4-MW03 Parcel A 29.41 389.24 405.90-395.90 <sup>P</sup>
		G510	SWMU4-MW04 Parcel A 32.62 388.96 405.57-395.57 <sup>P</sup>
		<u>Observation Monitoring Wells (LNAPL Monitoring Network<sup>5</sup>)</u>	
		G105	RL-5 ESP 34.00 388.28 398.28-388.28 <sup>C</sup>
		G512	SUMIP-28 Parcel C + 388.28 + 409.05-406.35 <sup>P</sup>
		<u>Observation Monitoring Wells (Sentinel Wells<sup>6</sup>)</u>	
		G511	SWMU4-MW02 Parcel A 26.43 392.67 402.67-392.67 <sup>C</sup>
		LOD1 <sup>2</sup>	LOD-1 LOD 31.400 393.58393.48 403.58-393.58403.32-393.48 <sup>C</sup>
		LOD2 <sup>2</sup>	LOD-2 LOD 41.200 380.15379.95 390.15-380.15390.02-379.95 <sup>C</sup>
		G029 <sup>7</sup>	C-19R MP 24.52 393.98 404.31-394.31 <sup>C</sup>
		G056**	G-16 MP 30.00 395.54 415.54-395.54 <sup>P</sup>
		<b>IEPA Well No.</b>	<b>Facility Well No.</b>
		<b>Area</b>	<b>Well Depth (ft-bgs)</b>
		<b>Well Depth Elevation (ft MSL)</b>	<b>Well Screen Interval (ft MSL)</b>
		G057 <sup>8</sup>	G-17 MP 35.02 391.90 411.90-391.90 <sup>C</sup>
		G058 <sup>8</sup>	G-18 MP 36.00 391.27 411.27-391.27 <sup>C</sup>
		GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion
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BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)																																																																				
IV-7	<p>Condition 1:                      Please revise the <u>Depth to Water units to Ft below ground surface (bgs) and Ft below top of casing (bTOC)</u>.</p> <p>Please revise hazardous constituents list and footnotes to align with the approved optimized Groundwater Corrective Action Monitoring Program.</p> <p>Please revise arsenic concentration limit to align with 35 IAC 620, Class I, Groundwater Quality Standards (GQS). Note that the historical drinking water standard for arsenic was 0.05 mg/L; however, the USEPA reduced the standard to 0.01 mg/L in 2006.</p>	<p>Depth to Water (below <del>land</del> <u>ground surface</u>) 72109 Feet <u>bgs</u></p> <p>Depth to Water (below <del>measuring point</del> <u>top of casing</u>) 72109 Ft <u>bgs</u> <u>IOC</u></p> <table border="1"> <thead> <tr> <th>Hazardous Constituents</th> <th>Storet No. (Total)</th> <th>Storet No. (Dissolved)</th> <th>Concentration Limits (mg/L)</th> </tr> </thead> <tbody> <tr> <td>Arsenic*</td> <td>01002</td> <td>01000</td> <td>0.015</td> </tr> <tr> <td>Barium</td> <td>01007</td> <td></td> <td>2.0</td> </tr> <tr> <td>Cadmium</td> <td>01027</td> <td></td> <td>0.005</td> </tr> <tr> <td>Chloride**</td> <td>00940</td> <td>00941</td> <td>200.0</td> </tr> <tr> <td>Chrysene</td> <td>34320</td> <td></td> <td>0.1</td> </tr> <tr> <td>Lead*</td> <td>01051</td> <td>01049</td> <td>0.0075</td> </tr> <tr> <td>Sulfate</td> <td>00945</td> <td></td> <td>400.0</td> </tr> <tr> <td>Benzene</td> <td>34030</td> <td></td> <td>0.005</td> </tr> <tr> <td>Benzo(b)fluoranthene</td> <td>34230</td> <td></td> <td>0.00018</td> </tr> <tr> <td>Bis(2-ethylhexyl) phthalate</td> <td>39100</td> <td></td> <td>0.006</td> </tr> <tr> <td>Carbon Disulfide</td> <td>81309</td> <td></td> <td>0.7</td> </tr> <tr> <td>Ethylbenzene</td> <td>78113</td> <td></td> <td>0.7</td> </tr> <tr> <td>Toluene</td> <td>34010</td> <td></td> <td>1.0</td> </tr> <tr> <td>Total Xylenes</td> <td>34020</td> <td></td> <td>10.0</td> </tr> <tr> <td>Methyl Tertiary-Butyl Ether</td> <td>46491</td> <td></td> <td>0.07</td> </tr> <tr> <td>Phenols</td> <td>46000</td> <td></td> <td>0.1</td> </tr> </tbody> </table> <p>* = Constituents that must be sampled for both dissolved and total concentrations.                      # = Constituents that must be sampled annually.                      1 = To monitor natural attenuation conditions.</p>	Hazardous Constituents	Storet No. (Total)	Storet No. (Dissolved)	Concentration Limits (mg/L)	Arsenic*	01002	01000	0.015	Barium	01007		2.0	Cadmium	01027		0.005	Chloride**	00940	00941	200.0	Chrysene	34320		0.1	Lead*	01051	01049	0.0075	Sulfate	00945		400.0	Benzene	34030		0.005	Benzo(b)fluoranthene	34230		0.00018	Bis(2-ethylhexyl) phthalate	39100		0.006	Carbon Disulfide	81309		0.7	Ethylbenzene	78113		0.7	Toluene	34010		1.0	Total Xylenes	34020		10.0	Methyl Tertiary-Butyl Ether	46491		0.07	Phenols	46000		0.1
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**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

IV-7	<p>Condition 2, a:</p> <p><i>Please add Condition 2.a.i. to include language referencing the proposed site-specific GQS for arsenic. bp submitted a Site-Wide Inorganics and Metals (SWIM) Evaluation Report dated January 25, 2022 for both the Riverfront and Main Plant facilities in which it was demonstrated that increases in dissolved-phase inorganics may be due to naturally occurring fluctuations or other external influences; and that these fluctuations may exceed the established Class 1 GQS. The SWIM evaluation determined that arsenic is present in the uppermost aquifer at background concentrations that exceed the Class 1 GQS of 0.01 mg/L. bp</i></p>	<p>i. -- <u>The Permittee submitted a Site-Wide Inorganics and Metals Evaluation Report dated January 25, 2022, proposing a site-specific groundwater quality standard of 0.036 mg/L for arsenic pending approval by the Illinois EPA.</u></p>
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BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
	<p><i>proposed that a site-specific GQS for arsenic be established at a concentration of 0.036 mg/L.</i></p>	
		<b>E. Groundwater Corrective Action Program</b>
IV-9	<p>Condition 3, b, 1<sup>st</sup> sentence:   <i>Please revise "daily" to "each business day."</i></p>	<p>The pumping rate from each Gradient Control Well (COD well) shall be recorded <del>daily</del><u>each business day</u>.</p>
IV-10	<p>Condition 6:   <i>Please revise to clarify "groundwater flow rate" and/or confirm this is a reference to seepage velocity in ft/day.</i></p>	<p>The Permittee shall determine the groundwater flow rate (i.e., <u>seepage velocity in ft/day</u>) and direction in the uppermost aquifer at least annually from the monitoring wells listed in Condition IV.C.1.</p>
IV-10	<p>Condition 8:   <i>Please revise the reference.</i></p>	<p>The GMZ Boundary Wells and Observation Monitoring Wells listed in Condition IV.C.1 shall be monitored for the constituents listed in Condition IV.ED.1.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
IV-13	<p><b>I. Reporting and Recordkeeping</b></p> <p>Condition 12: <i>Please clarify the number of copies required. This Condition states that one (1) original and two (2) copies are required while Condition III.F.6 states one (1) original and one (1) copy is required for the Leachate Data Quarterly Monitoring Report. Please note bp's preference is to mail one (1) original copy and send electronic copies for all Illinois EPA CCs.</i></p>	<p>The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. Only one (1) copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) copies of each notice or report you submit to the Illinois EPA. The LPC 592 form is not to be used for permit modification requests.</p>



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
IV-13	<p>Condition 14: <i>Please confirm that the CDF (Parcel D) and PNWL (Parcel J) reports required by Illinois EPA letters can be incorporated into the semi-annual report since neither are stated in Section VI – Special Conditions.</i></p>	<p>1. The Permittee shall submit a written report semi-annually to the Illinois EPA, in accordance with the schedule found in Condition IV.I.2, which discusses the effectiveness of the corrective action program and place it in the operating record for the facility. Groundwater monitoring information required by Illinois EPA letters for all Parcels at the BP Riverfront facility shall be provided within the semi-annual report and separate reports are no longer required unless otherwise stated in Section VI (Special Conditions) of the Permit. At a minimum, the report must:</p> <ul style="list-style-type: none"> <li>a. Address the information requirements in Conditions IV.C, IV.D, IV.E and IV.F</li> <li>b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition IV.D.</li> <li>c. Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.</li> </ul>
<b>V. Corrective Action</b>		
<b>F. Financial Assurance for Corrective Action</b>		
V-10	<p>Condition 3, c: <i>bp requests removal of the 20% contingency from the total cost estimate.</i></p>	<p><del>c. A 20% adjustment for contingencies to the total estimated cost;</del>  <del>c. An identification of the resources needed to complete each task (type and amount) and the unit cost of each required resource;</del>  <del>d. Justification for all values used in the developing all aspects of the estimate.</del></p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
V-15	<p><b>J. Reporting Requirements</b> Condition 1, b, 1: <i>Please clarify if the Pond 1 Landfill Leachate Data Quarterly Monitoring Report required in Condition III.F.3 can be included in this Corrective Action Progress Report rather than be submitted as a standalone report.</i></p>	<p>a summary of activities completed at each parcel during the quarter, including information regarding the amount of free product/groundwater/leachate removed on a weekly basis from various units during the quarter;</p>
V-15	<p>Condition 1, d: <i>Please correct number formatting and period in last sentence.</i></p>	<p>d. An Annual Corrective Action Progress Report must be submitted to Illinois EPA by March 1 of each year which summarizes corrective action program activities completed at the facility during the previous calendar year (i.e., the previous January 1 to December 31). Among other things, this report must contain a compilation/summary of the information in the quarterly reports for the year, what was completed during the year, and what must still be done in the next year and in the following years. The following shall be incorporated into the Annual Corrective Action Progress Report and separate reports are no longer required:</p> <p>    <u>(1)</u> The corrective action progress report for the fourth quarter (October – December of every year).</p> <p>    <u>(2)e.</u> The “Annual CDF Operations, Maintenance and Monitoring Report” (referred to as Annual CDF OM&amp;M/ Liquid Level Report by BP Products North America Inc.);</p>

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
<b>VI. Special Conditions</b>		
<b>C. Compliance Schedule</b>		
VI-2	<p>Condition 4:                      The GMZ for the Riverfront facility was established as a condition in the 1993 RCRA Permit. It is bp's opinion that the GMZ at the Riverfront facility is grandfathered and is not subject to requirements for property owner permission that were adopted after the GMZ was established. The 2023 permit condition requiring written permission from property owners for an off-site GMZ pre-dates 1997 Illinois GMZ regulations and Illinois EPA 2001 guidance requiring written permission. bp proposes that off-site property owners be notified of the previously approved GMZ.</p>	<p>Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a modification to the Corrective Action Section (Section V) of the Permit, for Illinois EPA review and approval, which provides written <del>permission from</del> notification to any applicable off-site property owner <del>acknowledging they</del> accept that a GMZ for the Riverfront facility encompasses <del>located on</del> their property. This documentation will serve to verify off-site property owners are aware and approve of a GMZ being present on their property.</p>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
VII. Standard Conditions		
VII-7	<p>Condition 36:  <i>“Closure Requirements for Accumulation Areas” is a new Standard Condition (under “General Facility Standards” subsection). It is bp’s opinion that this condition should only be applicable to storage areas operated on or after the date the closure requirement was adopted at 35 IAC 722.117(a)(8).</i></p>	<p>CLOSURE REQUIREMENTS FOR ACCUMULATION AREAS. The Permittee shall close containers storage areas, tanks, drip pads, or containment buildings used for the accumulation of on-site generated hazardous waste in accordance with the requirements identified at 35 IAC 722.117(a)(8). <u>This requirement is applicable to storage areas used on or after this section was amended at 44 Ill. Reg. 15263, effective September 3, 2020.</u></p>
VII-10	<p>Condition 56:  <i>The numbering missed “d” and skipped to “e”. Please revise list formatting.</i></p>	<p>56. COST ESTIMATE FOR FACILITY CLOSURE. The Permittee’s original closure cost estimate, prepared in accordance with 35 IAC 724.242, must be:</p> <ul style="list-style-type: none"> <li>a. Adjusted for inflation 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 724.243. However, if the owner/operator is using the financial test or corporate guarantee, it must be updated for inflation within 30 days after close of the firm’s fiscal year, and before the submission of updated information to the Illinois EPA as specified in Section 724.243(f).</li> <li>b. Revised no later than 30 days after the Illinois EPA has approved a request to modify the closure plan, if the change in the closure plan increases the cost of closure.</li> <li>c. Kept on record at the facility and updated. (35 IAC 724.242)</li> <li>e-d. Made immediately available to Illinois EPA personnel upon Illinois EPA request.</li> <li>f-e. Maintained at the value approved by Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.</li> </ul>

**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
VII-11	<p>Condition 63, a:</p> <p><i>Please revise language to align with current permit.</i></p>	<p>63. STORAGE RESTRICTIONS</p> <p>a. The Permittee shall not store hazardous wastes restricted from land disposal under 35 IAC Part 728, Subpart C unless such wastes are stored only in containers or tanks, or other units approved by Illinois EPA in writing, and are stored solely for the purpose of the accumulation of such quantities as is necessary to facilitate proper recovery, treatment, or disposal, and: (1) each container is clearly marked to identify its contents and the date each period of accumulation begins; (2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, as required by 35 IAC 728.150.</p>
VII-12	<p>Conditions 67 and 68:</p> <p><i>The numbering missed "c" and skipped to "d". Please revise list formatting.</i></p>	<p>67. COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 IAC 724.244, must be:</p> <p>a. Adjusted for inflation either 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year. This permit condition is applicable throughout the entirety of the post-closure care period.</p> <p>b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of the post-closure plan.</p> <p>c. Kept on record at the facility and updated. (35 IAC 724.244).</p> <p>d. Maintained at the value approved by Illinois EPA with annual adjustment for inflation during the post-closure care period and cannot be decreased unless approved by the Illinois EPA in a permit modification.</p>
<b>VIII. Reporting and Notification Requirements (SEE NEXT PAGE)</b>		



**BP Products North America Inc. – Riverfront Facility  
RCRA Administrative Record - Public Notice Comments for Draft Permit**

Page(s)	Comment	Reference / Proposed Revision(s)
VIII-1	<p><i>Please revise the incorrect Condition references.</i></p>	<p>IV.D.4 Notify Illinois EPA if any of the wells identified in Condition IV.DC.1 and IV.DC.2 are damaged, or the structural integrity has been compromised</p>
	<p><i>Please clarify the due date for Condition VII.14 regarding Reporting Planned Changes as here it states, "At least 15 days prior to planned change" but Condition VII.14 states, "as soon as possible."</i></p>	<p>IV.DC.6 Provide Illinois EPA boring logs, construction diagrams, and data sheets from new or replacement wells</p> <p>IV.JI.2 Groundwater monitoring data required each quarter, and additional data required in Conditions IV.FE., IV.GE., and IV.HI.</p> <p>IV.JI.3 Collect quarterly groundwater surface elevation data</p> <p>IV.JI.4 Quarterly groundwater withdrawal rates</p> <p>IV.JI.5 Gradient control measurements.</p> <p>IV.JI.6 Statistical evaluations, as required by Condition IV.F.2-eH</p> <p>IV.JI.7 Groundwater flow rate and direction in the uppermost aquifer.</p> <p>IV.JI.8 Collect groundwater samples per Condition IV.FE.8 and depict the extent of dissolved contamination to define the extent of contamination.</p> <p>IV.JI.9 The surveyed elevation of the top of well casing.</p> <p>IV.JI.10 Elevation of the bottom of each monitoring well.</p> <p>IV.JI.11 Electronic Reporting</p>

BP Products North America Inc. – Riverfront Facility  
 RCRA Administrative Record - Public Notice Comments for Draft Permit

Page(s)	Comment	Reference / Proposed Revision(s)
<b>Attachments</b>		
A	Divider Page: Please revise.	ATTACHMENT A IDENTIFICATION OF APPROVED PERMIT APPLICATION
I and J	Divider Page: Please revise.	ATTACHMENT I CERTIFICATION OF COMPLETION OF CLOSURE  ATTACHMENT J CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE

# EXHIBIT C



217/524-3301

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

SEP 29 2023

7022 1670 0001 4381 5296

BP Products North America, Inc.  
Attention: Ms. Michelle Knapp  
Liability Manager  
301 Evans Avenue  
P.O. Box 167  
Wood River, Illinois 62095

Re: 1191155009 – Madison County  
BP Products North American Inc./Riverfront Property  
ILD980503106  
Log No. B-145R2  
RCRA Administrative Record  
Permit Approval

Dear Ms. Knapp:

Enclosed is a final renewed Resource Conservation and Recovery Act (RCRA) Post-Closure Permit for BP Products North America, Inc. - Riverfront Facility (BP). The final permit decision is based on the administrative record contained in the Illinois EPA's files. The contents of the administrative record are described in Title 35 Illinois Administrative Code 705.211.

Please read the permit carefully. Failure to meet any portion of the permit could result in civil and/or criminal penalties. The only comments received on the draft renewed RCRA Post-Closure Permit were from BP. The Illinois EPA's responses to these comments are attached to this letter.

This action shall constitute the Illinois EPA's final action on the subject submittal. The applicant may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Illinois Environmental Protection Act by filing a petition for a hearing within thirty-five (35) days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed ninety (90) days by written notice from the applicant and the Illinois EPA within the initial 35-day appeal period. If the applicant wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the request for an extension, please contact:

Illinois Environmental Protection Agency  
Division of Legal Counsel  
Attn: Land Enforcement Unit Manager  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, IL 62794-9276  
217/782-5544

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board, Clerk  
State of Illinois Center  
100 West Randolph, Suite 11 500  
Chicago, IL 60601  
312/814-3620

Any questions regarding groundwater issues, please contact Amy Butler, P.G. at 217/558-4716.  
For all other questions, please contact Jacob Nutt at 217/524-7048.

Sincerely,



Jacqueline M. Cooperider, P.E.  
Permit Section Manager  
Bureau of Land

JMC:JDN:1191155009-RCRA-B145R2-approval.docx

Attachment: Illinois EPA's Response to BP's Comments  
Renewed RCRA Post-Closure Permit

cc: Norberto Gonzalez, U.S. EPA – Region V  
Emily Keener, U.S. EPA – Region V  
Michael Hoffman, Wood Environment & Infrastructure Solutions, Inc



ILLINOIS EPA'S RESPONSE TO COMMENTS  
BP Products North America, Inc.  
Draft Renewed RCRA Post-Closure Permit

The responses below address comments received from BP Products North America, Inc. Riverfront Facility (BP) dated August 23, 2023, and received by Illinois EPA on August 24, 2023, pertaining to the draft renewed RCRA permit for BP issued on July 7, 2023. In addition, typographical errors were corrected throughout the permit as the Illinois EPA initiated changes.

**BP'S COMMENTS TO THE FACT SHEET**

**BP Comment 1:**

*Page 1 of 7 (Section II.A.): 1st paragraph, 4th and 5th sentences:*

*Please revise to clarify the property now owned by Kinder Morgan Phoenix Holdings, LLC (KMPH) is no longer a portion of the Main Plant facility. Please remove the detail regarding operations at the KMPH facility as it is no longer a portion of the Main Plant facility.*

*In addition, it was used for the management of refinery waste. Currently, Kinder Morgan Liquids Terminal LLC (KMLT) operates and Kinder Morgan Phoenix Holdings, LLC (KMPH) owns a storage and distribution facility for gasoline and petroleum distillates at a site which was formerly a portion of the Main Plant facility ~~but that~~ was sold to KMPH and will be subject to a separate RCRA Permit. ~~Distribution operations are managed via pipelines, aboveground storage tanks at the Main Plant, and barge operations on the Mississippi River.~~*

**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP Comment 2:**

*Page 2 of 7 (Section II.B.): 2nd paragraph, 2nd sentence:*

*Please add references to the Main Plant facility and revise "riverfront property" to "Riverfront facility" for clarification.*

*The Riverfront facility is adjacent to, and its operation was associated with the former Amoco Refinery in Wood River. This 569-acre former refinery (Main Plant facility) is located due east of the Riverfront facility ~~riverfront property~~. Route 143, East Rand Avenue, South Sixth Street, and Illinois Route 3 bound the former refinery (Main Plant facility) on the north, south, east, and west sides, respectively.*

**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP Comment 3:**

***Page 3 of 7 (Section III.A.1.): Table:***

*Please revise to clarify there are no sediments or soil with K048 above the ESP liner. Remove second closing parentheses.*

<u>Description of Hazardous Waste &amp; Waste Numbers</u>
---

<i>Sediments and soil below the liner contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry</i>
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**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP Comment 4:**

***Page 3 of 7 (Section III.A.1.): 2nd paragraph, 1st sentence:***

*Please revise to clarify treatment and placement of sludges into the landfills.*

*The majority of the sludges were removed and treated by the Chemfix process prior to placement in the Permitted Non-Hazardous Waste Landfill (PNWL, or Pond 5 landfill). However, the heavier hazardous sludges and the majority of the impacted soils in these ponds could not be placed in the PNWL and were subsequently removed and placed in the Pond 1 Landfill (this unit is further discussed below).*

**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP Comment 5:**

***Page 3 of 7 (Section III.A.1.): 3rd paragraph, last sentence:***

*Please remove the word influent.*

*In the event this level is exceeded, influent water can be diverted to the Temporary Surge Basin or the West Surge Pond.*

**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP Comment 6:**

*Page N/A (Section III.A.2.): Pg. 11 through 18 of the pdf  
Please remove duplicate Fact Sheet.*

**Illinois EPA Response:**

The Illinois EPA acknowledges BP's comment. However, the Fact Sheet will not be included as a part of the final permit.

**BP'S COMMENTS TO DRAFT PERMIT**

**BP Comment 7:**

*Page I-2 (Section I.C.): 1st paragraph, 4th and 5th sentences:*

*Please revise to indicate that Kinder Morgan Phoenix Holdings (KMPH) owns and Kinder Morgan Liquid Terminals LLC (KMLT) operates this former portion of the Main Plant facility.*

*Please revise to clarify that the property now owned by KMPH is no longer a portion of the Main Plant facility. Please remove the detail regarding operations at the KMPH facility as it is no longer a portion of the Main Plant facility.*

*Presently, Kinder Morgan Liquid Terminals LLC (KMLT) ~~owns~~operates, and Kinder Morgan Phoenix Holdings (KMPH) ~~operates~~owns, a storage and distribution facility for gasoline and petroleum distillates at a site which was formerly a portion of the Main Plant facility but was sold to KMPH and will be subject to a separate RCRA Permit. ~~for gasoline and petroleum distillates. Distribution operations are carried out via pipelines and aboveground tanks at the Main Plant.~~ The Main Plant and Riverfront facilities were owned by Amoco Oil Company until the company merged with BP in 1999.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes, and the 1<sup>st</sup> paragraph of Section I.C been revised as proposed.

**BP Comment 8:**

*Page I-2 (Section I.C.): 3rd paragraph, 3rd sentence:*

*Please add a space after the “,” following (DAF) float in the third sentence of the third paragraph.*

*From 1977 to 1981, Amoco stored Dissolved Air Flotation (DAF) float, a listed hazardous waste, in Ponds 1, 1A, 2, 2A, 3, 3A and 4 of the former series of wastewater treatment ponds.*

**Illinois EPA Response:**

The typographical error was corrected as proposed in the 3<sup>rd</sup> paragraph of Section I.C.

**BP Comment 9:**

*Page I-3 (Section I.C.): Condition 2, 4th sentence:*

*Please add Permit reference to define “wastewater from the Main Plant.”*

*These wastewaters ~~include wastewater from the Main Plant are defined in Condition II.B.1, Wood River Wastewater Treatment Plant, and non-hazardous leachate from the Pond 5 landfill, also known as the Permitted Non-Hazardous Waste Landfill (PNWL).~~*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes, and Condition I.C.2 was revised as proposed.

**BP Comment 10:**

*Page I-3 (Section I.C.): Last 2 paragraphs:*

*Please remove the second period at the end of the third sentence in the third paragraph.*

*In the first sentence of the fourth paragraph, revise the word “at” to “the” and revise to clarify corrective action is required at the facility. However, bp does have the option to remove a parcel from the Land Reuse program, whereby Corrective Action would only apply to SWMUs and PRSs and would not include recognized environmental conditions.*

*As part of the general corrective action program, the facility has been broken up into ten parcels and the SWMUs in each parcel have individual focus.*

*This permit allows/requires BP to carry out ~~at~~the following activities at the Riverfront facility: (1) continue storing/treating non-hazardous wastewaters in the ESP until closure activities begin;*

*(2) provide post-closure care for the Pond 1 Landfill; (3) conduct-corrective action, as appropriate, ~~on the recognized environmental conditions at the facility~~; and (4) implement a groundwater monitoring/corrective action program.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes.

The Illinois EPA disagrees with BP's comment that required corrective action only applies to SWMUs and PRSs. Any newly discovered contamination throughout the site must be addressed under the corrective action, which may be designated as an area(s) of concern. However, the proposed change to remove "on the recognized environmental conditions" does not have any impact on the corrective action requirements in Section I.C of the final permit. Thus, proposed changes were made as proposed in Section I.C.

**BP Comment 11:**

*Page II-1 (Section II.A.): Third Paragraph, 2nd sentence:*

*Please add the word "to" between allowed and be.*

*Although some residual soil contamination may remain in the ESP during the delay of closure period, no new hazardous wastes are allowed to be placed in the unit.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes, and Section II.A was revised as proposed.

**BP Comment 12:**

*Page II-1 (Section II.B.): B. Condition 1, 1<sup>st</sup> sentence:*

*Please revise language to the 80-million-gallon capacity / 2-ft freeboard.*

*(a) Please add "industrial" sewage to account for process wastewater. Please add a "t" to BP "Main Plan."*

*(c) Please define or clarify "seepage water from the Riverfront facility."*

*The Permittee may only store/treat non-hazardous wastewaters ~~ain~~ total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic and industrial sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plant and Riverfront facilities; (b) groundwater pumped as part of BP's hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility.*



**Illinois EPA Response:**

Regarding Item (a): The Illinois EPA corrected the typographical errors in Condition II.B.1. However, at this time, insertion of “and industrial” is not made to the final permit as requested. Section B.1.2 and Section E Addendum of BP’s application for this renewed permit did not include “industrial sewage” regarding the wastewater management at the East Surge Pond (ESP). If BP would like this requirement to be modified, BP may submit a request to modify the permit with a demonstration that managing “industrial sewage” at the ESP is appropriate and meets any consideration for the final order of the Adjusted Standard (AS-91-4) for delay of closure of the unit. In addition, based on the Illinois EPA’s further evaluation of the requirements of wastewater management at the ESP relative to BP’s comment, the Illinois EPA determined that the following additional language is necessary in Section II.B.1: “Any wastewater management activities at the ESP must meet all requirements by the Illinois EPA Bureau of Water, as necessary”.

Seepage water at the Riverfront facility would be water seeping naturally through subsurface soils to surface soils and ground-surface at the Riverfront facility.

Thus, Condition II.B.1 of the permit is revised to read:

The Permittee may only store/treat non-hazardous wastewaters in total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plant and Riverfront facilities; (b) groundwater pumped as part of BP’s hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility. Any wastewater management activities at the facility at the ESP must meet all requirements by the Illinois EPA Bureau of Water, as necessary.

**BP Comments 13 and 14:**

*Page II-2 (Section II.B.): Condition 2, a:*

*Please revise to clarify this sample is the first discharge of wastewater sent to the ESP from Pond 3A.*

*Please define required analytes or add reference to the Condition with requirements.*

*a. Collect/analyze a sample of the first discharge of wastewater from Pond 3A, ~~sent~~ to the ESP each quarter of the calendar year in accordance with Condition II.B.2.c.*

*Page II-2 (Section II.B.): Condition 2, b:*

*As this is a new requirement, please confirm the following:*

- 1) that PNWL leachate sampling is necessary;*
- 2) what actions are required if no PNWL leachate is generated/ discharged; and*
- 3) what documentation is required if no PNWL leachate is discharged.*

*Please consider the proposed revision to require a quarterly sample of the PNWL leachate discharge as it is not possible to guarantee collection of the "first" PNWL leachate discharge.*

*Please revise the number formatting if the sample requirements apply to the samples required under both II.B.2.a and II.B.2.b. and add reference to II.B.2.c.*

*Please clarify if electronic records meet the definition of "operating record" throughout the Permit.*

- b. Two composite samples of ~~the first~~ leachate discharge, one from the manifolded pipe of odd numbered sumps and one from the even numbered sumps of the PNWL, sent to the East Surge Pond each quarter of the calendar year in accordance with Condition II.B.2.c.*
- c. These samples must be analyzed for all the characteristics of hazardous waste set forth in 35 IAC 721, Subpart C. The results of these efforts must be documented in the facility's operating record.*

**Illinois EPA Response:**

In response to BP's comments above, the Illinois EPA has revised Conditions II.B.2 (a) and (b) as proposed and also added Conditions II.B.2 (c) (partially modified previous Condition II.B.2 (b)) and II.B.4 to ensure that any wastewater managed meets necessary requirements by the Illinois EPA Bureau of Water as follows and the constituents of concerns at the ESP are properly analyzed:

**Condition II.B.2:**

- a. Collect and analyze a sample of the discharge of wastewater from Pond 3A to the ESP each quarter of the calendar year in accordance with Condition II.B.2 (c).
- b. Collect ~~two~~ (2) composite samples of ~~the first~~ leachate discharge: one from the manifolded pipe of odd numbered sumps; and one (1) from the even numbered sumps of the PNWL, sent to the ESP each quarter of the calendar year, when leachate is present at the PNWL in accordance with Condition II.B.2(c). If leachate is present at the PNWL but is not discharged to the ESP, then it must be noted in the analytical report included in the facility's operating record and annual report, as required in II.B.2 (c) below.
- c. ~~These samples must be analyzed for all the characteristics of hazardous waste set forth in 35 IAC 721, Subpart C.~~ The Permittee shall collect representative samples

of the discharge described in Conditions II.B.2 (a) and (b) above and analyze it for all the constituents listed in 35 IAC 724 Appendix I. The results of these efforts must be documented in the facility's operating record and reported to Illinois EPA annually. If it is found that the wastewater/leachate is hazardous, then:

<Conditions II.B.2 (b) (1) through (3) became Conditions II.B (c) (1) through (3)>

Condition II.B.4:

4. The Permittee must meet all applicable requirements of the Illinois EPA Bureau of Water, as necessary, regarding management of all wastewater at the facility in accordance with all applicable regulations for such activities.

**BP Comment 15:**

*Page II-3 (Section II.C.): Condition 2:*

*Please clarify if there is an exception to the 2-foot freeboard requirement in the case of Force Majeure events.*

*A minimum of two feet of freeboard must be maintained at all times in the ESP. Illinois EPA may modify this requirement when it determines cause exists, such as Force Majeure or events over which the Permittee has no control.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition II.C.2 was revised as proposed.

**BP Comment 16:**

*Page II-3 (Section II.C.): Condition 3:*

*Please add period to last sentence.*

*This adjusted standard allows the Permittee to continue using the ESP for the storage/treatment of non-hazardous wastewaters until they decide to close the impoundment in accordance with 35 IAC 724.*

**Illinois EPA Response:**

The typographical error was corrected as proposed in Condition II.C.3.

**BP Comment 17:**

*Page II-4 (Section II.E.): Condition 3:*

*Please include reference to Illinois Administrative Code.*

*If the ESP is taken out of service for more than six months, then prior to returning to service, the Permittee shall obtain a certification from a qualified Professional Engineer registered in the State of Illinois that the surface impoundment and the flood-protection dike, including that portion of any dike which provides freeboard, have structural integrity in accordance with 35 IAC 724.326(c).*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition II.E.3 was revised as proposed.

**BP Comment 18:**

*Page II-4 (Section II.F.): Condition 1, 2nd and 3rd sentences:*

*Please clarify or define “non-closure activity.”*

*The proposed schedule for closure of the ESP required in this section must include and consider any additional non-closure activities associated with the ESP. Any additional non-closure activities associated with the ESP must commence at least five (5) years prior to the expiration of this permit so that the required RCRA closure activities of the ESP may commence prior to the expiration date of this permit unless approved otherwise by Illinois EPA.*

**Illinois EPA Response:**

Non-closure activities in this regard are activities which may impact the ESP but are not required RCRA interim status closure activities for the ESP. For example, re-routing stormwater from on- and off-site areas to be managed elsewhere than the ESP may be a non-closure activity. It has a direct impact on the operation of the ESP and essentially for the ESP closure activities. However, the action of re-routing of stormwater itself is not a required RCRA closure activity (thus non-closure activity) while removing any existing water in the ESP would be considered a part of closure activity. No changes were made to Condition II.F.1.

**BP Comment 19:**

*Page II-4 (Section II.F.): Condition 2, 4th sentence:*

*Please capitalize “p” in Environmental Protection Act.*

*Illinois EPA review of this plan will be subject to the permit appeal provisions contained in Sections 39(a) and 40(a) of the Illinois Environmental protection Act.*

**Illinois EPA Response:**

The typographical error was corrected in Condition II.F.2.

**BP Comment 20:**

*Page II-6 (Section II.F.): Condition 5, i:*

*Please add a ";" between geologic cross-sections and groundwater monitoring data.*

*As appropriate and available: boring logs; well construction diagrams; geologic cross-sections; groundwater monitoring data; and information about any groundwater remediation effort.*

**Illinois EPA Response:**

The typographical error was corrected in Condition II.F.5 (i).

**BP Comment 21:**

*Page III-2 (Section III.B.): Condition 4:*

*Please revise description of cover system to include the Geotextile fabric layer between the 1-ft thick compacted clay layer and the geonet drainage layer.*

*The cover system on the top of the Pond 1 landfill is constructed of the following layers, specified from the top to bottom:*

- a. One foot thick protective soil cover;*
- b. One foot thick compacted clay layer;*
- ~~b.c.~~ c. Geotextile fabric;*
- ~~e.d.~~ d. A geonet drainage layer;*
- ~~d.e.~~ e. 60 mil HDPE geomembrane liner; and*
- ~~e.f.~~ f. Two foot thick compacted clay layer.*

**Illinois EPA Response:**

The typographical errors were corrected in Section III.B.4.

**BP Comment 22:**

*Page III-3 (Section III.B.): Condition 5, b:*

*Please revise to include exception for delisting.*



*Any material removed from the Pond 1 Landfill during future activities must be managed as a hazardous waste in accordance with 35 IAC Subtitle G: Waste Disposal unless material has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition III.B.5 (b) was revised as proposed.

**BP Comment 23:**

*Page III-5 (Section III.D.): Condition 4, 1<sup>st</sup> sentence:*

*A recent inspection of the benchmark locations at the Riverfront facility could not locate the markers; please consider the proposed revision.*

*The Permittee shall inspect the benchmarks used to identify the location of the hazardous waste management units (HWMUs) and solid waste management units (SWMUs) within 60 days of the effective date of this permit and thereafter in accordance with the Inspection Schedule in the approved permit application. If benchmarks cannot be located or confirmed, then the Permittee shall have the appropriate benchmark(s) reestablished by a licensed surveyor within 90 days of the effective date of this permit.*

**Illinois EPA Response:**

Based on BP's comment regarding not being able to locate previous benchmarks, in addition to BP's proposed language, Illinois EPA has added additional requirements to: (1) evaluate, as much as possible, and document any noticeable changes in the ground elevation in general and any settlement of the unit; and (2) maintain the benchmarks as a part of post-closure care of the unit. Thus, Condition II.D.4 in the final permit will read:

The Permittee shall inspect the benchmarks used to identify the location of the hazardous waste management units (HWMUs) and solid waste management units (SWMUs) within 60 days of the effective date of this permit and thereafter in accordance with the Inspection Schedule in the approved permit application.

If benchmarks cannot be located or confirmed, then the Permittee shall have the appropriate benchmark(s) reestablished by a licensed surveyor within 90 days of the effective date of this permit. Furthermore, the Permitted must: (1) evaluate, as much as possible, and document any noticeable changes in the ground elevation in general and any settlement of the unit; and (2) maintain the benchmarks as a part of post-closure care of the landfill.

**BP Comment 24:**

*Page III-6 (Section III.E.): Condition 1:*

*Please clarify if electronic records meet the definition of “written operating record.”*

*The Permittee shall keep and maintain a written operating record that includes all the records, reports, notifications, monitoring data, testing or analytical data, and corrective action data required by 35 IAC 724.173 and the conditions in this permit, for the entirety of the post-closure care period. The operating record shall be kept on-site at the facility and available for Illinois EPA review.*

**Illinois EPA Response:**

Keeping electronic records that can be printed meets the definition of “written operating record”. If any operational record is requested by the Illinois EPA, a written (paper copy) record must be available. No changes were made to Condition III.E.I based on this comment.

**BP Comment 25:**

*Page III-6 (Section III.E.): Conditions 4 and 5, 2<sup>nd</sup> sentence:*

*Please remove references to “run-on control system” and “run-off management system” as the landfill is not active; or define and clarify when applicable to the Pond 1 Landfill.*

*4. The Permittee shall prevent run-on from eroding or otherwise damaging the final cover. ~~At a minimum, the run-on control system shall be capable of preventing flow onto the active portion of the landfill during peak discharge from a 24 hour, 25-year storm event.~~*

*5. The Permittee shall prevent run off from eroding or otherwise damaging the final cover. ~~At a minimum, the run-off management system shall be capable of collecting and controlling the volume of water resulting from a 24 hour, 25-year storm event.~~*

**Illinois EPA Response:**

Both run-on and run-off stormwater must also be managed at the Pond 1 Landfill to prevent any future erosion and damage to the final cover. Run-on and run-off storm water is especially a concern during a peak discharge from a 24-hr, 25-year (or more intense) storm event. Thus, such a stormwater management system for the landfill must be in-place to prevent any damages to the final cover and other component of the Pond 1 Landfill. Thus, no changes were made to Conditions III.E.4 and 5.

**BP Comment 26:**

*Page III-6 and III-7 (Section III.E.): Condition 7:*

*Please consider the following:*

*The Pond 1 Landfill does not have a current permanent pumping system for leachate extraction. Leachate is removed via vacuum truck. A draft delisting petition for the Pond 1 Landfill leachate has been submitted for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board (IPCB). bp proposes to submit a Compliance Plan to Illinois EPA within 30 days of IPCC approval or denial of this petition, proposing a schedule to comply with the requirements, as applicable.*

*Please consider revising to require a camera survey of the collection risers and sump every 10 years to inspect and determine if sediment removal is needed.*

7. *The Permittee submitted a draft delisting petition dated June 30, 2023 for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board. Within 30 days of Illinois Pollution Control Board approval or denial of this petition, the Permittee shall submit a Compliance Plan to Illinois EPA, proposing a schedule to comply with the requirements stated below, as applicable.:*
  - a. *The Permittee shall ~~m~~install and maintain the~~g~~ leachate collection system (LCS) with pumps, and leak detection system (LDS) in accordance with the design plans and specifications contained in the Illinois EPA approved ~~permit application~~ Compliance Plan and the conditions in this permit. ~~The permittee shall:~~*
  - b. *The LCS will maintain leachate levels within the collection risers at a depth such that leachate does not exceed one (1) foot above the liner.*
  - c. *Remove and clean the pumps from the LCS and LDS at least once every year.*
  - d. *Every 10 years, the permittee will use a camera to inspect the collection risers and sump for sediment build-up. If 10% or more of the screened interval is silted-in, the permittee shall ~~R~~remove sediment from the LCS and LDS collection riser~~pipes~~ and sumps using a high-pressure jet or equivalent method ~~at least once every 10 years.~~*
  - e. *Install and operate ~~within 30 days of the effective date of this permit,~~ a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11 (b).*

**Illinois EPA Response:**

The Illinois EPA partially concurs with BP's comment. Any changes to the compliance requirements as a result of BP's delisting petition to the Illinois Pollution Control Board may be submitted as a permit modification request to the Illinois EPA. Condition III.E.7 (a) was revised to reflect BP's comment regarding future revisions in the current LCS and LDS. Condition III.E.7 (b) was revised as proposed by BP. Condition III.E.7 (c) was not

revised as the Illinois EPA determined that a leak detection alarm should be in place at the facility as a necessary safety measure for operating the Pond 1 Landfill. Finally, the requirements in Condition III.E.7 (d) were inserted as requested by BP. Thus, Condition III.E.7 was revised to read:

7. The Permittee shall maintain the leachate collection system (LCS), and leak detection system (LDS) in accordance with the design plans and specifications contained in the approved permit application and the conditions in this permit. The permittee shall:
  - a. ~~Remove and clean the pumps from LCS and LDS must be at least once every year~~ Manage leachate collected in LCS and LDS in accordance with Condition III.E.9 below until an alternative compliance plan is approved by Illinois EPA to install a new LDS with a permanent pumping system and LDS. Any pumps from the LCS and LDS must be removed on cleaned at least once every year, as applicable.
  - b. Every 10 years, the Permittee will use a camera to inspect the collection risers and sump for sediment build-up. If 10% or more of the screened interval is silted-in, the permittee shall remove sediment from the LCS and LDS collection riser pipes and sumps using a high-pressure jet or equivalent method at least once every 10 years.
  - c. Install and operate within 30 days of the effective date of this permit, a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11 (b).
  - d. The LCS will maintain leachate levels within the collection risers at a depth such that leachate does not exceed one (1) foot above the liner.

**BP Comment 27:**

***Page III-7 (Section III.E.): Condition 10, a and b:***

*As this is a new requirement, and the Permittee has conducted previous rounds of leachate characterization sampling to support a delisting petition, please clarify or revise based on the following:*

*In lieu of analyzing annual samples for the 35 IAC 724 Appendix I parameters for the first four years, bp proposes to analyze the first annual sample for the Appendix I parameters and submit these results to Illinois EPA along with results from previous samples collected by bp and/or the Publicly Owned Treatment Works (POTW) that collectively comprise the 35 IAC 724 Appendix I parameters, and use these results to propose a Reduced List for Illinois EPA approval, then subsequent implementation during the second annual sampling event.*



*The permittee shall collect a representative sample of leachate from the landfill and analyze it for all the constituents listed in 35 IAC 724 Appendix I. These samples shall be collected and analyzed annually in accordance with the sampling and test methods specified in the approved permit application. The results of the leachate quality testing data shall be submitted and maintained in the facility's operating record and submitted to the Illinois EPA by July 15 each year.*

- a. *The Reduced List will be based on the four most recent complete 35 IAC 724 Appendix I analyses and include all parameters detected in any of the four Appendix I analyses. Starting the next sampling event after Illinois EPA approval, this Reduced List will be used in lieu of the Appendix I analysis for three out of four years, with the fourth-year reverting to a full Appendix I analysis. Any parameters not included on the existing Reduced List that are detected in the fourth-year Appendix I analysis shall be added to all future Reduced List analyses by means of a permit modification request. This cycle of three years of Reduced List, followed by one year of Appendix I analysis, will repeat for the remainder of the post-closure period.*
- i. *For the first cycle, the Permittee may utilize results from the first annual sample analyzed for all Appendix I parameters in conjunction with previous results from samples collected by the Permittee and/or the Publicly Owned Treatment Works (POTW) that collectively comprise the Appendix I parameters, if available, to propose the first Reduced List for Illinois EPA approval.*

**Illinois EPA Response:**

The requested changes to Condition III.E.10 (a) by BP were not made as the Long Term Stewardship (LTS) consideration for the Pond 1 Landfill was made to include the subject condition. As the Pond 1 Landfill remains under post-closure care as long as the hazardous waste and associated risks remain in place, the only mechanism for detecting any hazardous constituent released from the landfill waste is to sample its leachate. The Illinois EPA currently has no information to ensure that the proposed four (4) years of sampling of leachate would demonstrate that the same condition of the containment system and the absence of risks would continue in perpetuity. Until such time that an appropriate demonstration can be made to the Illinois EPA that reduction of the parameters in sampling leachate represents the actual conditions of the waste materials managed in the landfill and future risks associated with the Pond 1 Landfill, this condition must be met. It should be noted that the Permittee is allowed to make such demonstration through a permit modification request to the Illinois EPA for its review and approval.

**BP Comment 28:**

*Page II-8 (Section III.E.): Condition 11, b:*

*Please consider the following:*



*A draft delisting petition for the Pond 1 Landfill leachate has been submitted for review by Illinois EPA prior to submittal to the Illinois Pollution Control Board. A 30-day deadline from the date of approval or denial of the delisting petition is requested for submittal of a Compliance Plan for implementation of any leachate management systems and adherence to Condition III.E.11.b.*

*In accordance with the Compliance Plan referenced in Condition III.E.7, Leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403' above mean sea level (MSL) for LCS).*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes. Condition III.E.11 (b) was revised to read:

- b. In accordance with an alternative Compliance Plan, if approved by the Illinois EPA as referenced in Condition III.E.7, leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403' above mean sea level (MSL) for LCS).

**BP Comment 29:**

*Page II-8 (Section III.E.): Condition 11, c:*

*Please revise to include exception for delisting.*

*All leachate removed from the LCS and LDS shall be managed as a hazardous waste unless leachate has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition III.E.11 (c) was revised as proposed.

**BP Comment 30:**

*Page III-8 (Section III.F.): Condition 3:*

*Please confirm this new data reporting requirement is necessary. If so, please consider allowing this data to be reported in the quarterly Corrective Action Progress Report required in Condition V.J.1 rather than a standalone report.*

*The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 for the LCS and LDS shall be submitted to the Illinois EPA Bureau of Land Permit Section as part of the Leachate Data Quarterly Monitoring Report in accordance with the following schedule.*

<u>Data Collected</u>	<u>Results/ Report Submitted by:</u>
January – March	May 1
April – June	August 1
July – September	November 1
October – December	February 1

**Illinois EPA Response:**

The Illinois EPA is confirming that leachate monitoring report is necessary as required in Conditions III.E.10 and III.E.11. As this is not a part of corrective action required under 35 IAC 724.201, a separate reporting must be made for the leachate data. However, the Permittee may submit the leachate data within the groundwater report required in Condition IV.I.14. Thus, Condition III.F.3 was revised as below:

3. The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 for the LCS and LDS shall be submitted to the Illinois EPA Bureau of Land Permit Section as part of the Leachate Data Quarterly Monitoring Report semi-annually in accordance with the following schedule.:- This Leachate Data Quarterly Monitoring Report may be combined with the groundwater monitoring report required in Condition IV.I.14.

<u>Data Collected</u>	<u>Results/ Report Submitted by:</u>
January – March	August 1 <del>May 1</del>
April – June	August 1
July – September	February 1 <del>November 1</del>
October – December	February 1

**BP Comment 31:**

***Page III-9 (Section III.F.): Condition 6:***

*Please clarify the number of copies required. This Condition states that an original and one (1) copy is required for this report whereas Condition IV.I.12 states that one (1) original and a minimum of two (2) copies are required for each notice or report submitted to the Illinois EPA.*

*Please confirm that this new reporting requirement for graphical representations of leachate removal volumes and liquid level elevations should start with the data generated following the effective date of the permit.*

6. *The permittee shall submit an original and one (1) copy of each Leachate Data Quarterly Monitoring Report required in Condition III.F.3 above.*

- a. *A graphical representation of the volumes of leachate removed from the LCS and LDS each month. The leachate generation rates (gallons/month) from the LCS and LDS shall be presented on the same graph. The scale of the abscissa (time) shall be such that no more than one year of data (starting with January each year) is presented on each sheet of paper.*
- b. *A graphical representation of the elevations of the liquid level in the collection risers for the quarter. For each measurement, the graph needs to identify the following: the elevation of leachate over time, elevation of the top of liner, and elevation of the bottom of the cover system all in feet above MSL.*

**Illinois EPA Response:**

The Illinois EPA re-evaluated this condition, Condition III.E.3, and Condition IV.E.14 and made the following changes to Condition III.F.6 to: (1) require semi-annual reporting of the quarterly sampling BP has been conducting; and (2) allow for combining the Leachate Data Quarterly Monitoring Report within semi-annual groundwater monitoring reports for the Pond 1 Landfill:

6. The permittee shall submit one (1) an original paper copy and one (1) copy of each Leachate Data Quarterly Monitoring Report required in Condition III.F.3 above. A Leachate Data Quarterly Monitoring Report may be combined with a groundwater monitoring report required in Condition IV.I.14. In addition to the electronic data, each report must include:

**BP Comment 32:**

*Page IV-1 (Section IV.A.): Condition 1, 1st sentence:*

*Please revise to match language in current Permit.*

*Condition 1, 3rd sentence:*

*Please revise to match language from current Permit.*

*Control of groundwater flow in the uppermost aquifer such that groundwater flow in the Riverfront Groundwater Management Zone is towards the interior of the ~~of the contaminated groundwater is towards the interior of the~~ BP Main Plant facility.*

*Such flow control is necessary as a corrective action to prevent contaminant migration of address contaminants in groundwater from on-site releases of product or waste, beyond the boundaries of the ~~at the~~ BP Riverfront facility and is the basis for the establishment of a Groundwater Management Zone (GMZ).*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes, and Condition IV.A.1 was revised as proposed.

**BP Comments 33 and 34:**

*Page IV-2 (Section IV.C.): Condition 1, 2<sup>nd</sup> sentence:*

*Please revise to reference the figure showing the well network for the approved optimized Groundwater Corrective Action Monitoring Program.*

The location of these wells is specified in Figure C-27 of the approved permit application.

*Page IV-2 and IV-3(Section IV.C.): Condition 1:*

*Please revise well construction information to match what was provided in permit renewal application replacement pages.*

*Please move IEPA Well No. LOD5 from the gauging and semi-annual sampling network to the gauging and annual sampling network to align with the approved optimized Groundwater Corrective Action Monitoring Program.*

*Please revise IEPA Well No. RL17B to L17B to meet 4-digit requirement and prevent confusion IEPA Well No. RL-17. Currently, IEPA Well No. RL17B is truncated to RL17 in Storet EDD files submitted to Illinois EPA.*

*Please revise Facility Well No. SUMP-2 to SUMP-8 for IEPA Well No. G512 included in the well network approved in the optimized Groundwater Corrective Action Monitoring Program.*

*Please correct miscellaneous typos as noted.*

<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
<u>GMZ Boundary Wells (Gauging and Semi-Annual Sampling Network<sup>2</sup>)</u>					
G66D	RL-6C	ESP	70.00	361.38	366.38-361.38 <sup>H</sup>
G103	RL-3	P1LF	39.00	386.27	396.4327-386.27 <sup>C</sup>
G106	RL-6	ESP	45.28 44.00	385.29 386.57	395.15-385.29 396.57-386.57 <sup>C</sup>
G107	RL-7	ESP	39.00	388.36	398.5936-388.36 <sup>C</sup>
G113	SWMU-14/MW-14A	Parcel C	53.30 51.94	369.64 371.00	378.20-369.64 381.00-371.00 <sup>H</sup>



G114	SWMU-14/MW-15	Parcel C	56.00	364.46	374.6546-364.46 <sup>H</sup>
LOD1	LOD-1	LOD	31.10 00	393.48-58	403.3258-393.4858 <sup>C</sup>
LOD2	LOD-2	LOD	41.20 00	379.95380.15	390.02-379.95
LOD5	LOD-5	LOD	28.50	393.61	390.15-380.15 <sup>C</sup>
LOD7	LOD-7	LOD	28.50 29.14	391.8420	401.87-393.61 <sup>C</sup>
RL17B	RL-17B	LOD	55.0054.84	363.8298	401.20-391.841.20 <sup>C</sup>
					373.98-363.8298 <sup>H</sup>
<b>Observation Monitoring Wells (Gauging and Annual Sampling Network<sup>2</sup>)</b>					
G35L	C-25B	ESP	57.0056.82	370.82	378.00-370.82
				371.00	373.00 <sup>H</sup>
G104	RL-4	P1LF	39.0036.00	385.25	398.54-385.25
				388.25	398.25-388.25 <sup>C</sup>
G115*	RL-15	WSP	52.00	376.18	380.51 381.18-376.18 <sup>H</sup>
G116	RL-16	WSP	52.00	375.35	379.08 380.35-375.35 <sup>H</sup>
G119	RL-19	ESP	41.1040.00	389.53	405.36 389.53
				391.80	406.80-391.80 <sup>C</sup>
G401	T-1	WSP	41.50	370.86	379.76-370.86
LOD5	LOD-5	LOD	30.24	380.86	385.86-380.86 <sup>H</sup>
R21L	RL-21BR	WSP	56.0054.01	391.87	401.87-391.87 <sup>C</sup>
				367.93	372.60-367.93
				369.92	374.92-369.92 <sup>H</sup>
R529	P-29R	LOD	47.0048.61	373.91	382.30-373.91
				372.30	372.30 <sup>H</sup>
<b>IEPA Well No.</b>	<b>Facility Well No.</b>	<b>Area</b>	<b>Well Depth (ft-bgs)</b>	<b>Well Depth Elevation (ft MSL)</b>	<b>Well Screen Interval (ft MSL)</b>
<b>Observation Monitoring Wells (Annual Sampling Only Network<sup>3</sup>)</b>					
R21D	RL-21CR	WSP	71.0070.24	352.82	356.90-352.82
				353.58	358.58-353.58 <sup>H</sup>
LOD6	LOD-6	LOD	28.50	393.20	403.40-393.40 <sup>C</sup>
LOD9	LOD-9	LOD	28.50	394.12	404.12-394.12 <sup>C</sup>
<b>Observation Monitoring Wells (Gauging Only Network<sup>4</sup>)</b>					
G030	C-20	TF	35.0039.10	390.37	400.35-390.37
				386.27	406.27-386.27 <sup>C</sup>
G033	C-23	POTW	35.00	393.54	403.55-393.55 <sup>C</sup>
G037	C-27	PNWL	34.00	393.94	404.04-393.94 <sup>P</sup>
G038	C-28	PNWL	35.69	393.70	403.90-393.80 <sup>P</sup>



G090	G090	PNWL	48.00	378.61	383.74-379.16 <sup>H</sup>
G091	G091	PNWL	66.50	359.14	382.27-377.69 <sup>H</sup>
G102	RL-2	LOD	34.0	388.78	398.78-388.78 <sup>C</sup>
G109	RL-9	ESP	39.00	388.45	398.45-388.45 <sup>P</sup>
G36R	C-26R	PNWL	34.4	392.18	402.48-392.48 <sup>P</sup>
G411	S-1	WSP	41.60	376.83	386.83-376.83 <sup>H</sup>
R034	C-24R	ESP	35.24	393.64	403.88-393.88 <sup>C</sup>
R66L	RL-6BR	ESP	55.30	377.06	382.16-377.06 <sup>H</sup>
G503	PANC-UP01	Parcel A	39.50	378.55	388.75-378.75 <sup>H</sup>
G504	PANC-UP02	Parcel A	39.00	372.06	382.06-372.06 <sup>H</sup>
G505	PANC-UP05	Parcel A	37.10	389.61	399.61-389.61 <sup>C</sup>
G506	PANC-UP09	Parcel A	27.30	389.29	399.49-389.49 <sup>C</sup>
G507	PANC-UP11	Parcel A	37.30	388.62	398.82-388.82 <sup>C</sup>
G508	SWMU4-MW01	Parcel A	30.98	395.10	405.10-395.10 <sup>P</sup>
G509	SWMU4-MW03	Parcel A	29.41	389.24	405.90-395.90 <sup>P</sup>
G510	SWMU4-MW04	Parcel A	32.62	388.96	405.57-395.57 <sup>P</sup>
<b>Observation Monitoring Wells (LNAPL Monitoring Network<sup>5</sup>)</b>					
G105	<del>RL-5</del> RL-5	ESP	34.00	388.28	398.28-388.28 <sup>C</sup>
G512	SUMP-28	Parcel C	+	+	409.05-406.35 <sup>P</sup>
<b>Observation Monitoring Wells (Sentinel Wells<sup>6</sup>)</b>					
G511	SWMU4-MW02	Parcel A	26.43	392.67	402.67-392.67 <sup>C</sup>
				393.48	403.32-393.48
LOD1 <sup>2</sup>	LOD-1	LOD	31.4000	393.58	403.58-393.58 <sup>C</sup>
				379.95	390.02-379.95
LOD2 <sup>2</sup>	LOD-2	LOD	41.2000	380.15	390.15-380.15 <sup>C</sup>
G029 <sup>7</sup>	C-19R	MP	24.52	393.98	404.31-394.31 <sup>C</sup>
G056 <sup>**</sup>	G-16	MP	30.00	395.54	415.54-395.54 <sup>P</sup>
<b><u>IEPA Well No.</u></b>	<b><u>Facility Well No.</u></b>	<b><u>Area</u></b>	<b><u>Well Depth (ft-bgs)</u></b>	<b><u>Well Depth Elevation (ft MSL)</u></b>	<b><u>Well Screen Interval (ft MSL)</u></b>
G057 <sup>8</sup>	G-17	MP	35.02	391.90	411.90-391.90 <sup>C</sup>
G058 <sup>8</sup>	G-18	MP	36.00	391.27	411.27-391.27 <sup>C</sup>
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes, and Condition IV.C.1 has been updated accordingly. However, the following Illinois EPA comments apply:

The difference in well details for G401 and G030 are greater than expected. While changes were made to reflect the most current information, the following requirement has been added to the Special Conditions section to require further reporting regarding this difference. Thus, Condition VI.C.9 has been added to the Special Conditions section of the final permit to require the following:

9. Provide a summary in the next semi-annual groundwater monitoring report required by Section IV which discusses the results of the recent well integrity efforts performed site-wide at the Riverfront facility, and explain specific to wells G401 and G030 why the changes in well depths and/or screened interval occurred since the previous survey. If reasons are unknown, submit a workplan as a Class 1\* permit modification within ninety (90) days to investigate the well integrity.

**BP Comment 35:**

*Page IV-7 (Section IV.D.): Condition 1:*

*Please revise the Depth to Water units to Ft below ground surface (bgs) and Ft below top of casing (bTOC).*

*Please revise hazardous constituents list and footnotes to align with the approved optimized Groundwater Corrective Action Monitoring Program.*

*Please revise arsenic concentration limit to align with 35 IAC 620, Class I, Groundwater Quality Standards (GQS). Note that the historical drinking water standard for arsenic was 0.05 mg/L; however, the USEPA reduced the standard to 0.01 mg/L in 2006.*

Depth to Water (below <del>land-ground</del> surface)	72109	Feet <u>bgs</u>
Depth to Water (below <del>measuring point</del> top of casing)	72109	Ft <u>bgs</u> bTOC

<u>Hazardous</u> <u>Constituents</u>	<u>Storet No.</u> <u>(Total)</u>	<u>Storet No.</u> <u>(Dissolved)</u>	<u>Concentration</u> <u>Limits (mg/L)</u>
Arsenic*	01002	01000	0.0 <u>1</u> 5
Barium	01007		2.0
Cadmium	01027		0.005
Chloride	00940	00941	200.0
Chrysene	34320		0.1
Lead*	01051	01049	0.0075

Sulfate	00945	400.0
Benzene	34030	0.005
Benzo(b)fluoranthene	34230	0.00018
Bis(2-ethylhexyl) phthalate	39100	0.006
Carbon Disulfide	81309	0.7
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Total Xylenes	34020	10.0
Methyl Tertiary-Butyl Ether	46491	0.07
Phenols	46000	0.1

\* = Constituents that must be sampled for both dissolved and total concentrations.

# = Constituents that must be sampled annually.

1 = To monitor natural attenuation conditions.

**Illinois EPA Response:**

The following comments apply:

1. The Illinois EPA can accept the recommendation to reduce the concentration limit for arsenic to 0.01 mg/L and add biogeochemical parameters, while the following recommendations to Condition D.1 of Section IV cannot be approved:
  - a. The “List of STORET Numbers” available on the Illinois EPA website indicates the numbers 72019 and 72109 are associated with the information listed below; therefore, language will not be revised:

72019	DEPTH TO WATER LEVEL (FEET BELOW LAND SURFACE)	DEPTH-FT TO WATER BL L S
72109	DEPTH TO WATER LEVEL FROM A MEASURING POINT (FEET)	DEPTH TO WATER FR MP FT

- b. Due to the Groundwater Corrective Action Program being tied to a landfill, Condition IV.D.4 applies, and the constituents will remain on the hazardous constituents list in IV.D.1 at this time. Condition IV.D.4 states:

4. Prior to removal of any constituents identified in Condition IV.D.1, the facility must present leachate analytical results from the Pond 1 landfill to demonstrate these constituents are not present in leachate. Therefore, to request removal of barium, cadmium, sulfate, benzo(b)fluoranthene, carbon disulfide, total xylenes, and phenols, present a demonstration these

constituents are not present in leachate. A leachate demonstration is also necessary to reduce the sampling frequency for chloride.

**BP Comment 36:**

*Page IV-7 (Section IV.D.): Condition 2, a:*

*Please add Condition 2.a.i. to include language referencing the proposed site-specific GQS for arsenic. bp submitted a Site-Wide Inorganics and Metals (SWIM) Evaluation Report dated January 25, 2022 for both the Riverfront and Main Plant facilities in which it was demonstrated that increases in dissolved-phase inorganics may be due to naturally occurring fluctuations or other external influences; and that these fluctuations may exceed the established Class 1 GQS. The SWIM evaluation determined that arsenic is present in the uppermost aquifer at background concentrations that exceed the Class 1 GQS of 0.01 mg/L. bp proposed that a site-specific GQS for arsenic be established at a concentration of 0.036 mg/L.*

i. — The Permittee submitted a Site-Wide Inorganics and Metals Evaluation Report dated January 25, 2022, proposing a site-specific groundwater quality standard of 0.036 mg/L for arsenic pending approval by the Illinois EPA.

**Illinois EPA Response:**

The proposed addition to Condition IV.D.2 (a) describing the pending review related to an arsenic value will not be added since the referenced report and arsenic value has not been reviewed and/or approved. The groundwater must meet the arsenic value established in 35 Ill. Adm. Code, Part 620. Thus, no changes were made to Condition IV.D.2 (a).

**BP Comment 37:**

*Page IV-9 (Section IV.E.): Condition 3, b, 1<sup>st</sup> sentence:*

*Please revise "daily" to "each business day."*

*The pumping rate from each Gradient Control Well (COD well) shall be recorded dailyeach business day.*

**Illinois EPA Response:**

The Illinois EPA can accept the recommendations, and the first sentence of Condition IV.E.3.b was revised as proposed.

**BP Comment 38:**

*Page IV-10 (Section IV.E.): Condition 6:*

*Please revise to clarify "groundwater flow rate" and/or confirm this is a reference to seepage velocity in ft/day.*

*The Permittee shall determine the groundwater flow rate (i.e., seepage velocity in ft/day) and direction in the uppermost aquifer at least annually from the monitoring wells listed in Condition IV.C.1.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition IV.E.6 was revised as proposed.

**BP Comment 39:**

*Page IV-10 (Section IV.E.): Condition 8:*

*Please revise the reference.*

*The GMZ Boundary Wells and Observation Monitoring Wells listed in Condition IV.C.1 shall be monitored for the constituents listed in Condition IV.E.1.*

**Illinois EPA Response:**

The Illinois EPA can accept the proposed change, and Condition IV.E.8 was revised as proposed.

**BP Comment 40:**

*Page IV-13 (Section IV.I.): Condition 12:*

*Please clarify the number of copies required. This Condition states that one (1) original and two (2) copies are required while Condition III.F.6 states one (1) original and one (1) copy is required for the Leachate Data Quarterly Monitoring Report. Please note bp's preference is to mail one (1) original copy and send electronic copies for all Illinois EPA CCs.*

*The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. Only one (1) copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) copies of each notice or report you submit to the Illinois EPA. The LPC 592 form is not to be used for permit modification requests.*

**Illinois EPA Response:**



1. Condition III.F.6 has been updated to partially address BP's comment (see Illinois EPA's Response to Comment 31 above).
2. Regarding Condition IV.I.12, the number of necessary copies is determined by the Illinois EPA needs. There is a regulatory requirement for an original signature; therefore, at least one paper copy with a wet signature is required at this time. A reduction in paper copies does not appear to violate any regulatory requirements and will reduce resources and energy. At this time, one (1) original paper submittal, plus electronic copies, is considered adequate as described below:

The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. Only one (1) copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original paper submittal and ~~(excluding the groundwater and leachate monitoring results submitted in an electronic format)~~ a minimum of two (2) copies of each notice or report you submit to the Illinois EPA, and ~~(excluding the groundwater and leachate monitoring results submitted in an electronic format)~~ a minimum of two (2) electronic copies for all additional Illinois EPA copies (i.e., Permit Section and the regional Field Operations Section). Additional paper copies must be provided upon Illinois EPA request. The LPC 592 form is not to be used for permit modification requests.

**BP Comment 41:**

***Page IV-13 (Section IV.I): Condition 14:***

*Please confirm that the CDF (Parcel D) and PNWL (Parcel J) reports required by Illinois EPA letters can be incorporated into the semi-annual report since neither are stated in Section VI – Special Conditions.*

1. *The Permittee shall submit a written report semi-annually to the Illinois EPA, in accordance with the schedule found in Condition IV.I.2, which discusses the effectiveness of the corrective action program and place it in the operating record for the facility. Groundwater monitoring information required by Illinois EPA letters for all Parcels at the BP Riverfront facility shall be provided within the semi-annual report and separate reports are no longer required unless otherwise stated in Section VI (Special Conditions) of the Permit. At a minimum, the report must:*
  - a. *Address the information requirements in Conditions IV.C, IV.D, IV.E and IV.F*
  - b. *Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition IV.D.*
  - c. *Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.*

**Illinois EPA Response:**

1. Condition IV.I.14 is intended to require the groundwater reporting across the entire facility be provided within one report semi-annually as many individual groundwater monitoring wells identified in Section IV are also part of programs identified in Section V. The Illinois EPA previously approved modification to the Permit (Log No. B-145R-M-10 and M-12) dated July 19, 2019 for consolidation of reporting to reduce duplications and centralize information previously provided within separate reports. Condition IV.I.14 has been revised to remove the requirement for groundwater information for Parcels be included in semi-annual monitoring reports, and Condition V.J.1 has been revised to identify reporting requirements, which include groundwater information to be reported for each Parcel as the Parcels contain SWMUs regulated by 35 Ill. Adm. Code 724.201. These revisions eliminate duplicate efforts and retain reporting requirements for the respective sections the units are tied to. These revisions cause no reduction of information to be reported.

Revisions to Condition IV.I.14 include:

The Permittee shall submit a written report semi-annually to the Illinois EPA, in accordance with the schedule found in Condition IV.I.2, which discusses the effectiveness of the corrective action program and place it in the operating record for the facility. ~~Groundwater monitoring information required by Illinois EPA letters for all Parcels at the BP Riverfront facility shall be provided within the semi-annual report and separate reports are no longer required unless otherwise stated in Section VI (Special Conditions) of the Permit.~~ At a minimum, the report must:

- a. Address the information requirements in Conditions IV.C, IV.D, IV.E and IV.F
  - b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition IV.D.
  - c. Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.
  - d. Groundwater monitoring information required by Illinois EPA letters for monitoring programs specific to Solid Waste Management Units (SWMUs) within Parcels identified in Section V of the Permit shall be provided within reports required by Section V.J of the Permit.
2. Revisions to Condition V.J.1 include the addition of the following language and renumbering to add clarification for where to report information for the CDF and PNWL. The LOD Area is also clarified:

The following condition is added as V.J.1 (d) to clarify reporting requirements for the PNWL:

d. The quarterly groundwater monitoring reports required by Attachment A of the December 15, 2006 letter (Log Nos. B-145; and 2001-075) for the landfill identified as the PNWL shall be incorporated into each quarterly Corrective Action Progress Report; and the PNWL annual groundwater monitoring reports required by the December 15, 2006 letter shall be incorporated into the Quarterly Corrective Action Progress Report. Separate reports are no longer required to be submitted.

3. The following condition is added as V.J.1 (e) to clarify reporting requirements for the CDF:

e. CDF landfill reporting requirements in Illinois EPA letters dated September 13, 2002 (Log No. B-145-CA-23), and as modified in Illinois EPA letters dated November 18, 2008 (B-145-CA-77), and September 3, 2009 (Log No. B-145-CA-71), shall be incorporated into the Quarterly and Annual Corrective Action Progress Reports in accordance with the schedule in Condition V.J.1.a (August 1 and March 1 submittal dates for the CDF). This includes the CDF Second and Fourth Quarter Semi-Annual Groundwater Monitoring Reports and the "Annual CDF Operations, Maintenance and Monitoring Report" (referred to as Annual CDF OM&M/Liquid Level Report by BP Products North America Inc.). Separate reports are no longer required to be submitted.

4. The following condition is added as V.J.1 (f) to clarify reporting requirements for the LOD Area:

f. The LOD Area reporting required as part of the GMZ approval in the April 4, 1994 Illinois EPA letter (Log No. B-145) and re-evaluation of the GMZ approval letter dated April 24, 2002 (Log No. B-145-CA-31) shall be incorporated into the Quarterly Corrective Action Progress Reports. Separate reports are no longer required to be submitted.

5. As a result of the added conditions listed above, Conditions V.J.1 (d) through (f) were renumbered and V.J.1. (e) of the draft permit was incorporated into V.J.1. (e) of the final permit.

**BP Comment 42:**

*Page V-10 (Section V.F.): Condition 3, c:*

*BP requests removal of the 20% contingency from the total cost estimate.*

e. ~~*A 20% adjustment for contingencies to the total estimated cost;*~~

*d.c. An identification of the resources needed to complete each task (type and amount) and the unit cost of each required resource;*

*e.d. Justification for all values used in the developing all aspects of the estimate.*

**Illinois EPA Response:**

The Illinois EPA respectfully declines BP's request as the 20% contingency is necessary to ensure the funds to complete corrective action will be available for the BP Riverfront facility located in the flood plain of the Mississippi River.

**BP Comment 43:**

*Page V-15 (Section V.J): Condition 1, b, 1:*

*Please clarify if the Pond 1 Landfill Leachate Data Quarterly Monitoring Report required in Condition III.F.3 can be included in this Corrective Action Progress Report rather than be submitted as a standalone report.*

*a summary of activities completed at each parcel during the quarter, including information regarding the amount of free product/groundwater/leachate removed on a weekly basis from various units during the quarter;*

**Illinois EPA Response:**

Please refer to Illinois EPA's Responses to Comments 30 and 31 above.

**BP Comment 44:**

*Page V-15 (Section V.J): Condition 1, d:*

*Please correct number formatting and period in last sentence.*

*d. An Annual Corrective Action Progress Report must be submitted to Illinois EPA by March 1 of each year which summarizes corrective action program activities completed at the facility during the previous calendar year (i.e., the previous January 1 to December 31). Among other things, this report must contain a compilation/summary of the information in the quarterly reports for the year, what was completed during the year, and what must still be done in the next year and in the following years. The following shall be incorporated into the Annual Corrective Action Progress Report and separate reports are no longer required:*

*(1) The corrective action progress report for the fourth quarter (October – December of every year).*

*(2)e. The "Annual CDF Operations, Maintenance and Monitoring Report" (referred to as Annual CDF OM&M/ Liquid Level Report by BP Products North America Inc-).*



**Illinois EPA Response:**

The Illinois EPA agrees with the proposed changes. As Condition V.J.1 (d) has been renumbered to Condition V.J.1 (g) in response to BP's Comment 41 above, the proposed change is made as requested under Condition V.J.1 (g) (1) and (2).

**BP Comment 45:**

*Page VI-2 (Section VI.C): Condition 4:*

*The GMZ for the River-front facility was established as a condition in the 1993 RCRA Permit. It is bp's opinion that the GMZ at the Riverfront facility is grand-fathered and is not subject to requirements for property owner permission that were adopted after the GMZ was established. The 2023 permit condition requiring written permission from property owners for an off-site GMZ pre-dates 1997 Illinois GMZ regulations and Illinois EPA 2001 guidance requiring written permission. bp proposes that off-site property owners be notified of the previously approved GMZ.*

*Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a modification to the Corrective Action Section (Section V) of the Permit, for Illinois EPA review and approval, which provides written ~~permission from notification to any applicable off-site property owner acknowledging they accept~~ that a GMZ for the Riverfront fFacility encompasses ~~is located on their property~~. This documentation will serve to verify off-site property owners are aware ~~and approve~~ of a GMZ being present on their property.*

**Illinois EPA Response:**

The Illinois EPA cannot approve the proposed language to Condition VI.C.4. The current requirements are reflected in the existing condition; therefore, no changes were made to Condition VI.C.4.

**BP Comment 46:**

*Page VII-7 (Section VII.): Condition 36:*

*"Closure Requirements for Accumulation Areas" is a new Standard Condition (under "General Facility Standards" subsection). It is bp's opinion that this condition should only be applicable to storage areas operated on or after the date the closure requirement was adopted at 35 IAC 722.117(a)(8).*

*CLOSURE REQUIREMENTS FOR ACCUMULATION AREAS. The Permittee shall close containers storage areas, tanks, drip pads, or containment buildings used for the accumulation of on-site generated hazardous waste in accordance with the requirements identified at 35 IAC 722.117(a)(8). This requirement is applicable to storage areas used on or after this section was amended at 44 Ill. Reg. 15263, effective September 3, 2020.*



**Illinois EPA Response:**

As this permit is issued after the effective date of the amendment (September 3, 2020), the Illinois EPA does not find the need to revise the condition. Thus, no changes were made to Condition VII.36.

**BP Comment 47:**

***Page VII-10 (Section VII.): Condition 56:***

*The numbering missed "d" and skipped to "e". Please revise list formatting.*

**56. COST ESTIMATE FOR FACILITY CLOSURE.** *The Permittee's original closure cost estimate, prepared in accordance with 35 IAC 724.242, must be:*

- a. Adjusted for inflation 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 724.243. However, if the owner/operator is using the financial test or corporate guarantee, it must be updated for inflation within 30 days after close of the firm's fiscal year, and before the submission of updated information to the Illinois EPA as specified in Section 724.243(f).*
- b. Revised no later than 30 days after the Illinois EPA has approved a request to modify the closure plan, if the change in the closure plan increases the cost of closure.*
- c. Kept on record at the facility and updated. (35 IAC 724.242)*
- e-d. Made immediately available to Illinois EPA personnel upon Illinois EPA request.*
- f.e. Maintained at the value approved by Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.*

**Illinois EPA Response:**

The typographical errors were corrected as proposed.

**BP Comment 48:**

***Page VII-11 (Section VII.): Condition 63, a:***

*Please revise language to align with current permit.*

**63. STORAGE RESTRICTIONS**

- a. The Permittee shall not store hazardous wastes restricted from land disposal under 35 IAC Part 728, Subpart C unless such wastes are stored only in containers or tanks, or other units approved by Illinois EPA in writing, and are stored solely for the purpose of the accumulation of such quantities as is necessary to facilitate proper recovery, treatment, or disposal, and: (1) each container is clearly marked to identify its contents and the date each period of accumulation begins; (2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, as required by 35 IAC 728.150.*

**Illinois EPA Response:**

Regulation 35 IAC 728.150 specifically states hazardous wastes restricted from land disposal are to be stored only in tanks, containers, or containment buildings on-site. It does not allow any other types of hazardous waste accumulation under the specific regulations. Thus, Condition VII.63 (a) was revised as:

63. STORAGE RESTRICTIONS

- a. The Permittee shall not store hazardous wastes restricted from land disposal under 35 IAC Part 728, Subpart C unless such wastes are stored only in containers, or tanks, or containment buildings on-site, and are stored solely for the purpose of the accumulation of such quantities as is necessary to facilitate proper recovery, treatment, or disposal, and: (1) each container is clearly marked to identify its contents and the date each period of accumulation begins; (2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, as required by 35 IAC 728.150.

**BP Comment 49:**

*Page VII-12 (Section VII.): Conditions 67 and 68:*

*The numbering missed "c" and skipped to "d". Please revise list formatting.*

67. *COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 IAC 724.244, must be:*

- a. *Adjusted for inflation either 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year. This permit condition is applicable throughout the entirety of the post-closure care period.*
- b. *Revised whenever there is a change in the facility's post-closure plan increasing the cost of the post-closure plan.*
- ~~c.~~ *Kept on record at the facility and updated. (35 IAC 724.244).*
- ~~e-d.~~ *Maintained at the value approved by Illinois EPA with annual adjustment for inflation during the post-closure care period and cannot be decreased unless approved by the Illinois EPA in a permit modification.*

**Illinois EPA Response:**

The typographical errors were corrected as proposed in Conditions VII.67. Condition VII.68 references Condition VII.67, but no changes were made to Condition III.68.

**BP Comment 50:**

*Page VIII-1 (Section VIII.): Please revise the incorrect Condition references.*

*Please clarify the due date for Condition VII.14 regarding Reporting Planned Changes as here it states, "At least 15 days prior to planned change" but Condition VII.14 states, "as soon as possible."*

<i>IV.D.4</i>	<i>Notify Illinois EPA if any of the wells identified in Condition IV.DC.1 and IV.DC.2 are damaged, or the structural integrity has been compromised</i>	<i>Within 30 days of the date the damage is detected</i>
<i>IV.DC.6</i>	<i>Provide Illinois EPA boring logs, construction diagrams, and data sheets from new or replacement wells</i>	<i>Within 30 days of the date installation is complete</i>
<i>IV.JI.2</i>	<i>Groundwater monitoring data required each quarter, and additional data required in Conditions IV.FE., IV.GF, and IV.IH.</i>	<i>Semi-annually</i>
<i>IV.JI.3</i>	<i>Collect quarterly groundwater surface elevation data</i>	<i>Semi-annually</i>
<i>IV.JI.4</i>	<i>Quarterly groundwater withdrawal rates</i>	<i>Semi-annually</i>
<i>IV.JI.5</i>	<i>Gradient control measurements.</i>	<i>Semi-annually</i>
<i>IV.JI.6</i>	<i>Statistical evaluations, as required by Condition IV.F.2.eH</i>	<i>Every 5-years in GMZ Evaluation</i>
<i>IV.JI.7</i>	<i>Groundwater flow rate and direction in the uppermost aquifer.</i>	<i>Semi-annually</i>
<i>IV.JI.8</i>	<i>Collect groundwater samples per Condition IV.FE.8 and depict the extent of dissolved contamination to define the extent of contamination.</i>	<i>Semi-annually</i>
<i>IV.JI.9</i>	<i>The surveyed elevation of the top of well casing.</i>	<i>Every 5 years.</i>
<i>IV.JI.10</i>	<i>Elevation of the bottom of each monitoring well.</i>	<i>Annually during the second quarter sampling event.</i>
<i>IV.JI.11</i>	<i>Electronic Reporting</i>	<i>Semi-annually</i>

**Illinois EPA Response:**

The Illinois EPA can accept the proposed changes for Section IV reporting items in Section VIII; therefore, the corrections to references identified for Section IV have been updated accordingly. In addition, the reference to IV.D.4 was corrected to IV.C.4. For Condition VII.14, "as soon as possible of" was replaced with "at least 15 days prior to" to clarify the requirement as requested.

**BP Comment 51:**

*Page Attachment A: Divider Page:*

*Please revise.*

***ATTACHMENT A  
IDENTIFICATION OF APPROVED PERMIT APPLICATION***

**Illinois EPA Response:**

The typographical error was corrected as proposed on the title page for Attachment A.

**BP Comment 52:**

*Page Attachment I and J: Divider Page:*

*Please revise.*

***ATTACHMENT I  
CERTIFICATION OF COMPLETION OF CLOSURE***

***ATTACHMENT J  
CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE***

**Illinois EPA Response:**

The typographical errors were corrected as proposed on the title pages for Attachments I and J.



RCRA HAZARDOUS WASTE PERMIT

1191155009 – Madison County  
ILD980503106  
BP Products North America/Riverfront  
Permit Log B-145R2  
RCRA Administrative Record

Issue Date: September 29, 2023  
Effective Date: November 3, 2023  
Expiration Date: November 3, 2033

PERMITTEE

BP Products North America, Inc.  
Attention: Ms. Michelle Knapp  
301 Evans Avenue, P.O. Box 167  
Wood River, Illinois 62095

A renewed RCRA post-closure hazardous waste permit is hereby issued to BP Products North America Inc.(BP) as Owner and Operator and Permittee pursuant to Section 39(d) of the Illinois Environmental Protection Act and Title 35 Illinois Administrative Code Subtitle G (35 IAC).

**PERMITTED HAZARDOUS WASTE ACTIVITY**

This permit requires BP to conduct the following hazardous waste activities in accordance with the approved permit application and the conditions in this permit:

- Disposal:** One surface impoundment (East Surge Pond) for non-hazardous waste only (D83)
- Post-Closure Care:** One closed landfill (Pond 1 Landfill) (D80) with detection and compliance monitoring
- Groundwater Monitoring:** Corrective Action Monitoring
- Corrective Action:** Twelve (12) SWMUs and one Product Release Site in ten (10) Parcels (Parcels A – J)

This permit consists of the conditions contained herein and those in the sections and attachments in this permit. The Permittee must comply with all terms and conditions of this permit and the applicable regulations contained in 35 IAC Parts 702, 703, 705 and 720 through 729, in effect through the effective date of this permit.

This permit is issued based on the information submitted in the approved permit application identified in Attachment A of this permit and any subsequent amendments. Any inaccuracies found in the information provided in the permit application may be grounds for the termination or modification of this permit (see 35 IAC 702.187 and 702.186) and potential enforcement action (415 ILCS 5/44(h)).

Jacqueline M. Cooperider, P.E.  
Permit Section Manager  
Bureau of Land

JMC:JDN: 1191155009-RCRA-B145R2-approval.docx

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595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200  
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022  
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760





## SECTION I: GENERAL FACILITY DESCRIPTION

### A. OWNER AND OPERATOR

The facility is owned and operated by BP Products, North America Inc., hereinafter referred to as the "Permittee" (Title 35 Illinois Administrative Code (35 IAC) 702.121, 702.123 and 703.181).

BP Products North America, Inc.  
301 Evans Avenue  
Wood River, Illinois 62095

Facility Contact:

Michelle Knapp  
Liability Manager  
Remediation Management Services Company  
An Affiliate of BP Products North America Inc.  
847-346-7112  
[michelle.knapp@bp.com](mailto:michelle.knapp@bp.com)

### B. LOCATON

1. Location of the facility:

The BP Riverfront facility is a 231-acre site mainly in Wood River, Illinois, with the 23 southernmost acres being located in the Village of Hartford in Madison County, Illinois. It is located between the levee of the Wood River Drainage Levee District (WRDL) and the Mississippi River, just west of Illinois Route 3. The mailing address for this facility is 301 Evans Avenue, Wood River, Illinois. (Note: This is also the mailing address for BP Main Plant facility).

The Riverfront facility is adjacent to, and its operation was associated with the former Amoco Refinery in Wood River. This 569-acre former refinery is located due east of the BP Riverfront property. The general boundaries of the former refinery are Route 143, East Rand Avenue, South Sixth Street, and Illinois Route 3 on the north, south, east, and west sides, respectively.

2. Facility Maps:

The general location of the facility is shown on Figure B-1, Attachment B of this permit. The locations of the hazardous waste management units (HWMUs), solid waste management units (SWMUs), regulated by this permit are shown on Figure D-2, Attachment D of this permit.

**C. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES**

Amoco operated an oil refinery at the Main Plant (BP Main Plant facility – 1191150001) from 1908 to 1981 and Amoco Petroleum Additives Company operated in a portion of the Main Plant from 1957 to 1996. The Riverfront facility was used by Amoco to gain access to barges on the Mississippi River. In addition, it was used for the management of refinery waste. Presently, Kinder Morgan Liquid Terminals LLC (KMLT) operates, and Kinder Morgan Phoenix Holdings (KMPH) owns, a storage and distribution facility for gasoline and petroleum distillates at a site which was formerly a portion of the Main Plant facility but was sold to KMPH and will be subject to a separate RCRA Permit. The Main Plant and Riverfront facilities were owned by Amoco Oil Company until the company merged with BP in 1999.

The Riverfront Property is now being remediated and redeveloped and will continue to have industrial and commercial use. It has been split up into ten (10) parcels: Parcels A through J which will be investigated, remediated, reported on, and redeveloped on a parcel-by-parcel basis.

For many years prior to 1977, a series of surface impoundments (or ponds) at the Riverfront facility were used to treat wastewater from the refinery. In the mid-1970s, these ponds were replaced by a new wastewater treatment plant. From 1977 to 1981, Amoco stored Dissolved Air Flotation (DAF) float, a listed hazardous waste, in Ponds 1, 1A, 2, 2A, 3, 3A and 4 of the former series of wastewater treatment ponds. As such, these ponds became HWMUs subject to the requirements of RCRA. Amoco elected to close these hazardous waste surface impoundments; Illinois EPA approved a closure plan for these units on April 4, 1986 (Log No. C-145). The main goal of this closure effort was to remove all sludges and contaminated soil from these ponds, treat the removed material and render it non-hazardous and then dispose of it in a permitted on-site landfill.

The pumpable material from the subject ponds were removed, treated, and placed in the Pond 5 landfill as a non-hazardous waste in accordance with plans approved by and a permit received from Illinois EPA. However, Amoco found that they could not easily remove/treat the heavier sludges and contaminated soils in the ponds and thus pursued an alternative closure effort at these ponds as follows:

1. The heavier sludges and some impacted soils from Ponds 1, 1A and the north portion of Pond 2 were removed and stored in the other ponds to allow for the construction of the Pond 1 landfill (a hazardous waste landfill). The heavier sludges and impacted soils from all the ponds (listed hazardous wastes) were subsequently placed in the Pond 1 landfill, which had been constructed in accordance with the requirements for a hazardous waste landfill at the former location of Ponds 1, 1A and the northern portion of Pond 2.
2. The heavier sludge and some contaminated soil from the southern half of Pond 2, as well as Ponds 2A, 3, 3A and 4 were also placed in the Pond 1 landfill. However, not all contaminated soil was removed from the ponds and the clean

closure requirements of RCRA were not achieved. As such, Amoco pursued and obtained a delay of closure adjusted standard (AS-91-4) allowing the company to continue discharging non-hazardous wastewaters into a unit referred to as the "East Surge Pond" (ESP) which was created from these ponds. These wastewaters are defined in Condition II.B.1. A one-foot compacted clay liner was placed on the floors and walls of the East Surge Pond (from which the sludges and some contaminated soil had been removed) before wastewater began to be discharged into the pond.

The Pond 1 landfill is approximately 4.1 acres and contains 80,000 cubic yards of stabilized heavy sludges and impacted soils. This landfill has been closed in accordance with a plan approved by Illinois and has been under post-closure care since August 1995.

The ESP is 20.9 acres in size with a storage capacity of 100 million gallons, and 80 million gallons are normally available below the 2-foot freeboard level. As indicated above, it is used as a backup system and only accepts non-hazardous wastewater from the Main Plant facility and the Wood River Wastewater Treatment Plant (WWTP); and nonhazardous leachate from the onsite PNWL in accordance with the delay of closure adjusted standard (AS-91-4) and this permit. It will eventually have to be closed in accordance with a plan approved by Illinois EPA.

BP is also conducting a groundwater monitoring/corrective action program at this facility and also a general corrective action for the SWMUs at the facility. The groundwater corrective action program includes: (1) a groundwater management zone and (2) a groundwater pump and treat system whose goal is to prevent any contaminated groundwater from flowing off-site. As part of the general corrective action program, the facility has been broken up into ten parcels and the SWMUs in each parcel have individual focus. BP also has the option of conducting corrective action on all contaminated areas or recognized environmental conditions in a given parcel.

This permit allows/requires BP to carry out the following activities at the Riverfront facility: (1) continue storing/treating non-hazardous wastewaters in the ESP until closure activities begin; (2) provide post-closure care for the Pond 1 Landfill; (3) conduct corrective action, as appropriate, at the facility; and (4) implement a groundwater monitoring/corrective action program. A RCRA permit was initially issued for these activities on September 30, 1993 (Log No B-145) and was previously renewed on August 11, 2008 (Log No. B-145R). This renewal permit (Log No. B-145R2) supersedes the previously issued two permits and any associated modifications.

## SECTION II: SURFACE IMPOUNDMENT

### A. SUMMARY

The East Surge Pond (ESP) is a hazardous waste surface impoundment that currently only receives/stores/treats non-hazardous wastewaters and non-hazardous leachate from the adjacent and onsite Permitted Non-Hazardous Waste Landfill (PNWL). It covers approximately 20.9 acres and has a capacity of 100 million gallons and is designed so that 80 million gallons of storage are normally available below the 2-foot freeboard level.

The impoundment is constructed in an area where several impoundments (the southern part of Pond 2 and all of Ponds 2A, 3, 3A, and 4) were once present that stored hazardous waste but were not clean closed in accordance with Title 35 Illinois Administrative Code (35 IAC) 724 or 725. During construction of the ESP, all sludges/sediments and most of the contaminated soil was removed from these ponds. The floor and sides of the ESP are lined with 1 foot of recompacted clay, and are protected from a 100-year flood event by a flood-protection dike. The location and layout of the East Surge Pond are presented in Figure B-3 of Attachment B to this permit.

The Illinois Pollution Control Board issued an Adjusted Standard (AS-91-4) to the Permittee to allow operation of the ESP for the storage/treatment of non-hazardous wastewaters under the delay of closure regulations contained in 35 IAC 724.213. Although some residual soil contamination may remain in the ESP during the delay of closure period, no new hazardous wastes are allowed to be placed in the unit. During the delay of closure period, the unit will manage only non-hazardous wastewaters, including nonhazardous leachate from the adjacent PNWL. This section contains provisions for continued operation and eventual closure of this unit; and requires BP to submit a proposed schedule for the closure of the ESP.

### B. DESCRIPTION OF SURFACE IMPOUNDMENT AND WASTES

1. The Permittee may only store/treat non-hazardous wastewaters in total volume of 100 million gallons in the ESP subject to the terms of this permit including: (a) domestic sewage and commingled stormwater from the Cities of Wood River, Hartford, South Roxana, and also BP Main Plant and Riverfront facilities; (b) groundwater pumped as part of BP's hydraulic gradient control and subsurface hydrocarbon recovery program; and (c) recovered non-hazardous leachate from the PNWL and seepage water from the Riverfront facility. Any wastewater management activities at the facility at the ESP must meet all requirements by the Illinois EPA Bureau of Water, as necessary.



<u>Surface Impoundment Designation</u>	<u>Capacity (gallons)</u>	<u>Dimensions of Impoundment</u>	<u>Description of Hazardous Waste &amp; Waste Numbers</u>
ESP	100 million	20.9 acre	Sediments and soil contaminated with K048 Dissolved Air Flotation (DAF) float from the petroleum refining industry

2. All wastewater managed in the ESP must be evaluated through the approved waste analysis plan for compatibility to ensure that all wastewaters placed into the ESP will be non-hazardous. The Permittee must:
  - a. Collect and analyze a sample of the discharge of wastewater from Pond 3A to the ESP each quarter of the calendar year in accordance with Condition II.B.2 (c).
  - b. Collect two (2) composite samples of leachate discharge, one from the manifolded pipe of odd numbered sumps and one from the even numbered sumps of the PNWL, sent to the ESP each quarter of the calendar year, when leachate is present at the PNWL in accordance with Condition II.B.2 (c). If leachate is present at the PNWL but is not discharged to the ESP, then it must be noted in the analytical report included in the facility's operating record and annual report, as required in II.B.2 (c) below.
  - c. The Permittee shall collect representative samples of the discharge described in Conditions II.B.2 (a) and (b) above and analyze it for all the constituents listed in 35 IAC 724 Appendix I. The results of these efforts must be documented in the facility's operating record and reported to Illinois EPA annually. If it is found that the wastewater/leachate is hazardous, then:
    - (1) Illinois EPA (Bureau of Land Permit Section and Collinsville FOS) must immediately be notified of such findings via email and/or phone call (which determined to be most as most appropriate and effective);
    - (2) No additional wastewaters/wastes must be discharged to the ESP until the Permittee is able to demonstrate to Illinois EPA's satisfaction that no additional hazardous waste will be discharged to the impoundment;
    - (3) The Permittee must develop and implement a plan for determining the source of the hazardous waste. A report documenting the results of this investigation must be developed; this report must also describe the steps to be taken to ensure this problem will not occur in the future. These plans and reports are subject to Illinois EPA review and approval.

3. The Permittee is prohibited from storing, treating, or disposing any waste (hazardous or non-hazardous) in the permitted unit(s) that is not identified in Condition II.B.1.
4. The Permittee must meet all applicable requirements of the Illinois EPA Bureau of Water, as necessary, regarding management of all wastewater at the facility in accordance with all applicable regulations for such activities.

**C. DESIGN AND OPERATING REQUIREMENTS**

1. The Permittee shall operate and maintain the surface impoundment in accordance with the plan and narrative contained in "East Surge Pond Addendum to Section E" section of the approved permit application and the conditions in this permit.
2. The Permittee shall operate and maintain the surface impoundment to prevent overtopping in accordance with the detailed design plans and operating practices contained in "East Surge Pond Addendum to Section E" section of the approved permit application. A minimum of two feet of freeboard must be maintained at all times in the ESP. Illinois EPA may modify this requirement when it determines cause exists, such as Force Majeure or events over which the Permittee has no control.
3. The Permittee shall comply with all requirements of the Adjusted Standard for delay of closure of the ESP issued by the Illinois Pollution Control Board, dated March 11, 1992 (AS-91-4). This adjusted standard allows the Permittee to continue using the ESP for the storage/treatment of non-hazardous wastewaters until they decide to close the impoundment in accordance with 35 IAC 724.
4. The requirements of Condition II.B.2 above must be met at all times while the ESP continues to receive non-hazardous wastewaters.
5. The Permittee shall maintain the surface impoundment dike in accordance with the operating practices contained in the approved permit application and the conditions in this permit.

**D. REPORTING**

The Permittee shall notify the Illinois EPA in writing within seven (7) days after detecting either a leak in the surface impoundment dike or a sudden drop in the liquid level (and the drop is not known to be caused by changes in the flows into or out of the impoundment). The procedures set forth in the contingency plan and 35 IAC 724.327 must then be followed if one of these incidents occur.

**E. INSPECTIONS**

1. The Permittee shall inspect the surface impoundment (including liner and appurtenances for control of overtopping) in accordance with the inspection schedule in the approved permit application.
2. The Permittee must inspect the surface impoundment on a weekly basis and within 72 hours of any storm or rain fall event of 3 or more inches in 24 hours to detect any evidence of:
  - a. deterioration, malfunctions, or improper operation of overtopping control equipment;
  - b. sudden drops in the level of the impoundment's contents; or
  - c. severe erosion or other signs of deterioration in dikes and other containment devices.
3. If the ESP is taken out of service for more than six months, then prior to returning to service, the Permittee shall obtain a certification from a qualified Professional Engineer registered in the State of Illinois that the surface impoundment and the flood-protection dike, including that portion of any dike which provides freeboard, have structural integrity in accordance with 35 IAC 724.326(c).
4. The results of all inspections conducted on the ESP must be recorded on an inspection log and placed in the operating record for this facility. Appropriate action, including implementation of the contingency plan if necessary, must be carried out in response to deficiencies noted during inspections; the results of these efforts must also be documented on an inspection log/repair log and placed in the operating record for the facility. The forms in Exhibit ESP-3 and Exhibit ESP-4 of the approved permit application shall be used to document inspections and any repairs done at the facility.

**F. CLOSURE REQUIREMENTS**

At closure, at a minimum, all waste, waste residues, and hazardous constituents must be removed from the unit. Remaining wastes, liner, and underlying soil containing or contaminated with waste, waste residue, or hazardous constituents must also be removed/remediated as appropriate to meet the requirements of 35 IAC 742. Closure of the surface impoundment must be carried out in accordance with the contingent closure plan contained in the "East Surge Pond Addendum to Section E" section of the approved permit application, as modified below:

1. The Permittee shall submit to the Illinois EPA in writing a proposed schedule to close the ESP for Illinois EPA's review and approval within one (1) year of the effective date of this permit. The proposed schedule for closure of the ESP

required in this section must include and consider any additional non-closure activities associated with the ESP. Any additional non-closure activities associated with the ESP must commence at least five (5) years prior to the expiration of this permit so that the required RCRA closure activities of the ESP may commence prior to the expiration date of this permit unless approved otherwise by Illinois EPA.

2. The Permittee shall notify the Illinois EPA in writing of its intent to close the ESP at least 180 days prior to the date closure is expected to begin. Along with this notification, the Permittee shall submit a sampling and analysis plan to be used in demonstrating that all contaminated material (sludge, liner, and underlying soil) has been removed. This plan must be approved by the Illinois EPA in writing prior to being implemented. Illinois EPA review of this plan will be subject to the permit appeal provisions contained in Sections 39(a) and 40(a) of the Illinois Environmental Protection Act. The response from the Illinois EPA will approve with or without conditions, if appropriate and establish:
  - a. The sampling and decontamination plan;
  - b. What contaminants must be analyzed for; and
  - c. The level at which decontamination or removal is considered complete. Please note that any proposed risk assessment will be subject to Illinois EPA's review. If the risk assessment is determined to be inadequate, the Illinois EPA may establish cleanup levels that will be protective of human health and the environment based upon the procedures set forth in 35 IAC 742.
3. All sweepings, wash water, and rinsate generated during the closure of the ESP shall be managed as a hazardous waste, unless it can be shown to be exempt under 35 IAC 721.
4. Additional plans and reports must be submitted to Illinois EPA for approval as necessary, to provide for the proper remediation (i.e., achievement of soil and groundwater remediation objectives developed in accordance with 35 IAC 742) of the sludges, liner, and underlying soil at the ESP.
5. Within sixty (60) days after closure of the ESP is complete, the Permittee shall submit certification to the Illinois EPA that the unit has been closed in accordance with the approved closure plan.

A closure certification form meeting the requirements of 35 IAC 724.215 must be signed by an authorized representative of the Permittee and a qualified Professional Engineer. Signatures must meet the requirements of 35 IAC Section 702.126. The qualified Professional Engineer (registered in the State of Illinois) must be present at all critical activities during the closure. These activities might



include soil sampling, soil removal, backfilling, final cover placement, etc. The frequency of inspections by the independent engineer must be sufficient to determine the adequacy of each critical activity. Financial assurance must be maintained for the ESP until the Illinois EPA approves the closure certification for the unit.

A Closure Documentation Report must be developed and submitted along with the certification of closure and include:

- a. Background information about the facility overall and the overall closure project.
- b. A description of the unit closed (include scaled maps showing location of unit within facility and layout of unit(s), information related to construction of the unit(s), identification of wastes managed in the unit).
- c. A chronological discussion of all closure activities and what was accomplished as a result of completing these activities.
- d. The volume of waste, waste residue and contaminated soil (if any) removed. The term waste includes wastes resulting from decontamination activities.
- e. Scaled drawings showing the horizontal and vertical boundaries of the extent of any soil removal effort.
- f. A description of the method of waste handling and transport.
- g. The waste manifest numbers.
- h. Copies of the waste manifests.
- i. As appropriate and available: boring logs; well construction diagrams; geologic cross-sections; groundwater monitoring data; and information about any groundwater remediation effort.
- j. Information documenting the results of all sampling/analysis efforts. The goal of presenting this information should be to describe, in a logical manner, the activities and results associated with the sampling/analysis effort. At a minimum, this information must include:
  - (1) identification of the reason for the sampling/analysis effort and the goals of the effort;
  - (2) a summary in tabular form of all analytical data, including all quality assurance/quality control data;



- (3) a scaled drawing showing the horizontal location from which all soil samples were collected;
  - (4) identification of the depth and vertical interval from which each sample was collected;
  - (5) a description of the soil sampling procedures, sample preservation procedures and chain of custody procedures;
  - (6) identification of the test method used, and detection limits achieved, including sample preparation, sample dilution (if necessary) and analytical inferences;
  - (7) copies of the final laboratory report sheets, including final sheets reporting all quality assurance and quality assurance dates;
  - (8) visual classification of each soil sample in accordance with ASTM D-2488;
  - (9) a summary of all procedures used for quality assurance/quality control, including the results of these procedures; and
  - (10) a discussion of the data, as it relates to the overall goal of the sampling/analysis effort.
- k. Information demonstrating that the remediation objectives approved for the project have been achieved, including establishment of any engineered barriers or institutional controls necessary to support these objectives.
- l. Color photo documentation of closure. Document conditions before, during, and after closure.
- m. A detailed summary of the costs incurred in completing the required closure activities.
6. The Permittee shall analyze all samples individually (i.e., no compositing). Sampling and analytical procedures shall be conducted in accordance with the latest edition of SW-846 and Attachment G to the Illinois EPA Bureau of Land's RCRA closure plan guidance. Sample size per interval shall be minimized to prevent dilution of any contamination. Apparent visually contaminated material within a sampling interval shall be included in the same portion of the interval to be analyzed. To demonstrate a parameter is not present in a sample, analysis results must show a detection limit at least as low as the practical quantitation limit (PQL) for that parameter as identified in the latest edition of SW-846.

7. To avoid creating another regulated storage unit during closure, it is recommended that any necessary permits for waste disposal are obtained prior to initiating excavation activities. If it is necessary to store excavated hazardous waste on-site prior to off-site disposal, do so only in containers or tanks or in other units if approved by the Illinois EPA in writing for less than ninety (90) days. Do not create regulated waste pile units by storing excavated hazardous waste in an unapproved manner. The ninety (90) day accumulation time exemption (35 IAC 722.134) only applies to containers and tanks.
8. Under the provisions of 29 CFR 1910, cleanup operations must meet the applicable requirements of OSHA's Hazardous Waste Operations and Emergency Response standard. These requirements include hazard communication, medical surveillance, health and safety programs, air monitoring, decontamination, and training. General site workers engaged in activities that expose or potentially expose them to hazardous substances must receive a minimum of 40 hours of safety and health training off site plus a minimum of three days of actual field experience under the direct supervision of a trained experienced supervisor. Managers and supervisors at the cleanup site must have at least an additional eight hours of specialized training on managing hazardous waste operations.
9. If the Illinois EPA determines that implementation of this closure plan fails to satisfy the requirements of 35 IAC 724.211, the Illinois EPA reserves the right to amend the closure plan. Revisions of closure plans are subject to the appeal provisions of Section 40 of the Illinois Environmental Protection Act.
10. The Permittee shall provide post-closure care in accordance with 35 IAC 724 for the ESP if all of the wastes or contaminated material or media cannot be removed or decontaminated in accordance with the closure plan and meeting the requirements of 35 IAC 742. If it is determined that the clean closure requirements (closure by removal) cannot be met and post-closure care is required, this permit must be modified to require closure and post-closure care as a landfill in accordance with 35 IAC 724, Subparts G and H.
11. Should post-closure care, as described above, become necessary, the permittee shall submit an application for modification to this permit, including an amended closure and post-closure care plan for this unit, within thirty (30) days following discovery that clean closure cannot be accomplished. If a determination is made not to pursue clean closure prior to the implementation of the closure plan, the modification request shall be made no later than sixty (60) days after such determination is made.
12. Financial assurance for closure and post-closure of the ESP as a landfill, if required, shall be provided within thirty (30) days following modification of the permit as set forth in Condition II.F.11 above.

**G. FINANCIAL ASSURANCE REQUIREMENTS**

1. The permittee shall maintain financial assurance for closure of the surface impoundment(s) of at least \$538,420 (in 2020 dollars). The cost estimate for closure of this facility is shown in Attachment G to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 IAC 724 Subpart H.
2. The approved cost estimate for closing this unit is as described in Attachment G. The Permittee must provide financial assurance for this amount in accordance with 35 IAC 724, Subpart G.
3. A revised closure cost estimate for the ESP must be submitted with the schedule for the closure for the ESP as required in Condition II.F.1. Such cost estimate must include all activities necessary to initiate and complete the closure of the ESP.
4. If clean closure cannot be achieved for the ESP, ESP will be subject to post-closure care, including the requirements for financial assurance.

**SECTION III: POST-CLOSURE FOR THE POND 1 LANDFILL UNIT**

**A. SUMMARY**

Hazardous waste management units where waste is left in place (e.g., landfills) must receive post-closure care for at least 30 years after the date the certification of closure is approved in writing by the Illinois EPA. Activities required during post-closure care include but are not limited to: (1) maintenance of final cover, (2) management of leachate, (3) monitoring, and as necessary, remediation of the groundwater, and (4) providing financial assurance for post-closure activities pursuant to Title 35 Illinois Administrative Code (35 IAC) Part 724.

Presently, there is one closed hazardous waste landfill at this facility which must receive post-closure care –the Pond 1 landfill. If it is determined by way of the closure plan contained in the “East Surge Pond Addendum to Section E” of the approved permit application that the East Surge Pond (ESP) cannot be clean closed (closure by removal), this permit shall be modified to incorporate closure and post-closure care for that unit as a landfill. This section describes the post-closure care requirements for the Pond 1 Landfill.

**B. UNIT IDENTIFICATION**

- The Permittee shall provide post-closure care for the following hazardous waste management unit(s), as described in the approved permit application, subject to the terms and conditions of this permit:

Unit Designation	Capacity	Surface Area Dimensions of Unit	Description of Waste and Hazardous Waste No.
Pond 1 Landfill (D80)	100,000 yd <sup>3</sup>	4.1 acres (approximate)	Sediments and soil contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry

The Pond 1 Landfill covers approximately 4.1 acres over Pond 1, Pond 1A and the southern part of Pond 2. The unit contains approximately 100,000 yd<sup>3</sup> of contaminated sediment and soils from the closure of Ponds 1, 1A, 2, 2A, 3, 3A, and 4.

- The location and horizontal extent of the landfill is identified in Figure B-2 of Attachment B to this permit. The lowest elevation of the sumps in the landfill is at or above 402 ft MSL. The highest elevation of the final cover system is at or below 432.99 ft MSL. The slopes of the final cover on the landfill shall not be steeper than 4H:1V or 2%. The landfill was designed and constructed to achieve

a minimum static slope factor of safety greater than or equal to 1.33 and a seismic factor of safety greater than or equal to 1.01.

3. Pond 1 Landfill has an engineered liner system consisting of several layers. From top to bottom (starting directly below the waste), these layers consist of:
  - a. One foot protective soil layer;
  - b. Geotextile fabric (filter);
  - c. One foot sand and gravel primary leachate detection and collection layer including leachate collection piping and leachate collection sumps;
  - d. 60 mil High Density Polyethylene (HDPE) geomembrane;
  - e. 0.25 inch Claymax geosynthetic clay liner (GCL);
  - f. One foot sand and gravel secondary leachate collection system including leachate collection piping and leachate collection sumps;
  - g. A 60 mil HDPE geomembrane;
  - h. Minimum of two feet of imported compacted clay; and
  - i. Minimum of one foot of recompacted in-situ clay.

The unit is protected from a 100-year flood event by a flood protection dike.

4. The cover system on the top of the Pond 1 landfill is constructed of the following layers, specified from the top to bottom:
  - a. One foot thick protective soil cover;
  - b. One foot thick compacted clay layer;
  - c. Geotextile fabric;
  - d. A geonet drainage layer;
  - e. A 60 mil HDPE geomembrane liner; and
  - f. Two foot thick compacted clay layer.
5. A survey plat indicating the location and dimensions of the Pond 1 Landfill and any other hazardous waste disposal units with respect to permanently surveyed benchmarks was prepared and certified by a professional land surveyor. The notes



on the plat state the owner's and operator's obligation to restrict disturbance of the Pond 1 Landfill in accordance with the applicable Subpart G regulations.

These notes state:

- a. The waste materials contained in the Pond 1 Landfill are considered RCRA hazardous wastes; and are sediments and soils contaminated with K048 – Dissolved air flotation (DAF) float from the petroleum refining industry.
  - b. Any material removed from the Pond 1 Landfill during future activities must be managed as a hazardous waste in accordance with 35 IAC Subtitle G: Waste Disposal unless material has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.
  - c. The use of this area is restricted.
6. The Plat of Survey must be attached to the deed to the property and serves as an instrument which is normally examined during title search that will in perpetuity notify any potential purchaser of the property that:
- a. The waste material in the Pond 1 Landfill is considered a RCRA hazardous waste;
  - b. Use of the area is restricted; and
  - c. A survey plat and record of the type, location, and quantity of waste material in the Pond 1 Landfill was filed with the Illinois EPA and the County Recorder.
  - d. Documentation/information regarding the Document No., Parcel Identification Number (PIN) for the Pond 1 Parcel, and the Drawing No. filed with the Madison County Recorder's must be submitted as required in Condition VI.C.7 of this permit.
7. The permittee shall develop a scaled topographic drawing of each unit identified in Condition III.B.1 to determine the vertical and horizontal dimensions of each unit at least once every 10 years. If a topographic drawing of a unit has not been developed in the 10 years prior to the date of this permit, it must be developed within 90 days of the date of the effective date of this permit, and every 10 years thereafter. The topographic drawings shall be maintained as part of the operating record.

Each scaled topographic drawing shall be compared to the permitted dimensions for that unit. The Permittee shall submit the most recent survey and scale drawings of the permitted dimensions for the unit within 60 days of the effective

date of this permit.

If a difference in elevation of more than 2 feet exists at any location on the unit, the Permittee shall notify the Illinois EPA Bureau of Land Permit Section of this finding within 30 days of the most recent survey. The notification must include the most recent survey and scale drawings of the permitted dimensions for the unit, a discussion of why the difference exists, and a plan that includes a schedule for repairing the cover system to its permitted dimensions. Repairs to the cover system, and/or its components, may be considered a permit modification.

**C. POST-CLOSURE CARE PERIOD**

1. The post-closure care period for the Pond 1 Landfill began on August 14, 1995, the date of completion of closure of the unit listed in Condition III.B.1 of this permit. August 14, 2025, marks the minimum requirement of thirty (30) years of Post-Closure Care.

Hazardous waste remains in the landfill, leachate continues to be generated and pumped out of the unit, and a groundwater corrective action program is required to address groundwater contamination at the site. Due to these site conditions, pursuant to 35 IAC 703.241, 724.131, 724.410 as well as Sections 12(a), 21(n), and 39(g) of the Environmental Protection Act, the Permittee must continue to provide post-closure care for the Pond 1 Landfill. Post-closure care shall be extended for additional 30 years or until such time as no unacceptable risks to human health and the environment are present in the Pond 1 Landfill unit, as determined by the Illinois EPA.

2. On or prior to August 14, 2024 (one year before August 14, 2025), the Permittee must submit a Class 2 Permit Modification request to Illinois EPA in accordance with 35 IAC 703.241(a)(2) and 35 IAC 703 Appendix A.E.2 to extend the Post-Closure Care of the Pond 1 Landfill for an additional thirty (30) years or until such time as no unacceptable risks to human health and the environment are present in the Pond 1 Landfill unit, as determined by the Agency, as specified in Condition III.C.1 above.
3. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After any administrative and judicial challenges to such restrictions have been exhausted, the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the hazardous waste disposal site is located.
4. The Permittee shall not allow the property where the unit(s) identified in Condition B.1 are located to be used in a way that could disturb the integrity of

the final cover, liners, any components of the containment system, or the function of the facility's monitoring systems unless the Illinois EPA finds, by way of a permit modification, that such use is necessary for either of the following reasons:

- a. It is necessary to the proposed use of the property, and will not increase the potential hazard to public health or the environment, or
  - b. It is necessary to reduce a threat to human health or the environment
5. The Illinois EPA may require the continuation of any of the security requirements during part or all of the post-closure period.

**D. INSPECTIONS**

1. The Permittee shall inspect the components, structures, and equipment at the site in accordance with the inspection schedule in the approved permit application and the conditions in this permit (Attachment H). The forms in Exhibit E-8 of the Post-Closure Plan in the approved permit application shall be used to document inspections and any repairs performed at the facility.
2. The Permittee shall inspect the facility at least quarterly or within 72 hours of any rain fall event of three (3) or more inches in 24 hours for evidence of any of the following:
  - a. Deterioration, malfunctions, or improper operation of run-on and run-off systems.
  - b. The presence of leachate in, and proper functioning of, the leachate collection and removal systems.
  - c. The deterioration of the liner or cover systems.
3. Appropriate corrective action shall be taken if problems; including erosion, blockage of the channels, slope failure, etc. are observed at any time. If corrective action is taken, the area involved shall be reinspected one month following completion of the work to ensure the corrective actions have adequately corrected the problem(s) noted.
4. The Permittee shall inspect the benchmarks used to identify the location of the hazardous waste management units (HWMUs) and solid waste management units (SWMUs) within 60 days of the effective date of this permit and thereafter in accordance with the Inspection Schedule in the approved permit application.

If benchmarks cannot be located or confirmed, then the Permittee shall have the appropriate benchmark(s) reestablished by a licensed surveyor within 90 days of the effective date of this permit. Furthermore, the Permitted must: (1) evaluate, as much as possible, and document any noticeable changes in the ground elevation

in general and any settlement of the unit; and (2) maintain the benchmarks as a part of post-closure care of the landfill.

5. Results of all inspections and a description of any remedial actions taken shall be documented in the Repair Log in the Operating Record and maintained for the entire post-closure period.

**E. MONITORING, MAINTENANCE, AND RECORDKEEPING**

1. The Permittee shall keep and maintain a written operating record that includes all the records, reports, notifications, monitoring data, testing or analytical data, and corrective action data required by 35 IAC 724.173 and the conditions in this permit, for the entirety of the post-closure care period. The operating record shall be kept on-site at the facility and available for Illinois EPA review.
2. The Permittee shall maintain and monitor the groundwater monitoring system and comply with the other applicable regulations of 35 IAC 724 Subpart F (Groundwater Protection) during the post-closure period.
3. The Permittee shall maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, and other events.
4. The Permittee shall prevent run-on from eroding or otherwise damaging the final cover. At a minimum, the run-on control system shall be capable of preventing flow onto the active portion of the landfill during peak discharge from a 24 hour, 25-year storm event.
5. The Permittee shall prevent run-off from eroding or otherwise damaging the final cover. At a minimum, the run-off management system shall be capable of collecting and controlling the volume of water resulting from a 24 hour, 25-year storm event.
6. The Permittee shall comply with the requirements for landfills described in the approved permit application and the conditions of this permit as follows:
  - a. Corrective action shall be taken if ponding has been observed, if cracks or erosion channels greater than one inch wide have formed for whatever reason, if gas, odor, vegetative or vector problems arise, if leachate pop-outs or seeps are present, or if vegetation with tap roots is found to be growing in areas which are not designed to accommodate such vegetation.
  - b. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements as required in Condition III.D.4.



7. The Permittee shall maintain the leachate collection system (LCS), and leak detection system (LDS) in accordance with the design plans and specifications contained in the approved permit application and the conditions in this permit. The permittee shall:
  - a. Manage leachate collected in LCS and LDS in accordance with Condition III.E.9 below until an alternative compliance plan is approved by Illinois EPA to install a new LDS with a permanent pumping system and LDS. Any pumps from the LCS and LDS must be removed or cleaned at least once every year, as applicable.
  - b. Every 10 years, the Permittee will use a camera to inspect the collection risers and sump for sediment build-up. If 10% or more of the screened interval is silted-in, the permittee shall remove sediment from the collection riser and sumps using a high-pressure jet or equivalent method.
  - c. Install and operate a leak detection alarm system to alert when the level of leachate reaches one (1) foot as described in Condition III.E.11 (b).
  - d. The LCS will maintain leachate levels within the collection risers at a depth such that leachate does not exceed one (1) foot above the liner.
8. The permittee shall remove leachate from the landfill until leachate is no longer detected in the LCS or LDS.
9. Leachate collected in the LCS and LDS, shall be managed in compliance with all applicable federal, state and local regulations. The leachate may be transferred to the City of Wood River Publicly Owned Treatment Works (POTW) by a vacuum truck in accordance with the Illinois EPA Water Pollution Control Permit No. 2020-EP-64994; the approved permit application; and the conditions in this permit.
10. The permittee shall collect a representative sample of leachate from the landfill and analyze it for all the constituents listed in 35 IAC 724 Appendix I. These samples shall be collected and analyzed annually in accordance with the sampling and test methods specified in the approved permit application. The results of the leachate quality testing data shall be submitted and maintained in the facility's operating record and submitted to the Illinois EPA by July 15 each year.
  - a. The Reduced List will be based on the four most recent complete 35 IAC 724 Appendix I analyses and include all parameters detected in any of the four Appendix I analyses. Starting the next sampling event after Illinois EPA approval, this Reduced List will be used in lieu of the Appendix I analysis for three out of four years, with the fourth-year reverting to a full Appendix I analysis. Any parameters not included on the existing



Reduced List that are detected in the fourth-year Appendix I analysis shall be added to all future Reduced List analyses by means of a permit modification request. This cycle of three years of Reduced List, followed by one year of Appendix I analysis, will repeat for the remainder of the post-closure period.

- b. If an analysis of the leachate from the landfill detects a parameter for which the groundwater is not being analyzed, the permittee shall submit a Class 1\* permit modification to the Illinois EPA BOL Permit Section in writing within 30 days of the leachate analysis to add the previously undetected parameter(s) to the groundwater monitoring list.
11. The permittee shall operate, monitor, and maintain the leachate collection system (LCS); and the leachate detection system (LDS) in accordance with the approved permit application and the following conditions:
- a. The elevation of leachate in the primary and secondary collection risers of the LCS and LDS of the Pond 1 Landfill shall be monitored weekly and recorded in feet above MSL.
  - b. In accordance with an alternative Compliance Plan, if approved by the Illinois EPA as referenced in Condition III.E.7, leachate shall be removed from the collection risers as necessary to ensure the leachate depth over the liner does not exceed one (1) foot (or approximately at Elevation 403' above mean sea level (MSL) for LCS).
  - c. All leachate removed from the LCS and LDS shall be managed as a hazardous waste unless leachate has been delisted by the Illinois Pollution Control Board in accordance with Section 28.1 of the Illinois Environmental Protection Act and 35 IAC 720.122.
  - d. The permittee shall record the amount of liquid removed from each LCS sump (in gallons) at least monthly. The results of the leachate quantity testing data from the LCS shall be maintained in the facility's operating record and submitted electronically to the Illinois EPA.
12. The permittee shall operate and maintain the alarm system as required in Condition III.E.7 (c). The alarm system shall immediately alert the permittee or their representative if there is a problem with the leachate collection or leak detection systems. Within 48 hours of an alarm, a technician will check the LCS and/or LDS and initiate any necessary corrective actions.

**F. REPORTING AND NOTIFICATION REQUIREMENTS**

1. The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 above must be submitted to the Illinois EPA Bureau of Land Permit

Section in an electronic format. The information is to be submitted as fixed-width text files formatted as found in Attachment C to this permit. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA's website.

2. A completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) must accompany all Leachate Data Reports required by this permit. A copy of this form is provided in Attachment C to this permit. This form is not be used for permit modification requests. This form is also available on the Illinois EPA website.
3. The leachate quantity and quality data required by Conditions III.E.10 and III.E.11 for the LCS and LDS shall be submitted to the Illinois EPA Bureau of Land Permit Section as part of the Leachate Data Quarterly Monitoring Report in accordance with the following schedule. This Leachate Data Quarterly Monitoring Report may be combined with the groundwater monitoring report required in Condition IV.I.14.

<u>Data Collected</u>	<u>Results/ Report Submitted by:</u>
January – March	August 1
April – June	August 1
July – September	February 1
October – December	February 1

4. The following Leachate Monitoring/Withdrawal Wells shall be used in leachate quality analysis required by Conditions III.E.10. For purposes of electronic reporting, the points will be labeled as shown below:

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
Primary Collection System Riser	PCRW
Primary Collection System Riser	PCRE
Secondary Collection System Riser	SCR1
French Drain Sump	FDS1

5. The following Leachate Monitoring/Withdrawal Well shall be used in leachate elevation and quantity monitoring required by Conditions III.E.11. For purposes of electronic reporting, the points will be labeled as shown below:

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
Primary Collection System Riser	PCRW
Primary Collection System Riser	PCRE
Secondary Collection System Riser	SCR1
French Drain Sump	FDS1

6. The permittee shall submit one (1) original paper copy of each Leachate Data Quarterly Monitoring Report required in Condition III.F.3 above. A Leachate Data Quarterly Monitoring Report may be combined with a groundwater monitoring report required in Condition IV.I.14. In addition to the electronic data, each report must include:
  - a. A graphical representation of the volumes of leachate removed from the LCS and LDS each month. The leachate generation rates (gallons/month) from the LCS and LDS shall be presented on the same graph. The scale of the abscissa (time) shall be such that no more than one year of data (starting with January each year) is presented on each sheet of paper.
  - b. A graphical representation of the elevations of the liquid level in the collection risers for the quarter. For each measurement, the graph needs to identify the following: the elevation of leachate over time, elevation of the top of liner, and elevation of the bottom of the cover system all in feet above MSL.
7. If the leachate quality analysis required in Condition III.E.10 detects a parameter for which the groundwater was not analyzed for in the last sampling event, the permittee shall submit a Class 1\* permit modification to the Illinois EPA BOL Permit Section in writing within 30 days of the leachate analysis to add the previously undetected parameter(s) to the groundwater monitoring list. .

**G. NOTICES AND CERTIFICATION**

1. A request to change the Post-Closure Plan must be submitted in the form of a permit modification request. This request must be in accordance with applicable requirements of 35 IAC Parts 702, 703 and 724 and must include a copy of the amended Post-Closure Plan for approval by the Illinois EPA.
2. If the Permittee or any subsequent owner or operator of the land upon which the Pond 1 Landfill listed in Condition III.B above is located wishes to remove hazardous waste, hazardous waste residue, the liner, or contaminated soil, they must request a modification to this RCRA post-closure permit in accordance with the applicable requirements in 35 IAC Parts 703, 705 and 724. At a minimum, the owner or operator must demonstrate that the removal of such material will satisfy the criteria of 35 IAC 724.217(c).
3. If the Permittee seeks to demonstrate that they should be allowed to end the post-closure care period (e.g., all waste has been removed, and leachate and groundwater monitoring results do not indicate a potential for migration of waste at levels which may be harmful to human health and the environment), the permittee shall submit an Uniform Environmental Covenant (UEC) for the future land use and management of the property on which the Pond 1 Landfill is located.

The UEC shall be submitted at least one year prior to the date the permittee expects to submit the Certification of Completion of Post-Closure and must be approved by Illinois EPA.

Pursuant to Section 39(g) of the Environmental Protection Act and Uniform Environmental Covenant Act, the purpose of the UEC is to place restrictions upon the future use of the site necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment.

4. If the Permittee seeks to exit post-closure care, the Permittee shall submit the following documents to the Illinois EPA Bureau of Land Permit Section by registered mail no later than sixty (60) days after completion of the established post-closure care period for the Pond 1 Landfill listed in Condition III.B of this permit:
  - a. A properly completed Certification of Completion of Post-Closure Care Form provided in Appendix J to this permit that states the post-closure care for the Pond 1 Landfill was performed in accordance with the specifications in the approved post-closure plan in the approved permit application and the conditions in this permit. The owner and operator and a qualified Professional Engineer registered in the State of Illinois must sign the Certification Form.
  - b. A Post-Closure Documentation Report that documents the post-closure care conditions and activities at your facility during the post-closure period. The Post-Closure Documentation Report must include the following:
    - (1) Background information about the facility and the unit subject to the Post-Closure Certification. Describe the facility and RCRA permit history for the unit.
    - (2) A detailed description of the unit subject to the post-closure care certification that includes:
      - i. The unit's design, including liner system, sumps, leachate collection, leak detection, and gas systems, and cover system including stormwater run-off and run-on controls. Provide this information in both a narrative form and scale drawings.
      - ii. How the unit was operated and how it was closed.
      - iii. When the unit was operated and when it was closed.
      - iv. The wastes disposed of (including waste codes).
      - v. The amount of leachate pumped each year from each sump in the unit's leachate collection and leak detection systems during



the post-closure period. Provide this information in both a table and graphically. Demonstrate the unit has met the requirements of 35 IAC 724.410(b)(2).

- vi. A scaled map showing the location of unit within the facility boundary. Include all wells in the groundwater monitoring system for the unit on this map.
- vii. Scaled drawings (plan view and cross-section) that show the horizontal and vertical extent of the unit at the time it was certified closed, every 10 years after it was closed, and at the time the Post-Closure Documentation Report is submitted. The scale of the plan view should be 1 inch = 200 feet. All design components of the unit must be shown on the drawings.

When the drawings are compared, if a difference in elevation of more than 2 feet exists at any location on the unit, the Post-Closure Documentation Report needs to indicate the reason for the change in elevation, and demonstrate it would not be a concern in the future.

- viii. A survey of the unit when it was certified closed and at the time the Post-Closure Documentation Report is submitted. The surveys must be certified by a professional land surveyor.
- (3) A general discussion on the inspection and maintenance of, and repairs to, the cover system, leachate collection, leak detection, gas collection, stormwater run-off and run-on controls, wells in the groundwater monitoring system, and any corrective action system required for the unit or groundwater contamination associated with it. Describe any problems and/or repairs to these systems that were addressed over the post-closure care period in chronological order. Show the locations of each of the repairs to these systems during post-closure care on a scaled drawing of the unit.
  - (4) A discussion on the groundwater monitoring program, including any corrective measures that were completed during the post-closure care period, and a summary of the three (3) most recent years of groundwater data. Identify the horizontal and vertical extent of any groundwater contaminant plume from the unit that existed at the beginning of the post-closure period and every five (5) years after that. The facility must have complied with all requirements of 35 IAC 620 and 724, Subpart F, in order to certify completion of post-closure care activities.
  - (5) Colored photos of unit(s) at post-closure completion. Photo documentation of the unit should include at least one aerial (satellite) photo and photos of all design features of the unit.



- (6) Completed Illinois EPA LPC-PA23 and 39i Forms.
  - c. Documentation that the UEC required by Condition III.G.3 above has been placed on the deed to the property on which the Pond 1 Landfill is located has been filed with the County Recorder's Office.
5. The certification of completion of post-closure care shall not be approved by the Illinois EPA until the permittee demonstrates that the UEC required by Condition III.G.3 above has been properly filed with the appropriate governmental office (e.g. State of Illinois, or County Recorder's office).
6. Within 60 days after receiving certification from the owner or operator and a qualified Professional Engineer that the post-closure care period has been completed for the Pond 1 Landfill listed in Condition III.B of this permit in accordance with the approved post-closure plan, the Illinois EPA shall notify the owner or operator that it is no longer required to maintain financial assurance for post-closure care of that unit unless the Illinois EPA determines that post-closure care has not been conducted in accordance with the approved post-closure plan. The Illinois EPA shall provide the owner or operator with a detailed written statement of any such determination that post-closure care has not been in accordance with the approved post-closure plan.

**H. POST-CLOSURE CARE COST ESTIMATE/FINANCIAL ASSURANCE**

1. The Permittee shall maintain financial assurance for post-closure care of the Pond 1 Landfill listed in Condition III.B.1 of this permit of at least \$2,364,068 in 2020 dollars until such time as it is required to be modified pursuant to Conditions VI.C.1(a) and VI.C.1 (d). A summary of the cost estimate for post-closure care is shown in Attachment G to this permit. The financial assurance maintained by the facility shall be sufficient to meet the requirements at 35 IAC 724 Subpart H.
2. Post-closure care costs are determined by multiplying annual costs by the 30-year post-closure care period.

## **SECTION IV: GROUNDWATER CORRECTIVE ACTION PROGRAM**

### **A. SUMMARY**

Hazardous constituents released from the BP Riverfront facility have been detected in the groundwater at the point of compliance at concentrations which exceed the Groundwater Protection Standards, as well as groundwater quality standards established by Title 35 Illinois Administrative Code (35 IAC) 724.192. Therefore, a Corrective Action Program meeting the requirements of 35 IAC 724.200 must be implemented at the BP Riverfront facility.

The Corrective Action Program required by this permit includes:

1. Control of groundwater flow in the uppermost aquifer such that groundwater flow in the Riverfront Groundwater Management Zone is towards the interior of the Main Plant facility. This control of groundwater flow will be accomplished by withdrawing sufficient quantities of groundwater from the uppermost aquifer through operation of Gradient Control Wells located at the BP Main Plant facility. Such flow control is necessary as a corrective action to prevent contaminant migration of on-site releases of product or waste, beyond the boundaries of the Riverfront facility and is the basis for the establishment of a Groundwater Management Zone (GMZ).
2. Verification that the flow of groundwater is adequately controlled as required by Condition IV.A.1 above.
3. Monitoring the quality and movement of the groundwater in the uppermost aquifer beneath the BP Riverfront facility to determine the effectiveness of the Corrective Action Program, as well as verify compliance with the GMZ.

### **B. IMPLEMENTATION**

1. The Permittee shall implement the Corrective Action Program established in this Permit upon the effective date of this Permit. On that date, the corrective action and groundwater monitoring requirements set forth in this Permit shall supersede those previously established.
2. The Permittee shall carry out the corrective actions specified in this Permit on the groundwater beneath the BP Riverfront facility. The uppermost aquifer at this facility is a sand and gravel aquifer located approximately 30 feet deep below the ground surface (hereinafter ft-bgs) and extending to a depth of about 101 to 113 ft-bgs to the top of the bedrock surface. This aquifer is commonly referred to as the "American Bottoms."

3. For the purposes of this Permit and in accordance with 35 IAC Part 620 regulations, the sand and gravel aquifer has been designated Class I: Potable Resource Groundwater. The analytical results obtained from these groundwater monitoring wells shall be compared to the appropriate Class I concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1 or to established background values as appropriate.
4. At this time, the establishment of a Point of Compliance (as defined by 35 IAC 724.195) will be postponed until such time that the monitoring wells at the facility have attained the applicable concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1 and the GMZ expires. At that time, facility must submit a proposal for the establishment of a Point of Compliance which satisfies the regulatory requirements found in 35 IAC 724, Subpart F and reflects the current conditions at the facility.

**C. WELL LOCATIONS AND CONSTRUCTION**

1. The Permittee shall maintain the groundwater monitoring wells identified in the table below to allow for the collection of groundwater samples from the uppermost aquifer. The location of these wells is specified in Figure C-7 of the approved permit application. All wells are gauged quarterly. Sampling frequencies vary and are specified below.

<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
<u>GMZ Boundary Wells (Gauging and Semi-Annual Sampling Network<sup>2</sup>)</u>					
G66D	RL-6C	ESP	70.00	361.38	366.38-361.38 <sup>H</sup>
G103	RL-3	PILF	39.00	386.27	396.27-386.27 <sup>C</sup>
G106	RL-6	ESP	44.00	386.57	396.57-386.57 <sup>C</sup>
G107	RL-7	ESP	39.00	388.36	398.36-388.36 <sup>C</sup>
G113	SWMU-14/MW-14A	Parcel C	51.94	371.00	381.00-371.00 <sup>H</sup>
G114	SWMU-14/MW-15	Parcel C	56.00	364.46	374.46-364.46 <sup>H</sup>
LOD1	LOD-1	LOD	31.00	393.58	403.58-393.58 <sup>C</sup>
LOD2	LOD-2	LOD	41.00	380.15	390.15-380.15 <sup>C</sup>
LOD7	LOD-7	LOD	29.14	391.20	401.20-391.20 <sup>C</sup>
L17B	RL-17B	LOD	54.84	363.98	373.98-363.98 <sup>H</sup>
<u>Observation Monitoring Wells (Gauging and Annual Sampling Network<sup>2</sup>)</u>					
G35L	C-25B	ESP	56.82	371.00	378.00-373.00 <sup>H</sup>
G104	RL-4	PILF	36.00	388.25	398.25-388.25 <sup>C</sup>

IEPA Well No.	Facility Well No.	Area	Well Depth (ft-bgs)	Well Depth	Well Screen Interval (ft MSL)
				Elevation (ft MSL)	
G115*	RL-15	WSP	52.00	376.18	381.18-376.18 <sup>H</sup>
G116	RL-16	WSP	52.00	375.35	380.35-375.35 <sup>H</sup>
G119	RL-19	ESP	40.00	391.80	406.80-391.80 <sup>C</sup>
G401	T-1	WSP	41.50	380.86	385.86-380.86 <sup>H</sup>
LOD5	LOD-5	LOD	30.24	391.87	401.87-391.87
R21L	RL-21BR	WSP	54.01	369.92	374.92-369.92 <sup>H</sup>
R529	P-29R	LOD	48.61	372.30	382.30-372.30 <sup>H</sup>

Observation Monitoring Wells (Annual Sampling Only Network<sup>3</sup>)

R21D	RL-21CR	WSP	70.24	353.58	358.58-353.58 <sup>H</sup>
LOD6	LOD-6	LOD	28.50	393.20	403.40-393.40 <sup>C</sup>
LOD9	LOD-9	LOD	28.50	394.12	404.12-394.12 <sup>C</sup>

Observation Monitoring Wells (Gauging Only Network<sup>4</sup>)

G030	C-20	TF	39.10	386.27	406.27-386.27 <sup>C</sup>
G033	C-23	POTW	35.00	393.54	403.55-393.55 <sup>C</sup>
G037	C-27	PNWL	34.00	393.94	404.04-393.94 <sup>P</sup>
G038	C-28	PNWL	35.69	393.70	403.90-393.80 <sup>P</sup>
G090	G090	PNWL	48.00	378.61	383.74-379.16 <sup>H</sup>
G091	G091	PNWL	66.50	359.14	382.27-377.69 <sup>H</sup>
G102	RL-2	LOD	34.0	388.78	398.78-388.78 <sup>C</sup>
G109	RL-9	ESP	39.00	388.45	398.45-388.45 <sup>P</sup>
G36R	C-26R	PNWL	34.4	392.18	402.48-392.48 <sup>P</sup>
G411	S-1	WSP	41.60	376.83	386.83-376.83 <sup>H</sup>
R034	C-24R	ESP	35.24	393.64	403.88-393.88 <sup>C</sup>
R66L	RL-6BR	ESP	55.30	377.06	382.16-377.06 <sup>H</sup>
G503	PANC-UP01	Parcel A	39.50	378.55	388.75-378.75 <sup>H</sup>
G504	PANC-UP02	Parcel A	39.00	372.06	382.06-372.06 <sup>H</sup>
G505	PANC-UP05	Parcel A	37.10	389.61	399.61-389.61 <sup>C</sup>
G506	PANC-UP09	Parcel A	27.30	389.29	399.49-389.49 <sup>C</sup>
G507	PANC-UP11	Parcel A	37.30	388.62	398.82-388.82 <sup>C</sup>
G508	SWMU4-	Parcel A	30.98	395.10	405.10-395.10 <sup>P</sup>
	MW01				
G509	SWMU4-	Parcel A	29.41	389.24	405.90-395.90 <sup>P</sup>
	MW03				
G510	SWMU4-	Parcel A	32.62	388.96	405.57-395.57 <sup>P</sup>

Observation Monitoring Wells (LNAPL Monitoring Network<sup>5</sup>)

G105	RL-5	ESP	34.00	388.28	398.28-388.28 <sup>C</sup>
G512	SUMP-8	Parcel C	+	+	409.05-406.35 <sup>P</sup>



<u>IEPA Well No.</u>	<u>Facility Well No.</u>	<u>Area</u>	<u>Well Depth (ft-bgs)</u>	<u>Well Depth Elevation (ft MSL)</u>	<u>Well Screen Interval (ft MSL)</u>
<u>Observation Monitoring Wells (Sentinel Wells<sup>6</sup>)</u>					
SWMU4-					
G511	MW02	Parcel A	26.43	392.67	402.67-392.67 <sup>C</sup>
LOD1 <sup>2</sup>	LOD-1	LOD	31.00	393.58	403.58-393.58 <sup>C</sup>
LOD2 <sup>2</sup>	LOD-2	LOD	41.00	380.15	390.15-380.15 <sup>C</sup>
G029 <sup>7</sup>	C-19R	MP	24.52	393.98	404.31-394.31 <sup>C</sup>
G056**	G-16	MP	30.00	395.54	415.54-395.54 <sup>P</sup>
G057 <sup>8</sup>	G-17	MP	35.02	391.90	411.90-391.90 <sup>C</sup>
G058 <sup>8</sup>	G-18	MP	36.00	391.27	411.27-391.27 <sup>C</sup>
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				
GXXX <sup>9</sup>	Well details will be provided within ninety (90) days of well completion				

Notes

+ = Well construction information is incomplete

\* = Denotes Upgradient Well(s)

\*\* = Also an Observation Well under the BP Main Plant RCRA Permit. Groundwater sampling required until additional sentinel wells are installed and incorporated into the BP Riverfront RCRA Permit in accordance with January 19, 2023 Illinois EPA letter.

C = Wells fully or partially screened within the silty sandy layer of the Cahokia Sand facies are designated as "UMA C" uppermost aquifer wells.

H = Wells screened within the coarse sand and gravel of the Henry formation are designated as "UMA H" uppermost aquifer wells.

P = Wells within the Cahokia exhibiting perched behavior are designated as "Cahokia Perched" wells.

2 = GMZ Boundary

3 = Groundwater sampling only. Well will still be gauged when sampled in accordance with Condition IV.F.1; however, water level data will not be utilized for developing potentiometric surface maps or evaluation of hydraulic gradients as required under Condition IV.E.6 (3 Observation wells)

4 = Groundwater gauging only. Groundwater sampling not required (20 Observation wells).

5 = LNAPL monitoring only. Groundwater sampling not required (2 Observation wells).

6 = Sentinel wells required to be sampled semi-annually.

7 = Groundwater sampling required until revised GMZ approved and G029 is abandoned in accordance with January 19, 2023 Illinois EPA letter.

8 = Also an Observation Well under the Main Plant RCRA Permit.

9 = Additional sentinel wells to be installed and incorporated into RCRA Permit in accordance with January 19, 2023 Illinois EPA letter.



- The Permittee shall maintain the Gradient Control Wells identified in the table below to allow for the withdrawal of contaminated groundwater, as well as, the measurement of water levels to verify the flow of groundwater is adequately controlled as required by Condition IV.A.1 above.

IEPA Well No.	Facility Well No.	Area	Well Depth (ft-bgs)	Well Depth Elevation (ft MSL)	Well Screen Interval (ft MSL)
<u>Gradient Control Wells</u>					
G664	PW-64	MP	118.0	309.4	344.4 -309.4
G667	HPW-41	MP	105.0	322.6	347.6 - 322.6
G668	HPW-58	MP	115.0	318.0	358.0 – 318.0
G669	HPW-61	MP	118.0	314.55	345.05 – 314.55

Area Identification

P1LF = Pond 1 Landfill	LOD = Light Oils Dock
ESP = East Surge Pond	POTW = Publicly Owned Treatment Works
WSP = West Surge Pond	PNWL = Permitted Non-Hazardous Solid Waste Landfill
MP = Main Plant	PA = Parcel A
TF = Tank Farm	PC = Parcel C

- Construction of each monitor well/piezometer must be in accordance with the diagram contained in Attachment C to this Permit, unless otherwise approved in writing by the Illinois EPA. All new monitoring wells/piezometers to be installed must be continuously sampled and logged on Illinois EPA boring logs as provided in Attachment C unless otherwise approved by the Illinois EPA.
- The Permittee shall notify the Illinois EPA within thirty (30) days in writing if any of the wells identified in Conditions IV.C.1 and IV.C.2 are damaged or the structural integrity has been compromised causing the well not to serve its function or to act as a contaminant pathway. A proposal for the replacement of the subject well shall accompany this notification. The well shall not be plugged until the new well is on-line and monitoring data has been obtained and verified, unless the well is extremely damaged or would create a potential route for groundwater contamination. Prior to replacing the subject well, the Permittee shall obtain written approval from the Illinois EPA regarding the proposed installation procedures and construction.
- Should any well become consistently dry or unserviceable, a replacement well shall be provided within ten (10) feet of the existing well. This well shall monitor the same zone as the existing well and be constructed in accordance with the

current Illinois EPA groundwater monitor well construction standards at the time that the wells are replaced. A replacement well which is more than ten (10) feet from the existing well or which does not monitor the same geologic zone must be approved by the Illinois EPA and designated as a new well.

6. The Permittee shall submit boring logs, construction diagrams and datasheets from installation and development of a new or replacement well to the Illinois EPA at the address below within thirty (30) days of the date that installation of the well is completed. In addition, the Permittee shall submit certification that plugging, and abandonment of a well was carried out in accordance with the approved procedures to the Illinois EPA at the address below within thirty (30) days of the date that the well is plugged and abandoned. All pertinent information should be submitted to the appropriate State agencies.

Illinois Environmental Protection Illinois EPA  
 Bureau of Land -- #33  
 Permit Section  
 1021 North Grand Avenue East  
 Post Office Box 19276  
 Springfield, Illinois, 62794-9276

7. All wells/piezometers shall be clearly identified and shall be equipped with protective caps and locks. Monitoring wells or piezometers located in high traffic areas must be protected with bumper guards.
8. All groundwater monitoring wells and piezometers not utilized in the approved groundwater monitoring system, but retained by the facility, must be constructed and maintained in accordance with 77 IAC 920 regulations. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Condition IV.C.4.

**D. GROUNDWATER PROTECTION STANDARD**

1. The following hazardous constituents and their concentration limits (35 IAC 620, Class I, Groundwater Quality Standards) comprise the Groundwater Protection Standard for the groundwater monitoring wells found in Conditions IV.C.1. (Total (unfiltered) values will be used for the comparison with the 35 IAC 620, Class I, Groundwater Quality Standards. Dissolved values shall be used for statistical evaluations required in Condition IV.H unless otherwise noted.)

<u>Field Parameters</u>	<u>Storet</u>	<u>Units</u>
pH	00400	
Specific Conductance	00094	micromos/cm
Temperature of Water Sample	00011	(°F)
Turbidity	45626	Ntus

Depth to Water (below land surface)	72019	Feet
Depth to Water (below measuring point)	72109	ft bgs
Elevation of Groundwater Surface	71993	ft MSL
Elevation of Bottom of Well #	72020	ft MSL
Elevation of Measuring Point (Top of casing)##	72110	ft MSL

#Shall be determined during the first semi-annual sampling event each year.

##Shall be surveyed once every five (5) years, or at the request of the Illinois EPA, or whenever the elevation changes as required by Condition IV.I.9.a.

Hazardous <u>Constituents</u>	Storet No. <u>(Total)</u>	Storet No. <u>(Dissolved)</u>	Concentration <u>Limits (mg/L)</u>
Arsenic*	01002	01000	0.01
Barium	01007		2.0
Cadmium	01027		0.005
Chloride*	00940	00941	200.0
Chrysene	34320		0.1
Lead*	01051	01049	0.0075
Sulfate	00945		400.0
Benzene	34030		0.005
Benzo(b)fluoranthene	34230		0.00018
Bis(2-ethylhexyl) phthalate	39100		0.006
Carbon Disulfide	81309		0.7
Ethylbenzene	78113		0.7
Toluene	34010		1.0
Total Xylenes	34020		10.0
Methyl Tertiary-Butyl Ether	46491		0.07
Phenols	46000		0.1

Biogeochemical Analytes<sup>1</sup>

Dissolved iron	01046	N/A
Dissolved manganese	01056	N/A
Dissolved sulfate	00946	N/A

\* = Constituents that must be sampled for both dissolved and total concentrations.

<sup>1</sup> = To monitor natural attenuation conditions.

2. Alternate concentration limits may be established where the Permittee can determine a constituent will not pose a substantial hazard to human health or the environment as follows:
  - a. Where a hazardous constituent has a standard in 35 IAC Part 620, the facility must apply for an adjusted standard as outlined in Section 28.1 of the Environmental Protection Act or reapply once corrective measures have been implemented pursuant to 35 IAC 620.450.
  - b. For those hazardous constituents without a 35 IAC Part 620 standard, the alternative concentration limits proposed by the facility must be approved by the Illinois EPA.
3. The Permittee must continue corrective action measures for as long as necessary, as determined by the Illinois EPA, to achieve compliance with the Groundwater Protection Standards. The Permittee may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if it can be demonstrated, based on data from the groundwater monitoring program, that the Groundwater Protection Standards found in Condition IV.D.1 have not been exceeded for a period of three (3) consecutive years.
4. Prior to removal of any constituents identified in Condition IV.D.1, the facility must present leachate analytical results from the Pond 1 landfill to demonstrate these constituents are not present in leachate. Therefore, to request removal of barium, cadmium, sulfate, benzo(b)fluoranthene, carbon disulfide, total xylenes, and phenols, present a demonstration these constituents are not present in leachate. A leachate demonstration is also necessary to reduce the sampling frequency for chloride.

**E. GROUNDWATER CORRECTIVE ACTION PROGRAM**

The Permittee shall conduct the Corrective Action Program and perform groundwater monitoring detailed in this section, in accordance with the following:

1. The Permittee shall monitor the GMZ Boundary Wells and Observation Wells designated in Condition IV.C.1 on a semi-annual or annual basis (as indicated in Condition IV.C.1) for the hazardous constituents listed in Condition IV.D.1 above.
2. The GMZ must be monitored and maintained as follows:
  - a. The GMZ boundaries shall be defined as follows:
    - Western Boundary: LOD-1 and LOD-5;

- Eastern Boundary: G103, G106 and G107;
  - Northern Boundary: LOD-2, G113 and G114;
  - Southern Boundary: LOD-7 and G107.
  - Vertical Boundary: RL-17B and G66D.
- b. The results of monitoring the GMZ shall be submitted to the Illinois EPA semi-annually in accordance with the schedule found in Condition IV.I.2.
- c. The GMZ expires when all groundwater monitoring wells within the GMZ have attained the appropriate Class I concentration limits that comprise the Groundwater Protection Standard found in Condition IV.D.1.
- d. The appropriate Class I concentration limits shall be considered attained when groundwater monitoring results meet the appropriate concentration limit for two (2) consecutive years.
- e. An evaluation of the GMZ shall be submitted in a report for Illinois EPA review and approval, a minimum of every five (5) years, in accordance with the guidance document, "Re-evaluation of Groundwater Management Zones at RCRA Facilities" found at the Illinois EPA website. Statistical analysis required by IV.I must also be included.
3. The Corrective Action Program shall control the horizontal and vertical flow in the vertical column of water present in the uppermost aquifer beneath the facility and monitor the position and rate of migration of the Hydrocarbon Pool as follows:
- a. The pumping from the Gradient Control Wells (COD wells) shall maintain the cone of depression to ensure groundwater flow is adequately controlled in the uppermost aquifer.
  - b. The pumping rate from each Gradient Control Well (COD well) shall be recorded each business day. This data shall be used to calculate the monthly average withdrawal rate for the Gradient Control System.
4. The Permittee shall monitor the groundwater horizontal and vertical gradients in the uppermost aquifer beneath the facility.
5. The Permittee shall record the following measurements and submit to the Illinois EPA semi-annually as required by Condition IV.I.2.



- a. A record of the amount of groundwater withdrawn each day by the groundwater withdrawal wells.
  - b. Quarterly monitoring of the piezometric head at wells in the uppermost aquifer identified in Conditions IV.C.1 and IV.C.2 above to demonstrate that groundwater flow is properly controlled throughout the contaminated area requiring corrective action in the uppermost aquifer is being contained.
6. The Permittee shall determine the groundwater flow rate (i.e., seepage velocity in ft/day) and direction in the uppermost aquifer at least annually from the monitoring wells listed in Condition IV.C.1.
  7. The groundwater quality in the uppermost aquifer beneath the facility shall be monitored on a semi-annual or an annual basis in Condition IV.C.1 at each of the monitoring wells identified.
  8. The GMZ Boundary Wells and Observation Monitoring Wells listed in Condition IV.C.1 shall be monitored for the constituents listed in Condition IV.D.1.
  9. Due to the close proximity to the Hydrocarbon Pool (SWMU 7), the facility must propose a location for a new well or replacement well which will monitor the same geologic zone as monitoring well G119. The proposed location must be submitted for Illinois EPA review and approval prior to abandonment of well G119. BP must continue to pursue approval for replacement of G119 from the Corps of Engineers to satisfy replacement requirements from Illinois EPA, and provide updates in each semi-annual report required by Condition IV.I.2.

**F. GROUNDWATER ELEVATIONS**

1. The Permittee shall determine the groundwater surface elevation referenced to MSL at each well each time groundwater is sampled in accordance with Condition IV.I.3.
2. The Permittee shall report the surveyed elevation of stick-up and ground surface referenced to MSL once every five (5) years or at the request of the Illinois EPA, or whenever the elevation changes in accordance with Condition IV.I.9.
3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020), is to be reported at least annually. The mandatory measurement shall be taken during the first semi-annual sampling event each year.

**G. SAMPLING AND ANALYSIS PROCEDURES**

The Permittee shall follow the techniques and procedures described in Exhibit C-3 of Attachment B of the approved permit application, except as modified below, when obtaining and analyzing samples from the groundwater monitoring wells described in Condition IV.C.1:

1. Samples shall be collected by the techniques described for low-flow sample collection in Exhibit C-3 of Attachment B of the approved permit application.
2. Samples shall be preserved, shipped and handled in accordance with the procedures specified in Exhibit C-3 of Attachment B of the approved permit application.
3. Samples shall be analyzed according to the procedures specified in Exhibit C-3 of Attachment B of the approved permit application, with the exception that the most current SW-846 Method states that field blanks must be tested for volatile organic compounds (VOCs), which includes Methyl Tertiary-Butyl Ether (MTBE).
4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Exhibit C-3 of Attachment B of the approved permit application.

**H. STATISTICAL METHODS**

The Permittee shall evaluate the quality of groundwater samples collected during semi-annual sampling events identified in Condition IV.E to determine trends and demonstrate effectiveness of corrective action as follows:

1. The GMZ Boundary Wells and Observation Monitoring Wells, as identified in Condition IV.C.1, shall be used for statistical evaluations of groundwater quality data as follows:
  - a. The groundwater quality data shall be statistically evaluated annually for the constituents identified in Condition IV.D.1, in accordance with Exhibit C-4 of the approved permit application.
  - b. The results of the statistical evaluations shall be discussed and included within the required five (5)-year GMZ Evaluation reports required by Condition IV.I.6.

**I. REPORTING AND RECORDKEEPING**

1. The Permittee shall enter all monitoring, testing and analytical data obtained in accordance with Conditions IV.D, IV.E, IV.F and IV.H into the operating record.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions IV.D, IV.E, IV.F and IV.G shall be collected and reported as identified in the table below. All additional data required by the groundwater monitoring program (as specified in Conditions IV.D, IV.E, IV.F and IV.G) shall also be submitted to the Illinois EPA at the address listed in Condition IV.C.6 in accordance with this schedule.

<u>Sampling Event of Calendar Year</u>	<u>Samples to be Collected During the Months of</u>	<u>Results Submitted to the Illinois EPA by the Following</u>
First Quarter	January - February	August 1
Second Quarter	April - May	August 1
Third Quarter	July - August	February 1
Fourth Quarter	October - November	February 1

3. Groundwater surface elevation data measured pursuant to Condition IV.F.1, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition IV.I.2.
4. Groundwater withdrawal rates collected and calculated pursuant to Condition IV.E.3.b shall be submitted in accordance with the schedule identified in Condition IV.I.2.
5. Gradient control measurements collected pursuant to Condition IV.E.5 shall be submitted to the Illinois EPA as part of the second and fourth quarter reports as identified in Condition IV.I.2.
6. Statistical evaluations for the year, as required by Condition IV.H, shall be submitted to the Illinois EPA as a part of the required 5-year GMZ Evaluation reports required by Condition IV.E.2.e.
7. The Permittee shall report the groundwater flow rate and direction, as required by Condition IV.E.6, during the first and second semi-annual reports each year.
8. Groundwater quality samples collected to meet the requirements of Condition IV.E.8 shall be collected during the second and fourth quarter and submitted to the Illinois EPA as identified in Condition IV.I.2.
9. The Permittee shall report the surveyed elevation, as required by Condition IV.F.2, of the top of the well casing ("stick-up"), referenced to MSL, in accordance with the following schedule:
  - a. For wells identified in Condition IV.C.1 above, every five (5) years (during the second semi-annual sampling event), or at the request of the Illinois EPA, or whenever the elevation changes.

- b. For any new wells, at the time of installation and reported in the as-built diagrams. Subsequent measurements shall be made every five (5) years (during the second quarter sampling event) or whenever the elevation changes.
10. Elevation of the bottom of each monitoring well identified in Condition IV.C.1, referenced to MSL, is to be reported annually. This measurement shall be taken during the first semi-annual sampling event (Storet 72020).
11. Information required by Conditions IV.I.2, IV.I.3, IV.I.9 and IV.I.10 must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted as found in Attachment C of this permit, in accordance with the schedule found in Condition IV.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA's website.
12. The Permittee shall submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form" (LPC 592) as a cover sheet for any notices or reports required by the facility's permit for identification purposes. Only one (1) copy of the LPC 592 must accompany your submittal. However, the Permittee must submit one (1) original paper submittal of each notice or report you submit to the Illinois EPA, and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two (2) electronic copies for all additional Illinois EPA copies (i.e., Permit Section and the regional Field Operation Section). Additional paper copies must be provided upon Illinois EPA request. The LPC 592 form is not to be used for permit modification requests.
13. The Permittee shall report all information to the Illinois EPA in a form which can be easily reviewed. All submittals must contain tables of data, drawings, and text (as necessary) to accurately describe the information contained in the submittal.
14. The Permittee shall submit a written report semi-annually to the Illinois EPA, in accordance with the schedule found in Condition IV.I.2, which discusses the effectiveness of the corrective action program and place it in the operating record for the facility. At a minimum, the report must:
  - a. Address the information requirements in Conditions IV.C, IV.D, IV.E and IV.F
  - b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition IV.D.
  - c. Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.

- d. Groundwater monitoring required by Illinois EPA letters for monitoring programs specific to Solid Waste Management Units (SWMUs) within Parcels identified in Section V of the Permit shall be provided within reports required by Section V.J of the Permit.
15. If the Permittee determines that groundwater flow is not being adequately controlled, the Permittee shall:
- a. Notify the Illinois EPA in writing within seven (7) days of the date that this determination is made;
  - b. Take actions as necessary to regain the control of groundwater flow as required by Condition IV.E.3.
  - c. Submit a written report to the Illinois EPA within thirty (30) days describing the actions taken to regain control of groundwater flow. In addition, the report must contain information which demonstrates that groundwater flow is being adequately controlled.
  - d. Submit a request for permit modification to the Illinois EPA within sixty (60) days describing any changes which must be made to the corrective action program to ensure that the groundwater flow is adequately controlled.

**J. REQUEST FOR PERMIT MODIFICATION**

1. If the Permittee determines that the Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724, Subpart F, the Permittee must, within ninety (90) days, submit an application for permit modification to the Bureau of Land of the Illinois EPA to make any appropriate changes to the program which will satisfy the regulations.
2. Conditions in this section of the permit may be modified by the Illinois EPA in accordance with 35 IAC 702.183 and 705.128 if there is cause for such modification, as defined in 35 IAC 702.184. Causes for modification in this section of the regulations include, but are not limited to, alterations to the permitted facility, additional information which would have justified the application of different permit conditions at the time of permit issuance, and new regulations.



## SECTION V: CORRECTIVE ACTION

### A. INTRODUCTION

1. In accordance with Section 3004 of RCRA and Title 35 Illinois Administrative Code (35 IAC) 724.201, the Permittee shall institute such corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any solid waste management unit (SWMU) at its facility in Wood River, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.
2. The original RCRA permit issued by Illinois EPA for this facility on September 30, 1993 required that the facility conduct corrective action on twelve (12) solid waste management units and one product release site. On, August 9, 2001, Illinois EPA approved a plan to expand the scope of the corrective action program at the facility to include all recognized conditions at the facility. To accomplish this, the facility was broken up into ten (10) land reuse investigation parcels so that corrective action at the facility could be addressed on a parcel-by-parcel basis.
3. The facility has completed a substantial amount of corrective action efforts to date at this facility. A summary of these completed efforts, based on the date that Illinois EPA approved workplans and reports associated with these efforts, as of January 2021, is provided in Condition V.C below.
4. The Permittee must develop and implement a Corrective Measures Program to protect human health and the environment from any of the SWMUs and areas of concern at the facility.
5. The Permittee must carry out interim measures in accordance with the terms, conditions, and requirements of this permit to address existing contamination at the facility until such time as a final corrective measure can be developed and implemented.
6. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs; or (2) future releases for existing SWMUs.
7. Investigation and remediation efforts carried out as part of the corrective action program implemented in accordance with this permit must meet the requirements of: (1) this permit, and the regulations cited herein; (2) Illinois EPA and USEPA guidance documents regarding such efforts; and (3) Illinois EPA letters regarding such activities.
8. The requirements of 35 IAC 620 and 742 must be met, when applicable, in establishing remediation objectives for corrective action. In addition, all corrective action efforts must meet the requirements of 35 IAC 724.201.

9. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of the Illinois Environmental Protection Act.
10. The Illinois EPA may modify this Section when it determines good cause exists for modification of a compliance schedule, such as an act of nature, strike, flood or materials shortage or other Force Majeure or events over which the Permittee has no control and for which there is no reasonably available remedy.

**B. CORRECTIVE ACTION REQUIREMENTS**

1. Twelve (12) SWMUs and one Product Release Site (PRS) were listed in the 1993 permit as units to be addressed by the facility's corrective action program; SWMU 10 was combined with SWMU 6 in 1994; and a SWMU 14 was added in 1994 (the Former Channel Seep Area). As of January 2021, the following list of SWMUs have been identified at the facility:

<u>SWMU/PRS</u>	<u>Name</u>
SWMU 1	Closed Disposal Facility
SWMU 2	West Surge Pond
SWMU 3	Temporary Surge Basin
SWMU 4	Butene Polymerization Waste Area
SWMU 5	Pond 5 Landfill Adjacent Area
SWMU 6	Tank D-700 Area (includes SWMU 10—Field North of Tank D-700)
SWMU 7	Hydrocarbon Pool
SWMU 9	Chemfix Pad Area
SWMU 11	Pond 5 Landfill
SWMU 12	Heavy Oils Dock
SWMU 13	Mississippi River Seep Area
SWMU 14	Former Channel Seep Area
PRS 1	Marathon Pipeline Area

2. A Phase I RCRA Facility Investigation report for the units above was approved by Illinois EPA on December 2, 1996. The Permittee and Illinois EPA subsequently expanded the scope of corrective action at this facility to all recognized environmental conditions (not just the units identified above) and divided the facility into ten (10) land reuse parcels for remediation and potential redevelopment. Market conditions and environmental priorities will guide the

schedule for investigating, remediating and redeveloping these parcels. The schedule for addressing these parcels is subject to Illinois EPA review and approval. A map of the BP Riverfront land reuse parcels is presented in Figure B-1 of Attachment B to this permit; these parcels are also identified as the following:

<u>Parcel</u>	<u>Name</u>
A	Barge Maintenance Area (BMA), North Channel Tract Areas (NCT), Butene Polymerization Waste Area (BPWA), South Channel Tract Area (SCT), Southwest Channel Tract Area (SWCT)
B	Light Oils Dock (LOD)
C	Former Channel Seep Area (FSCA)
D	Closed Disposal Facility (CDF)
E	Pond 1 Landfill
F	Temporary Surge Pond (TSP)
G	Mississippi River Seep Area (MRSA)
H	East Surge Pond (ESP)
I	West Surge Pond (WSP)
J	Permitted Nonhazardous Landfill (PNWL)

3. The Permittee plans to complete corrective action for the soil and groundwater at the facility through the parcel land reuse investigation remediation process. The goal in following this process is to obtain a no further action (NFA) determination for the entire parcel and address all recognized environmental conditions in the parcel. If the Permittee determines that redevelopment is not likely to occur in a given parcel, the Permittee may focus only on the SWMUs and PRS within the parcel. If the potential for redevelopment of the parcel becomes viable in the future, the Permittee may pursue an NFA determination for all recognized environmental conditions within the parcel at that time. The general process for investigation/remediation of each parcel (or for individual SWMUs/PRSs) is as follows:
  - a. Current conditions will be established for the parcel.
  - b. An Investigation Work Plan incorporating the current conditions will be developed and submitted to Illinois EPA for review and approval to investigate data gaps required to properly characterize the area.
  - c. The investigation, focused on obtaining soil and any perched groundwater data, will be completed. It must be noted that the groundwater within the

uppermost aquifer beneath the facility is being addressed by the requirements of Section IV of this permit.

- d. The results of investigation will be analyzed; as well as all other data remediation objectives will be developed in accordance with 35 IAC 742; a comparison will be made between the data to the developed remediation objectives; and a determination will be made regarding the need for any remedial activities (including the establishment of engineered barriers and institutional controls).
- e. A report documenting the results of the efforts described in Items (c) and (d) above will be submitted to Illinois EPA for review and approval. This report will also identify any required remedial activities (including establishment of any required engineered barriers and/or institutional controls) needed to achieve the proposed remediation objectives.
- f. Based upon the results of its review of the Investigation Report, Illinois EPA will either:
  - (1) require that additional investigative efforts be conducted;
  - (2) issue a draft NFA letter for soil and perched groundwater (if applicable). This draft NFA will identify any required remedial activities (including establishment of an engineered barrier or institutional control) that must be completed before a final NFA letter can be issued. As necessary, the Permittee will conduct the required remedial activities and submit a report to Illinois EPA for review and approval documenting the results of these activities. Additional work must be conducted by the Permittee as necessary in accordance with plans and reports approved by Illinois EPA, until Illinois EPA determines that a final NFA letter can be issued.
  - (3) issue a final NFA letter for soil and perched groundwater (if applicable); or
  - (4) require some combination of the above efforts.
- g. Any engineered barriers and/or institutional controls required in the development of remediation objectives must be established before a No Further Action letter can be issued. Plans for establishing the required barrier/institutional control must be submitted to Illinois EPA for review and approval as well as reports documenting completion of these efforts. Any other proposed remedial efforts to achieve the established remediation objectives must also be completed before a final NFA letter can be issued.

4. Plans and reports associated with all aspects of corrective action at this facility must be submitted to Illinois EPA before being implemented.
5. The investigation efforts conducted at each area must be sufficient to characterize contamination associated with all the identified recognized environmental conditions present in the area. The parcel investigations will focus on soil and perched water.

**C. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED TO DATE**

1. As of February 2021, the Permittee has obtained NFA for the specific media at the following parcels and SWMUs:

<b>Parcel/ SWMUs Present in Parcel</b>	<b>NFA and Media</b>
Parcel A—Butene Polymerization Waste Area/SWMU 4	NFA letter for soil and perched-groundwater only was issued on March 8, 2005 (Log No. B-145-CA-46). ELUC was established for Parcel A (see Conditions IV.C. 2 and 3 below).
Parcel B—Light Oils Dock/SWMU 6, SWMU 10	NFA Letter for soils-only was issued by IEPA on October 22, 2009 (Log No. B-145-CA-69). Exclusion of perched-groundwater in this parcel was approved on 12/30/2004 (B-145-CA-48).
PRS 1	NFA letter for soils-only was issued for PRS 1 on December 2, 1996 (B-145-CA-1) (see Condition IV.D below).

2. As of February 2021, the following Environmental Land Use Control (ELUC) has been established following the NFA determinations by Illinois EPA and recorded with the Madison County Recorder's Office as shown in the table below.

ELUC Recorded as Part of RFI for BP Riverfront Facility

<b>Area Name</b>	<b>Size (Acres)</b>	<b>Parcel ID for Site</b>	<b>Date of NFA Letter</b>	<b>County Recorder's No. /Date Recorded</b>	<b>PIN/TAX ID</b>
Parcel A	64.8-AC (A-1= 63.92-AC; A-2 = 0.88-AC)	Parcel A, which includes Parcel A-1 and Parcel A-2	3/8/2005 (Log No B-145-CA-46)	2007R32644 June 15, 2007	PIN: 19-1-08-28-00-000-009; 19-1-08-28-00-000-009-.001; 19-1-08-29-00-000-07

3. ELUCs have been established in accordance with 35 IAC Part 742 as part of the completed corrective action efforts at this facility as summarized in Condition V.C.2 above. The ELUC places following restrictions on future activities at the facility:



- a. Parcel A  
 ELUC requires following restrictions: potable groundwater use restriction; no residential use; construction worker health and safety plan for any excavation required; limited access to soils in this area and requirements for soil screening of VOCs and documentation requirements; an engineered barrier at a location which requires 3' of clean soil (including following sampling locations: PASW0702BH02;PALD0109BH01;PASW0702BH06). Note: Certified copy of recorded ELUC was accepted by IEPA on January 14, 2008.

- 4. At Parcel E (Pond 1 Landfill), the Pond 1 Landfill was closed as a hazardous waste landfill in August 1995;post-closure care is being carried out in accordance with requirements of Section III of this permit.

**D. SUMMARY OF CORRECTIVE ACTION EFFORTS STILL TO BE COMPLETED**

- 1. A brief summary of corrective action efforts still to be completed at each parcel, as of June 2023, is presented by the table below. (Please note this is not a complete listing of SWMUs at the subject facility). In addition, for all Parcels and SWMUs, Corrective Action efforts must be completed in accordance with requirements of this permit and corrective action letters issued by Illinois EPA for all media of concern.

<b>Parcel/ SWMUs Present in Parcel</b>	<b>Corrective Action Efforts to be Completed</b>
Parcel A—Butene Polymerization Waste Area/SWMU 4	Groundwater in the upper most aquifer in the vicinity of this parcel must be investigated and remediated as necessary to meet the corrective action requirements.
Parcel B—Light Oils Dock/ SWMU 6; SWMU 10	Groundwater in the vicinity of this parcel must be investigated and remediated as necessary to meet the corrective action requirements.
Parcel C—Former Channel Seep Area/ SWMU 14	Corrective action for all media, including continued LNAPL Recovery, must be carried out to meet the corrective action requirements.
Parcel D—Closed Disposal Facility Landfill/SWMU 1	Corrective action activities, including leachate management; groundwater monitoring and maintenance of the phytoremediation system must be continued.
Parcel E—Pond 1 Landfill	Post-closure care being carried out in accordance with Section III of this permit must be continued.

<b>Parcel/ SWMUs Present in Parcel</b>	<b>Corrective Action Efforts to be Completed</b>
Parcel F—Temporary Surge Pond/ SWMU 3	Current conditions report and groundwater investigation workplan for this parcel must be submitted. Corrective action must be carried out in accordance with the Phase II/ III Work Plan (approved on August 9, 2001 by the Illinois EPA) and meet the corrective requirements.
Parcel G—Mississippi River Seep Area (MRSA)/ SWMU 13	Land Reuse Investigation activities in accordance with the Illinois EPA's January 22, 2013 letter are in progress. MRSA Corrective Action Reports are being submitted as part of the Quarterly Riverfront Corrective Action Reports. Any remaining corrective action activities must be carried out to meet the corrective action requirements.
Parcel H—East Surge Pond (ESP)/ SWMU 8	The ESP must be operated in accordance with requirements of Section II of this permit. A proposed schedule to close the ESP in accordance with Condition II.F of this permit must be submitted to the Illinois EPA within one (1) year of the effective date of this permit. The closure of the ESP must commence prior to the expiration date of this permit as required in Condition II.F.1 of this permit, unless otherwise approved of an alternative closure commencement date by the Illinois EPA. If clean closure can't be achieved, this unit must be closed as a landfill and provided necessary post-closure care.
Parcel I—West Surge Pond (WSP)/ SWMU 2	The WSP is currently used for temporary storage of nonhazardous wastewaters. A current conditions report and RCRA Investigation workplan for this area must be submitted.
Parcel J—Permitted Non-Hazardous Waste Landfill/ SWMU 5/ SWMU 11	BP is currently providing post-closure care (maintenance of final cover, leachate management, and groundwater monitoring) in accordance with the Illinois EPA letter of April 27, 2005 and associated modifications. BP submits groundwater reports quarterly. Any additional corrective action activities must be conducted as necessary to meet the corrective action requirements.
SWMU 7—Hydrocarbon Pool	Further investigation and remediation must be conducted to meet the conditions of the Illinois EPA's Corrective Action approval letters for this unit. BP is awaiting USACE, WRDL, and IDOT access authorization for this area to conduct further required corrective action activities. Any remaining corrective action activities must be conducted to meet the corrective action requirements.
PRS-1—Marathon Pipeline Area	BP must continue to monitor groundwater in accordance with corrective action provisions of this permit.
Shallow Groundwater Beneath Facility	BP must continue to address shallow groundwater at the site to meet the corrective action requirements of this permit.
Groundwater Beneath Facility in the American Bottoms Aquifer	BP must continue to address the groundwater at the site in accordance with Section IV of this permit.

2. Within ninety (90) days of the date of the permit, the Permittee must submit a document summarizing the next step for the corrective action and proposed schedule for addressing each Parcel/SWMU listed in Condition V.D.1 above as a corrective action submittal.

**E. CORRECTIVE MEASURES REQUIREMENTS**

1. If it is determined that corrective measures must be taken at a SWMU, then the Permittee must implement a Corrective Measures Program (CMP) for such SWMUs in general accordance with the procedures set forth in Attachment E to this permit. The corrective measures implemented by the Permittee must be sufficient to ensure the appropriate requirements of 35 IAC Parts 302, 620, 724, and 742 are met.
2. The types of corrective measures which may be implemented include, but are not limited to:
  - a. Removal of the contaminants or the contaminated media so that the remaining media meet remediation objectives developed in accordance with 35 IAC 742;
  - b. Closing the SWMU as a landfill by establishing a proper final cover over the SWMU and then providing proper long-term monitoring/maintenance/management of: (1) leachate; (2) subsurface gas; (3) final cover system; and (4) groundwater;
  - c. Establishing engineered barriers to restrict exposure to the contaminants remaining at the SWMU (necessary to certain remediation objectives developed in accordance with 35 IAC Part 742);
  - d. Establishing institutional controls to restrict activities at the facility, as necessary, to support remediation objectives established in accordance with 35 IAC Part 742.
3. The Corrective Measures Program described in Attachment E to this permit consists of five phases:
  - a. Phase I--conceptual design of the selected corrective measure;
  - b. Phase II--development of the final design plans for the corrective measure, including installation and operation/maintenance plans;
  - c. Phase III--actual construction/installation/implementation of the corrective measure;

- d. Phase IV--operation/maintenance/monitoring, as necessary, of the corrective measure to ensure it is being properly implemented and is properly protecting human health and the environment.
  - e. Phase V--demonstration/verification that the corrective measure has been completed and that the established remediation objectives have been achieved.
  - f. Phases may be combined or skipped, depending on the actual corrective measure selected. The overall CMP implemented at a given SWMU must: (1) be logical in nature; and (2) allow for Illinois oversight and approval throughout the entire process. As such, it will be necessary for the Permittee to submit workplans and reports regarding all aspects of corrective measures for the Illinois EPA review and approval prior to carrying out any corrective measure activity.
4. A Phase I CMP Workplan, or its equivalent, must be submitted to the Illinois EPA within ninety (90) days of the date that the Illinois EPA notifies the Permittee of the need for a CMP.
  5. Subsequent CMP related workplans and reports must be submitted to the Illinois EPA for review and approval in accordance with a schedule approved by the Illinois EPA.
  6. For units closed as landfills:
    - a. The Phase II report must include a plan for the construction of a final cover system as well as a post-closure care plan. The post-closure care plan must include provisions for (1) inspecting the final cover; (2) monitoring the groundwater and soil gas; and (3) taking corrective action if any problems are observed during the inspection/monitoring effort.
    - b. The Phase III report must document the construction of the approved final cover system and any other systems required for closure of the unit.
    - c. During Phase IV, quarterly reports must be submitted documenting the results of the inspection/monitoring efforts as well as any corrective measures taken in response to problems observed during these efforts. It will be necessary to submit plans to the Illinois EPA for review and approval to address any groundwater quality or gas migration problems.
    - d. The Phase V report will not be submitted until the post-closure care period has been completed. This report must demonstrate that all applicable post-closure requirements have been met and that the groundwater at the site meets the applicable standards.



7. Once all corrective measures have been completed, a report must be developed documenting all efforts and results associated with the completed measure, including, as appropriate, information demonstrating the approved remediation objectives for the project have been achieved.
8. The Illinois EPA's action on all CMP submittals shall be subject to the appeal provisions of Sections 39(a) and 40(a) of the Illinois Environmental Protection Act.

**F. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION**

1. The current cost-estimate for completing corrective action and groundwater remediation, including 20% contingency, at the BP Riverfront provided by the facility is \$10,359,514 in 2020 dollars as described in Attachment G. The Permittee shall prepare an updated cost estimate for the completion of any corrective action required under this permit in order to provide financial assurance for the approved amount of that cost estimate as required in Condition VI.C.1 (c).
2. The Permittee shall demonstrate continuous compliance with 35 IAC 724.201 by providing documentation of financial assurance using a mechanism specified in 35 IAC 724.243, in at least the amount of the cost estimate required under Condition V.E.1 above. The words "completion of corrective action" shall be substituted for "closure and/or post-closure", as appropriate in the financial instrument specified in 35 IAC 724.251. The Illinois EPA may accept financial assurance for completion of corrective action in combination with another financial mechanism that is acceptable under 35 IAC 724.246.
3. At least once per year but no later than January 30 of each year, starting in 2024, the Permittee shall submit an updated estimate of the cost for completing corrective action at this facility to reflect the recent results of the program and the impacts these results have on determining what is needed to complete corrective action at the facility (such updates are also necessary to take into account such things as the completion of investigation efforts, the need for or completion of remediation, etc.). This estimate shall be submitted as a Class 1\* modification request and contain the following detailed information in support of the overall cost estimate:
  - a. A brief description of the various tasks which must be carried out to complete corrective action at the facility;
  - b. The estimated cost of completing each identified task;
  - c. A 20% adjustment for contingencies to the total estimated cost;
  - d. An identification of the resources needed to complete each task (type and amount) and the unit cost of each required resource;



- e. Justification for all values used in the developing all aspects of the estimate.
4. The cost estimate must be supported by a detailed breakdown of the estimated third-party cost for completing each required task. The amount of the various resources needed to complete each task must be provided, as well as the unit cost of these resources and an adjustment for contingencies. Justification for all data used in these calculations must also be provided.
5. The financial assurance requirements of 35 IAC 724.201 must also be met for any investigative or corrective action efforts carried out in accordance with Conditions G.1 or I below. Detailed cost estimates must be developed for any activities carried out under this Section and must accompany any workplan/report submitted to Illinois EPA for review and approval. Appropriate documentation of financial assurance in at least the amount of the approved cost estimate must be submitted to Illinois EPA within sixty (60) days after the cost estimates are approved.
6. All cost estimates prepared under the requirements of Conditions V.F.1 through V.F.5 above must be submitted as a Class 1\* permit modification request in accordance with 35 IAC 703.281.

**G. REQUIREMENTS FOR ADDRESSING NEWLY- IDENTIFIED SWMU(s) AND AREA(s) OF CONCERN (AOCs)**

1. The Permittee shall notify the Illinois EPA BOL Permit Section in writing of any newly-identified SWMU(s) and/or Area(s) of Concern (AOCs) discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30) calendar days after discovery. The notification shall provide the following information, as available:
  - a. The location of the newly-identified SWMU/AOC in relation to other SWMUs on a scaled map or drawing;
  - b. The type of unit and past and present function of the unit;
  - c. The general dimensions, capacities, and structural description of the unit (available drawings and specifications provided);
  - d. The period during which the unit was operated;
  - e. The specifics on all materials, including but not limited to, wastes and hazardous constituents, that have been or are being managed at the SWMU/AOC, to the extent available; and

- f. The results of any relevant available sampling and analysis which may aid in determining whether releases of hazardous wastes or hazardous constituents have occurred or are occurring from the unit.
2. If the submitted information demonstrates a potential for a release of hazardous waste or hazardous waste constituents from the newly identified SWMU/AOC, the Illinois EPA may request in writing, that the Permittee prepare a SWMU Assessment Plan and a proposed schedule of implementation and completion of the Plan for any additional SWMU(s) discovered subsequent to the issuance of this Permit. This SWMU Assessment Plan must also propose investigations, including field investigations if necessary, to determine the release potential to specific environmental media for the newly identified SWMU/AOC. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents from the newly-discovered SWMU(s)/AOC(s) to the environment.
3. Within ninety (90) calendar days after receipt of the Illinois EPA's request for a SWMU Assessment Plan, the Permittee shall submit a SWMU Assessment Plan to the Illinois EPA for review and approval.
4. After the Permittee submits the SWMU Assessment Plan, the Illinois EPA shall either approve, conditionally approve or disapprove the plan in writing. If the plan is approved, the Permittee shall begin to implement the plan within forty-five (45) calendar days of receiving such written notification or in according to the terms and schedule established within the plan and any conditions placed on it. If the plan is disapproved, the Illinois EPA shall notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revised plan.
5. The Permittee shall submit a report documenting the results of the approved SWMU Assessment Plan to the Illinois EPA in accordance with the schedule in the approved SWMU Assessment Plan. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan.
6. The Permittee must implement a Corrective Measures Program, as necessary, to properly address any contamination encountered during the assessment. Guidance regarding the implementation of this program will be provided at the time Illinois EPA notifies the Permittee of the need for such a program.

**H. FUTURE RELEASES FROM SWMUs**

There exists a potential that a release may occur in the future from SWMUs identified in the RFA which did not require any corrective action at the time that the RFA or RFI was completed. If the Permittee discovers that a release has occurred from such a SWMU in the future, then the Illinois EPA must be notified of this release within thirty (30) days

after its discovery following the procedures set forth in Condition V.G.1 above. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in Subsection E above. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

**I. INTERIM MEASURES/STABILIZATION**

The Permittee shall carry out interim measures/stabilization activities in order to prevent or mitigate the migration of a release of hazardous substances into the environment, and to provide adequate protection to public health, welfare and the environment.

1. At any time during the corrective action process, the Permittee may initiate interim measures for the purpose of preventing continuing releases and/or mitigating the results of releases and/or mitigating the migration of hazardous wastes or hazardous constituents. It shall not be necessary to conduct all phases of a RCRA Facility Investigation (RFI) or a Corrective Measures Study (CMS) prior to implementing an interim measure if the Illinois EPA and the Permittee agree that a problem can be corrected, or a release cleaned up, without additional study and/or without a formal corrective measures study.
2. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed interim measure to the Illinois EPA's BOL Permit Section for approval. This information shall include, at a minimum:
  - a. Objectives of the interim measures: how the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long-term solution at the facility;
  - b. Design, construction, and maintenance requirements;
  - c. Schedules for design and construction; and
  - d. Schedules for progress reports.
3. If the Illinois EPA determines that a release cannot be addressed without additional study and/or a formal CMS, then the Illinois EPA will notify the Permittee that these must be performed. Any proposal made under this provision or any other activity resulting from such proposal, including the invocation of dispute resolution, shall not affect the schedule for implementation of the other corrective action efforts being carried out at the facility or of any other portion of the permit.
4. If the Illinois EPA determines that interim measures are necessary to protect human health or the environment, the Permittee will be notified by way of a permit modification.

5. Consistent with the annual reporting requirements of this permit, the Permittee shall submit a report assessing the effectiveness of any interim measures being carried out in accordance with this permit. Based on a review of this report, the Illinois EPA reserves the right to require additional interim measures be carried out if it is determined that the interim measure is unable to protect human health and the environment. This annual report should at a minimum contain the following information regarding each system which comprises the interim measure:
  - a. A discussion of each system's operation during the year. This discussion should address: (1) actual daily, weekly and monthly flow rates through each system; (2) any periods when the systems were not operating; and (3) deviations from the design operating procedures for the system (such as problems with drawing an adequate vacuum, downtime due to equipment failure, etc.);
  - b. Results of all monitoring efforts carried out during the year;
  - c. A discussion of the effectiveness of the system supported as appropriate with data and calculations; and
  - d. Recommended changes, if any, which should be made to the system to improve its effectiveness.
6. The Illinois EPA reserves the right to require the Permittee to remove or treat soil if the Illinois EPA determines that contaminants are present in the soils at levels such that the remediation system is unable to protect human health and the environment. Remediation objectives for corrective measures will be established by the Illinois EPA at a later date.
7. The interim measure approved for a SWMU may not be sufficient to meet the final requirements for corrective action for remediation for the unit. The adequacy of the interim measure will be addressed upon Illinois EPA review and approval of the RFI Reports and the Corrective Measures Plan, as required by this permit. As such, the Permittee may be required to expand this interim measure as necessary to address existing or additional contamination detected through RFI investigations.
8. The Illinois EPA reserves the right to require revision and modification of the interim measures implemented by the facility should it be determined by the Illinois EPA through information obtained through facility monitoring that the interim measures approved by this portion of the permit are ineffective in protecting human health and the environment.



**J. REPORTING REQUIREMENTS**

1. A "Corrective Action Progress Report (formerly referred to as Riverfront RFI Progress Report by BP Products, North America)" shall be submitted summarizing the corrective action efforts completed at each parcel during each quarter of the calendar year. This report must also contain a general description of the corrective action efforts to be completed during the next quarter of the calendar year.

a. The reports should be submitted in accordance with the following schedule:

<u>Reporting Period</u>	<u>Report to be submitted by the following</u>
January – March	May 1
April – June	August 1
July - September	November 1
October - December	March 1**

\*\* The fourth quarter report must be combined with the Annual "Corrective Action Progress Report" (due by March 1 of every year)

b. Each Corrective Action Progress Report must contain:

- (1) a summary of activities completed at each parcel during the quarter, including information regarding the amount of free product/groundwater/leachate removed on a weekly basis from various units during the quarter;
- (2) a discussion of any problems encountered while conducting corrective action at each parcel during the quarter; and
- (3) A summary of the activities anticipated to be carried out during the next quarter.

c. The "MRSA Corrective Measures Quarterly Report" for each quarter, required by the Illinois EPA's letter dated January 12, 2006 and the "90-Day SWMU 7 Status Reports" shall be incorporated into each quarterly Corrective Action Progress Report and are no longer required to be submitted as separate reports.

d. The quarterly groundwater monitoring reports required by Attachment A of the December 15, 2006 letter (Log Nos. B-145; and 2001-075) for the



landfill identified as the PNWL shall be incorporated into each quarterly Corrective Action Progress Report; and the PNWL annual groundwater monitoring reports required by the December 15, 2006 letter shall be incorporated into the Quarterly Corrective Action Progress Report. Separate reports are no longer required to be submitted.

- e. CDF landfill reporting requirements in Illinois EPA letters dated September 13, 2002 (Log No. B-145-CA-23), and as modified in Illinois EPA letters dated November 18, 2008 (B-145-CA-77), and September 3, 2009 (Log No. B-145-CA-71), shall be incorporated into the Quarterly and Annual Corrective Action Progress Reports in accordance with the schedule in Condition V.J.1.a (August 1 and March 1 submittal dates for the CDF). This includes the CDF Second and Fourth Quarter Semi-Annual Groundwater Monitoring Reports and the "Annual CDF Operations, Maintenance and Monitoring Report" (referred to as Annual CDF OM&M/Liquid Level Report by BP Products North America Inc.). Separate reports are no longer required to be submitted.
  - f. The LOD Area reporting required as part of the GMZ approval in the April 4, 1994 Illinois EPA letter (Log No. B-145) and re-evaluation of the GMZ approval letter dated April 24, 2002 (Log No. B-145-CA-31) shall be incorporated into the Quarterly Corrective Action Progress Reports. Separate reports are no longer required to be submitted.
  - g. An Annual Corrective Action Progress Report must be submitted to Illinois EPA by March 1 of each year which summarizes corrective action program activities completed at the facility during the previous calendar year (i.e., the previous January 1 to December 31). Among other things, this report must contain a compilation/summary of the information in the quarterly reports for the year, what was completed during the year, and what must still be done in the next year and in the following years. The following shall be incorporated into the Annual Corrective Action Progress Report and separate reports are no longer required: The corrective action progress report for the fourth quarter (October – December of every year).
2. Final reports must be submitted to Illinois EPA for review and approval when corrective action is complete for a given parcel. Such reports must be certified by a qualified professional engineer and a person of authority from the Permittee. This certification must meet the requirements of 35 IAC 702.126. These reports must contain be detailed in nature and contain sufficient information which (1) describes in detail all investigation/remediation efforts carried out in the parcel; and (2) the efforts were carried out in accordance with the approved plan and this permit.

## SECTION VI: SPECIAL CONDITIONS

### A. REQUIRED FORMS

- ii. The permittee shall provide a completed Illinois EPA permit application form LPC-PA23 with all additional information, permit modifications, and permit applications that are submitted to the Illinois EPA Bureau of Land.
- iii. The permittee shall submit current 39(i) certifications and supporting documentation with all applications for a permit.

Note: If the applicant wants additional staff to be able to send in future modifications, certifications, etc. those individuals should also send in an individual 39i certification form.

### B. REPOSITORY

1. The permittee shall maintain a repository at the Wood River Public Library, located at 326 E. Ferguson Avenue, Wood River, Illinois. The following information shall be sent to the repository:
  - a. A copy of the approved RCRA Post-Closure Renewal Permit.
  - b. All permit applications and permit modification requests.
  - c. All Illinois EPA responses to modification requests made to the RCRA Post-Closure Permit (Log No. B-145R2).

### C. COMPLIANCE SCHEDULE

1. Cost Estimates: Within ninety (90) days of the effective date of this Permit,
  - a. The Permittee shall submit revised post-closure cost estimates and financial assurance to meet the required minimum of thirty (30) years post-closure care costs for the Pond 1 Landfill, as stated in Condition III.H. as a Class 1\* permit modification.
  - b. The Permittee shall include the corrective action cost estimates for Parcel J/ SMWU 5 - the costs associated with the post-closure care of the Permitted Non-Hazardous Waste Landfill.
  - c. The Permittee must provide an updated cost estimate for the completion of any corrective action required under this permit in order to provide financial assurance for the approved amount of that cost estimate within

90 days of the date of the effective date of this permit, as required in accordance with Title 35 Illinois Administrative Code (35 IAC) 724.201.

- d. All estimated costs must be updated annually beginning with Year 2024.
2. Survey Plat: Within ninety (90) days of the effective date of this Permit,
    - a. The Permittee shall file the certified survey plat and record of the type/location/quantity of material in the Pond 1 Landfill with the Illinois EPA, the County Recorder, and any local zoning authority or authority with jurisdiction over local land use.
    - b. The Permittee must provide to the Illinois EPA a copy of the certified survey plat (at least in a size of 11" X 17" drawing) that includes the documents that the survey plat was placed in; with the County Recorder's Office and the local zoning authority.
  3. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit revised page(s) as a Class 1\* modification for Illinois EPA review and approval, which revises Section C.8 of the approved permit application to identify the monitoring wells specific to each monitoring program (i.e., identify the wells which must be monitored for the PNWL Program) and their groundwater quality.
  4. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a modification to the Corrective Action Section (Section V) of the Permit, for Illinois EPA review and approval, which provides written notification to any applicable off-site property owner that a GMZ for the Riverfront facility encompasses their property. This documentation will serve to verify off-site property owners are aware of a GMZ being present on their property.
  5. Within one (1) year of the effective date of this Permit, the Permittee shall submit a proposed schedule for implementing closure activities for the East Surge Pond (ESP) as required by Condition II.F.1 as a Class 1\* modification for Illinois EPA review and approval. In accordance with Condition II.G.3, a revised cost estimate for conducting closure of the ESP must be submitted with the proposed schedule.
  6. Any proposed corrective actions to address leachate at the Pond 1 Landfill as a result of Pond 1 Landfill assessment as described in Sections III. E.3.4 and III. E.4.3 of the approved permit application must be submitted as a permit modification request in accordance with Condition III.G.1 for Illinois EPA's review and approval. The permittee must verify that automated alarm system is in place for leachate detection as required in Condition III.E.7.(c) of the Permit. In addition, as a part of the study, an Action Leakage Rate (ALR) is recommended to be determined for Pond 1 Landfill for corrective action purposed.

7. Within thirty (30) days of the date of this permit, the Permittee must submit a draft deed restriction regarding the Pond 1 Parcel with a Plat of Survey, which will be attached to the deed to the property as described in Condition II.B.6.(d) of this permit as a Class 1\* permit modification request. Once the draft deed restriction is approved by Illinois EPA, the deed restriction must be filed with the Madison County Recorder's office. A certified copy of the recorded deed restriction with a Plat of Survey must be submitted to Illinois EPA as a Class 1 permit modification request within thirty (30) days of the Illinois EPA's approval of the draft document.
8. Within ninety (90) days of the date of the permit, the Permittee must submit a document summarizing the next step for the corrective action and proposed schedule for addressing each Parcel/SWMU listed in Condition V.D.1 of this permit as a corrective action submittal.
9. Provide a summary in the next semi-annual groundwater monitoring report required by Section IV which discusses the results of the recent well integrity efforts performed site-wide at the Riverfront facility, and explain specific to wells G401 and G030 why the changes in well depths and/or screened interval occurred since the previous survey. If reasons are unknown, submit a workplan as a Class 1\* permit modification within ninety (90) days to investigate the well integrity.

## SECTION VII: STANDARD CONDITIONS

### GENERAL REQUIREMENTS

1. **EFFECT OF PERMIT.** The existence of a RCRA permit shall not constitute a defense to a violation of the Environmental Protection Act or Subtitle G, except for development, modification or operation without a permit. Issuance of this permit does not convey property rights or any exclusive privilege. Issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or infringement of state or local law or regulations. (Title 35 Illinois Administrative Code (35 IAC) 702.181)
2. **PERMIT ACTIONS.** This permit may be modified, reissued or revoked for cause as specified in 35 IAC 703.270 through 703.273 and Section 702.186. The filing of a request by the Permittee for a permit modification or reissuance, or a notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition. (35 IAC 702.146)
3. **SEVERABILITY.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. (35 IAC 705.202)
4. **PERMIT CONDITION CONFLICT.** In case of conflict between a special permit condition and a standard condition, the special condition will prevail. (35 IAC 702.160)
5. **DUTY TO COMPLY.** The Permittee shall comply with all conditions of this permit except for the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the Environmental Protection Act and is grounds for enforcement action; permit revocation or modification; or for denial of a permit renewal application. (35 IAC 702.141 and 703.242)
6. **DUTY TO REAPPLY.** If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must apply for a new permit at least 180 days before this permit expires, unless permission for a later date has been granted by the Illinois EPA. (35 IAC 702.142 and 703.125)
7. **PERMIT EXPIRATION.** This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 35 IAC 703.181-703.209) and through no fault of the Permittee the Illinois EPA has not issued a new permit as set forth in 35 IAC 702.125.



8. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (35 IAC 702.143)
9. DUTY TO MITIGATE. In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. (35 IAC 702.144)
10. PROPER OPERATION AND MAINTENANCE. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory, and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. (35 IAC 702.145)
11. DUTY TO PROVIDE INFORMATION. The Permittee shall furnish to the Illinois EPA, within a reasonable time, any relevant information which the Illinois EPA may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Illinois EPA, upon request, copies of records required to be kept by this permit. (35 IAC 702.148)
12. INSPECTION AND ENTRY. The Permittee shall allow an authorized representative of the Illinois EPA, upon the presentation of credentials and other documents as may be required by law, to:
  - a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location. (35 IAC 702.149)

13. MONITORING AND RECORDS. (35 IAC 702.150)
- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix A of 35 IAC 721. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, latest versions; Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, latest versions; or an equivalent method as specified in the approved Waste Analysis Plan.
  - b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report or application. These periods may be extended by request of the Illinois EPA at any time. The permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.
  - c. Records of monitoring information shall include:
    - i. The date(s), exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical technique(s) or method(s) used; and
    - vi. The result(s) of such analyses. (35 IAC 702.150)
14. REPORTING PLANNED CHANGES. The permittee shall give written notice to the Illinois EPA at least 15 days prior to any planned physical alterations or additions to the permitted facility. In general, proposed changes to the facility will need to be submitted to the Illinois EPA as permit modification request that complies with the requirements of 35 IAC 703.280. (35 IACs 702.152(a))
15. CONSTRUCTION CERTIFICATION. For a new hazardous waste management facility, the permittee shall not commence treatment, storage or disposal of hazardous waste; and for a facility being modified the permittee shall not treat, store or dispose of hazardous waste in the modified portion of the facility, until:

- a. The permittee has submitted to the Illinois EPA by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
  - b.
    - i. The Illinois EPA has inspected the modified or newly constructed facility and finds it is in compliance with the condition of the permit; or
    - ii. If, within 15 days of the date of submission of the letter in paragraph (a), the permittee has not received notice from the Illinois EPA of its intent to inspect, prior inspection is waived and the permittee may commence treatment, storage or disposal of hazardous waste. (35 IAC 703.247)
16. **ANTICIPATED NONCOMPLIANCE.** The Permittee shall give advanced written notice to the Illinois EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements, regulations, or the Act. (35 IAC 702.152(b))
17. **TRANSFER OF PERMITS.** This permit may not be transferred by the permittee to a new owner or operator unless the permit has been modified or reissued pursuant to 35 IAC 703.260(b) or 703.272. Changes in the ownership or operational control of a facility must be made as a Class 1 modification with the prior written approval of the Illinois EPA. The new owner or operator shall submit a revised permit application no later than 90 days prior to the scheduled change. (35 IAC 703.260)
18. **MONITORING REPORTS.** Monitoring results shall be reported at the intervals specified in the permit. (35 IAC 702.152(d))
19. **COMPLIANCE SCHEDULES.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than specified in 35 IAC 702.162. (35 IAC 702.152(e))
20. **TWENTY-FOUR HOUR REPORTING.**
- a. The Permittee shall report to the Illinois EPA any noncompliance with the permit which may endanger health or the environment. Any such information shall be reported verbally within 24 hours from the time the Permittee becomes aware of the following circumstances. This report shall include the following:
    - i. Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies.
    - ii. Information concerning the release or discharge of any hazardous waste or of a fire or explosion at the hazardous waste management facility, which could threaten the environment or human health outside the facility.

- b. The description of the occurrence and its cause shall include:
- i. Name, address, and telephone number of the owner or operator;
  - ii. Name, address, and telephone number of the facility;
  - iii. Date, time, and type of incident;
  - iv. Name and quantity of material(s) involved;
  - v. The extent of injuries, if any;
  - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where applicable; and
  - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Illinois EPA may waive the five day written notice requirement in favor of a written report within fifteen days. (35 IAC 702.152(f) and 703.245(b))
21. **OTHER NONCOMPLIANCE.** The Permittee shall report all instances of noncompliance not otherwise required to be reported under Standard Conditions 18, 19 and 20, at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Standard Condition 20. (35 IAC 702.152(g))
22. **OTHER INFORMATION.** Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Illinois EPA, the Permittee shall promptly submit such facts or information. (35 IAC 702.152(h))
23. **REPORTING REQUIREMENTS.** The following reports required by 35 IAC 724 shall be submitted in addition to those required by 35 IAC 702.152 (reporting requirements):
- a. **Manifest discrepancy report:** if a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days after receiving the waste, the permittee must immediately submit to the Illinois EPA a

letter describing the discrepancy and attempts to reconcile it and a copy of the manifest or shipping paper at issue. (35 IAC 724.172(b))

- b. Unmanifested waste report: The permittee must submit to the Illinois EPA within 15 days of receipt of unmanifested waste an unmanifested waste report on EPA form 8700-13B. (35 IAC 724.176)
- c. Annual report: an annual report must be submitted covering facility activities during the previous calendar year. (35 IAC 724.175)

24. **SUBMITTAL OF REPORTS OR OTHER INFORMATION.** All written reports or other written information required to be submitted by the terms of this permit shall be sent to:

Illinois Environmental Protection Illinois EPA  
Bureau of Land  
Permit Section - #33  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

25. **SIGNATORY REQUIREMENT.** All permit applications, reports or information submitted to the Illinois EPA shall be signed and certified as required by 35 IAC 702.126. (35 IAC 702.151)

26. **CONFIDENTIAL INFORMATION.** Any claim of confidentiality must be asserted in accordance with 35 IAC 702.103 and 35 IAC 161.

27. **DOCUMENTS TO BE MAINTAINED AT FACILITY SITE.** The Permittee shall maintain at the facility, until closure is complete, the following documents and amendments, revisions and modifications to these documents:

- a. Waste analysis plan as required by 35 IAC 724.113(b) and this permit.
- b. Personnel training documents and records as required by 35 IAC 724.116(d) and this permit.
- c. Contingency plan as required by 35 IAC 724.153(a) and this permit.
- d. Closure plan as required by 35 IAC 724.212(a) and this permit.
- e. Cost estimate for facility closure as required by 35 IAC 724.242(d) and this permit.
- f. Operating record as required by 35 IAC 724.173 and this permit.
- g. Inspection schedules as required by 35 IAC 724.115(b) and this permit.



28. **WASTE MINIMIZATION.** The Permittee shall certify at least annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that one generates to the degree determined by the Permittee to be economically practicable, and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment, in accordance with 35 IAC 724.173(b)(9).

#### **GENERAL FACILITY STANDARDS**

29. **NOTICE OF WASTE FROM A FOREIGN SOURCE.** The permittee who has arranged to receive hazardous waste from a foreign source must notify the Illinois EPA in writing at least four weeks in advance of the date the waste is expected at the facility. (35 IAC 724.112(a))
30. **NOTICE OF WASTE FROM OFF-SITE.** The Permittee who receives hazardous waste from an off-site source (except where the Permittee is also the generator), must inform the generator in writing that the permittee has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the facility operating record. (35 IAC 724.112(b))
31. **GENERAL WASTE ANALYSIS.** The Permittee shall comply with the procedures described in the approved waste analysis plan. (35 IAC 724.113)
32. **SECURITY.** The Permittee shall comply with the security provisions of 35 IAC 724.114(b) and (c).
33. **GENERAL INSPECTION REQUIREMENTS.** The Permittee shall follow the approved inspection schedule. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 35 IAC 724.115(c). Records of inspections shall be kept as required by 35 IAC 724.115(d).
34. **PERSONNEL TRAINING.** The Permittee shall conduct personnel training as required by 35 IAC 724.116 and shall maintain training documents and records as required by 35 IAC 724.116(d) and (e).
35. **GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE.** The Permittee shall comply with the requirements of 35 IAC 724.117.
36. **CLOSURE REQUIREMENTS FOR ACCUMULATION AREAS.** The Permittee shall close containers storage areas, tanks, drip pads, or containment buildings used for the accumulation of on-site generated hazardous waste in accordance with the requirements identified at 35 IAC 722.117(a)(8). This requirement is applicable to storage areas used on or after this section was amended at 44 Ill. Reg. 15263, effective September 3, 2020.

### **PREPAREDNESS AND PREVENTION**

37. **DESIGN AND OPERATION OF FACILITY.** The Permittee shall maintain and operate the facility to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. (35 IAC 724.131)
38. **REQUIRED EQUIPMENT.** The Permittee shall equip the facility with the equipment set forth in the approved contingency plan, as required by 35 IAC 724.132.
39. **TESTING AND MAINTENANCE OF EQUIPMENT.** The Permittee shall test and maintain the equipment specified in the contingency plan and this permit as necessary to assure its proper operation in time of emergency. Such testing and maintenance activities are set forth in the approved inspection schedule. (35 IAC 724.133)
40. **ACCESS TO COMMUNICATIONS OR ALARM SYSTEM.** The Permittee shall maintain access to the communications or alarm system as required by 35 IAC 724.134.
41. **REQUIRED AISLE SPACE.** The Permittee shall maintain aisle space as required by 35 IAC 724.135 and National Fire Protection Association (NFPA) requirements.
42. **ARRANGEMENTS WITH STATE AND LOCAL AUTHORITIES AND EMERGENCY RESPONSE CONTRACTORS.** The Permittee shall attempt to make emergency response arrangements with State and local authorities and agreements with State emergency response teams and emergency response contractors and equipment suppliers as required by 35 IAC 724.137. If State or local officials refuse to enter in preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

### **CONTINGENCY PLAN**

43. **IMPLEMENTATION OF PLAN.** The provisions of the contingency plan must be carried out by the Permittee immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment (35 IAC 724.151(b)). At a minimum, this includes any fire or explosion which occurs in an area where hazardous waste is being managed (treated, stored or disposed) (35 IAC 703.241). Within 15 days of any incident that requires implementation of the contingency plan, the owner or operator must submit a written report to the Illinois EPA as required by 35 IAC 724.156(j).
44. **COPIES OF PLAN.** A copy of the contingency plan, including any revisions, must be maintained at the facility and submitted to all local police and fire departments, hospitals and state and local emergency response teams as required by 35 IAC 724.153.
45. **AMENDMENTS TO PLAN.** The Permittee shall review and immediately amend, if necessary, the contingency plan, as required by 35 IAC 724.154.

46. EMERGENCY COORDINATOR. A trained emergency coordinator shall be available at all times in case of an emergency as required by 35 IAC 724.155 and 724.156.

#### **MANIFEST SYSTEM RECORD KEEPING AND REPORTING**

47. MANIFEST SYSTEM. The Permittee shall comply with the manifest requirements of 35 IAC 724.171, 724.172 and 724.176.
48. OPERATING RECORD. The Permittee shall maintain a written operating record at the facility in accordance with 35 IAC 724.173.
49. ANNUAL REPORT. The Permittee shall prepare and submit an annual report to the Illinois EPA prior to March 1st of each year in accordance with the requirements of 35 IAC 724.175.

#### **CLOSURE**

50. PERFORMANCE STANDARD. The Permittee shall close the facility as required by 35 IAC 724.211 and in accordance with the approved closure plan.
51. AMENDMENT TO CLOSURE PLAN. The Permittee must amend the closure plan whenever there is a change in the expected year of closure or whenever a change in the facility operation plans or facility design affects the closure plan pursuant to 35 IAC 724.212(c).
52. NOTIFICATION OF CLOSURE. The Permittee shall notify the Illinois EPA at least 60 days prior to the date it expects to begin closure. (35 IAC 724.212(d))
53. TIME ALLOWED FOR CLOSURE. After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste and complete closure activities in accordance with the schedule(s) specified in the closure plan. (35 IAC 724.213)
54. DISPOSAL AND/OR DECONTAMINATION OF EQUIPMENT. When closure is completed, the Permittee shall decontaminate and/or dispose of all facility equipment and structures as required by the approved closure (35 IAC 724.214) plan.
55. CERTIFICATION OF CLOSURE. When closure is completed, the Permittee shall submit certification to the Illinois EPA in accordance with 35 IAC 724.215 that the facility has been closed as specified by the approved closure plans.
56. COST ESTIMATE FOR FACILITY CLOSURE. The Permittee's original closure cost estimate, prepared in accordance with 35 IAC 724.242, must be:

- a. Adjusted for inflation 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 724.243. However, if the owner/operator is using the financial test or corporate guarantee, it must be updated for inflation within 30 days after close of the firm's fiscal year, and before the submission of updated information to the Illinois EPA as specified in Section 724.243(f).
  - b. Revised no later than 30 days after the Illinois EPA has approved a request to modify the closure plan, if the change in the closure plan increases the cost of closure.
  - c. Kept on record at the facility and updated. (35 IAC 724.242)
  - d. Made immediately available to Illinois EPA personnel upon Illinois EPA request.
  - e. Maintained at the value approved by Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.
57. **FINANCIAL ASSURANCE FOR FACILITY CLOSURE.** The Permittee shall demonstrate compliance with 35 IAC 724.243 by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by the previous Permit Condition. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.243.
- Financial assurance documents submitted to Illinois EPA should be directed to the following address:
- Illinois Environmental Protection Illinois EPA  
Bureau of Land #24  
Financial Assurance Program  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276
58. **LIABILITY REQUIREMENTS.** The Permittee shall demonstrate continuous compliance with the requirements of 35 IAC 724.247 and the documentation requirements of 35 IAC 724.251.
59. **INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS.** The Permittee shall comply with 35 IAC 724.248 whenever necessary.

### LAND DISPOSAL RESTRICTIONS

60. DISPOSAL PROHIBITION. Any waste identified in 35 IAC Part 728, Subpart C, or any mixture of such a waste with nonrestricted wastes, is prohibited from land disposal unless it meets the standards of 35 IAC Part 728, Subpart D, or unless it meets the requirements for exemptions under Subpart C. "Land disposal" means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, or vault intended for disposal.
61. DILUTION PROHIBITION. The Permittee shall not in any way dilute a restricted waste or residual from treatment of a restricted waste as a substitute for adequate treatment in order to achieve compliance with 35 IAC 728, Subpart D (35 IAC 728.103).
62. WASTE ANALYSIS.
  - a. The Permittee must test his waste or extract developed, using the test method identified in Appendix I of 40 CFR Part 268, or use knowledge of the waste, to determine if the waste is restricted from land disposal.
  - b. For any waste with treatment standards expressed as concentrations in the waste extract, the Permittee must test the treatment residues or an extract of such residues developed using the test method described in Appendix I of 40 CFR Part 268, to assure that the treatment residues or extract meet the applicable treatment standard.
  - c. If the treatment residues do not meet the treatment standards, or if the Permittee ships any restricted wastes to a different facility, the Permittee shall comply with the requirements applicable to generators in 35 IAC 728.107 and 728.150(a)(1).
63. STORAGE RESTRICTIONS
  - a. The Permittee shall not store hazardous wastes restricted from land disposal under 35 IAC Part 728, Subpart C unless such wastes are stored only in containers or tanks, or containment buildings on-site, and are stored solely for the purpose of the accumulation of such quantities as is necessary to facilitate proper recovery, treatment, or disposal, and: (1) each container is clearly marked to identify its contents and the date each period of accumulation begins; (2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, as required by 35 IAC 728.150.
  - b. The Permittee must comply with the operating record requirements of 35 IAC 724.173.



64. NEW DETERMINATIONS OF PROHIBITED WASTES

Wastes which are prohibited from land disposal under 35 IAC Part 728, Subpart C, or for which treatment standards have been established under 35 IAC 728, Subpart D, subsequent to the date of issuance of this permit, shall be subject to the conditions number 59 through 62 above.

**POST-CLOSURE**

65. CARE AND USE OF PROPERTY. The Permittee shall provide post-closure care for the facility as required by 35 IAC 724.217 and in accordance with the approved post-closure plan.

66. AMENDMENT TO POST-CLOSURE PLAN. The Permittee must amend the post-closure plan whenever a change in the facility operation plans or facility design affects the post-closure plan or when an unexpected event has occurred which has affected the post-closure plan pursuant to 35 IAC 724.218(d).

67. COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 IAC 724.244, must be:

- a. Adjusted for inflation either 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year. This permit condition is applicable throughout the entirety of the post-closure care period.
- b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of the post-closure plan.
- c. Kept on record at the facility and updated. (35 IAC 724.244).
- d. Maintained at the value approved by Illinois EPA with annual adjustment for inflation during the post-closure care period and cannot be decreased unless approved by the Illinois EPA in a permit modification.

68. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 IAC 724.245 and 703.241(a)(2) by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by the Permit Condition 67. This financial assurance shall be maintained at such value throughout the post-closure care period and shall be adjusted accordingly pursuant to Permit Condition 67. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.245.

Financial assurance documents submitted to Illinois EPA should be directed to the following address:

Illinois Environmental Protection Illinois EPA  
Bureau of Land #24  
Financial Assurance Program  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

69. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS. The Permittee shall comply with 35 IAC 724.248 whenever necessary.

**SECTION VIII: REPORTING AND NOTIFICATION REQUIREMENTS**

The reporting and notification requirements of each section of the RCRA permit are summarized below. This summary table is provided to “highlight” the various reporting and notification requirements of this permit but is not meant to supersede the requirements of the various sections of this permit.

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
II.B.2	Notify Illinois EPA if the wastewater/ leachate sent to ESP is found hazardous	Immediately
II.D	Notify Illinois EPA of unknown level drop or leaking dike	Within 7 days after problem is detected
II.F.1	Submit to the Illinois EPA of a proposed schedule for the commencement of closure activities to close the ESP	Within 1 year of the effective date of this permit.
II.F.2	Notify Illinois EPA closure of ESP begins and submit a sampling and analysis plan.	180 days prior to date of closure of ESP begins
II.F.5	Submit Certification of Closure	Within 60-day of completion of closure
III.F.3 -6	Submit to the Illinois EPA the Leachate Data Quarterly Monitoring Report; and additional data as per the condition	May 1; August 1; Nov 1; and Feb 1 of each year
III.F.7	Submit Class 1* Modification Request when previously undetected parameter in leachate is detected.	Within 30 days of leachate analysis.
III.G.2	Request permit modification to remove the liner or hazardous wastes	Prior to removing the liner or wastes
III.G.4.	Certify to the Illinois EPA that post-closure was performed in accordance with the approved post-closure plan	Within 60 days of the completion of the post-closure care period
IV.C.4	Notify Illinois EPA if any of the wells identified in Condition IV.C.1 and IV.C.2 are damaged, or the structural integrity has been compromised	Within 30 days of the date the damage is detected

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
IV.C.6	Provide Illinois EPA boring logs, construction diagrams, and data sheets from new or replacement wells	Within 30 days of the date installation is complete
IV.I.2	Groundwater monitoring data required each quarter, and additional data required in Conditions IV.E., IV.F, and IV.H.	Semi-annually
IV.I.3	Collect quarterly groundwater surface elevation data	Semi-annually
IV.I.4	Quarterly groundwater withdrawal rates	Semi-annually
IV.I.5	Gradient control measurements.	Semi-annually
IV.I.6	Statistical evaluations, as required by Condition IV.H	Every 5-years in GMZ Evaluation
IV.I.7	Groundwater flow rate and direction in the uppermost aquifer.	Semi-annually
IV.I.8	Collect groundwater samples per Condition IV.E.8 and depict the extent of dissolved contamination to define the extent of contamination.	Semi-annually
IV.I.9	The surveyed elevation of the top of well casing.	Every 5 years.
IV.I.10	Elevation of the bottom of each monitoring well.	Annually during the second quarter sampling event.
IV.I.11	Electronic Reporting	Semi-annually
V.F.3	Submit annual Cost Estimate for Corrective Action	By January 30 each year
V.G.1	Notify Illinois EPA of Newly Identified SWMU/AOC	Within 30-day of discovery
V.G.3	Submit to the Illinois EPA a SWMU Assessment Plan	Within 90 days of Illinois EPA's request
V.H.1	Notify Illinois EPA of a new releases from a SWMU	Within 30 days of such discovery

<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
VII.11	Information requested by Illinois EPA and copies of records required to be kept by this permit.	Reasonable time.
VII.14	Notify Illinois EPA of planned physical alterations or additions	At least 15 days prior to planned change
VII.16	Notify Illinois EPA of changes which may result in permit noncompliance	Advanced written notice to the Illinois EPA
VII.17	Application for permit modification indicating permit is to be transferred.	No later than 90 days prior to scheduled change in ownership
VII.19	Submission of any information required in a compliance schedule.	As per Section VI.C of the renewal permit
VII.20	Report to Illinois EPA any non-compliance which may endanger health or environment	
	- via telephone	Within 24 hours after discovery
	- in writing	Within 5 days after discovery
VII.21	Report all other instances of noncompliance	March 1 of each year along with Annual Report
VII.29	Notify Illinois EPA in writing of expected receipt of hazardous waste from foreign source	At least 4 weeks prior to receipt of waste.
VII.43	Implementation of Contingency Plan.	Immediately upon incident
	Notify appropriate state and local agencies with designated response roles.	Within 15 days of incident
	Notify appropriate local officials.	Immediately, if emergency coordinator's assessment indicates evacuation of local area is advisable.
	Notify the Illinois EPA via telephone if emergency coordinator determines there has been a release, fire or explosion which could threaten human health or the environment, outside the facility	Immediately after determination made



<u>Condition</u>	<u>Action</u>	<u>Due Date</u>
	Report to Illinois EPA details regarding incident which required implementation of contingency plan	Within 15 days after event
VII.49	Submit annual report required by 35 IAC 724.175.	March 1 of each year
VII.51	Application for permit modification amending closure plan.	Whenever there is a change that affects the closure plan
VII.52	Notify Illinois EPA of intention/ expectation of closure	At least 60 days prior to beginning closure
VII.56.a and VII.67.a	Adjust closure and post-closure cost estimates for inflation	Within 60 days before anniversary date, or within 30 days after close of the firm's fiscal year
VII.56.b and VII.67.b	Revision of closure and post-closure cost estimates	Withing 30 days of the close of the company's fiscal year
VII.59 and VII.69	Notify Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings.	Within 10 days after commencement of proceeding.



**ATTACHMENT A**

**IDENTIFICATION OF APPROVED PERMIT APPLICATION**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT A  
IDENTIFICATION OF APPROVED PERMIT APPLICATION**

1. RCRA Post-Closure Draft Renewal Application dated May 17, 2018.
2. "RCRA Part B Permit Renewal Application" dated August 3, 2018 (completely replaced May 2018 draft application).
3. "Response to Illinois EPA Comments dated July 19, 2019" dated September 3, 2019.
4. "Response to Illinois EPA Comments dated May 5, 2020" dated June 19, 2020.
5. Additional Information, dated April 8, 2021.
6. Additional Information for B-145R2- Riverfront Property Renewal Application, dated June 22, 2021.
7. Supplemental Pond 1 Landfill Information to Section E, dated November 24, 2021.
8. Additional Information for B-145R2- Replacement Page, Cone of Depression (COD) Well G669/HPW61 Repairs, dated May 10, 2022.
9. Additional Information for B-145R2- Replacement Page, for Section B and Section C, dated April 12, 2023.

**ATTACHMENT B**

**LOCATION MAP & DRAWING OF PERMITTED UNITS**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



Figure B-1: Site Location map



Figure B-2: Pond 1 Landfill

Figure E-2  
Pond 1 Landfill Map  
BP Riverfront Property  
Wood River, IL

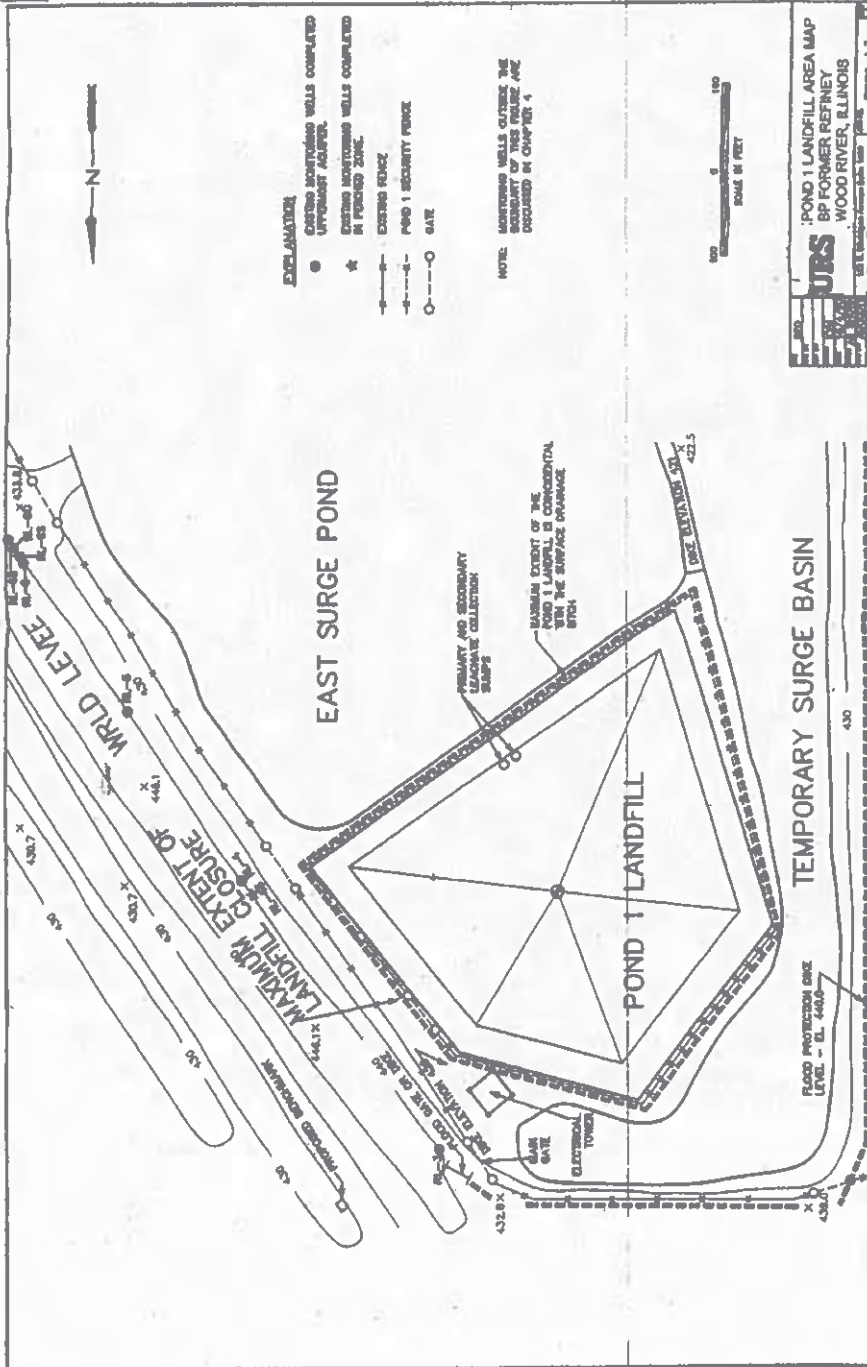


Figure B-3: East Surge Pond



**ATTACHMENT C**

**GROUNDWATER MONITORING ATTACHMENTS (Section IV)**

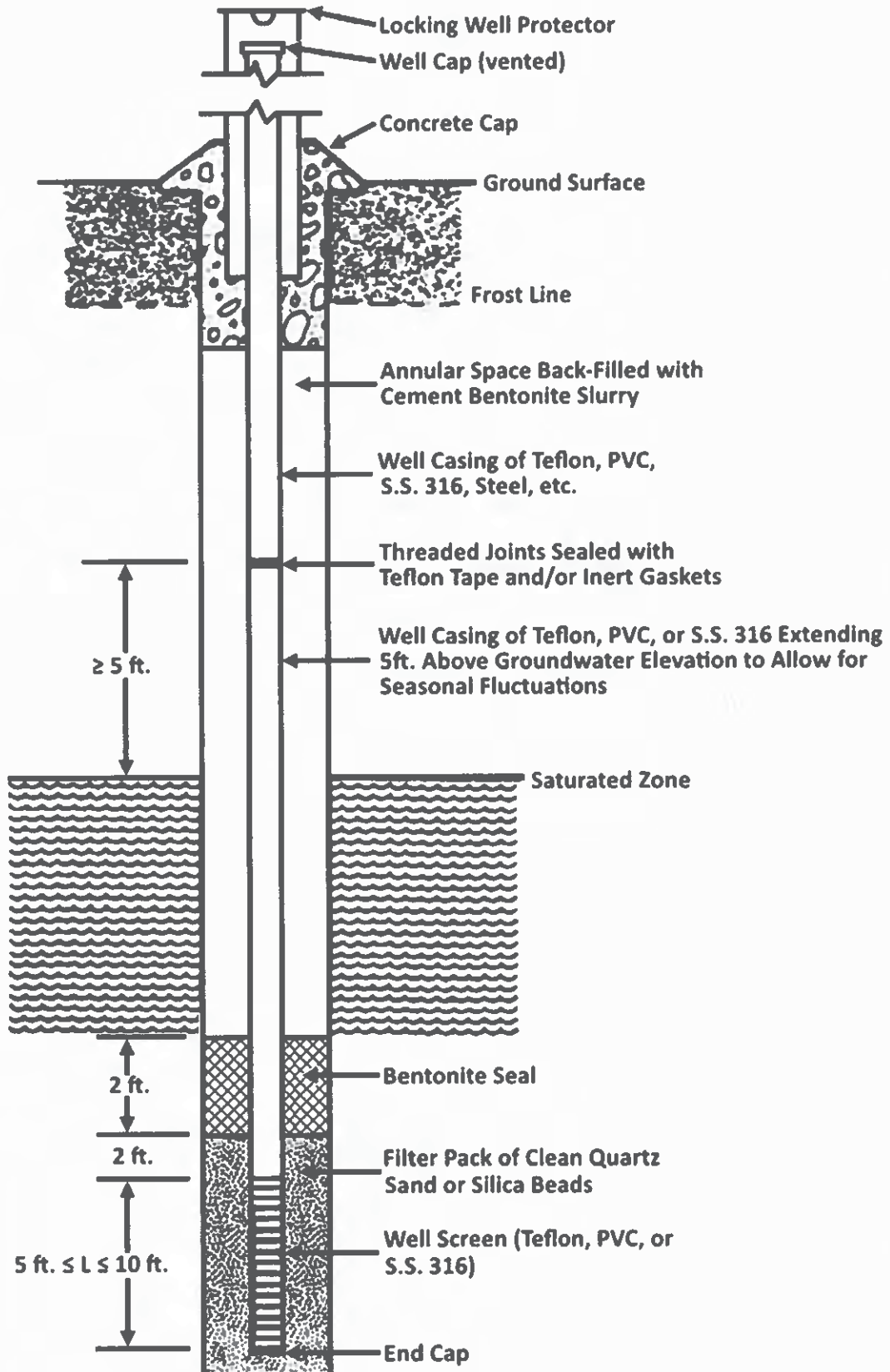
**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



# Monitoring Well Diagram





**ILLINOIS EPA MONITOR WELL PLUGGING AND ABANDONMENT PROCEDURES**

Well Construction		Plugging Procedure
I. Unconsolidated Sediment Wells	I-A ...if backfilled with cement grout above bentonite seal and/or sandpack:	<ol style="list-style-type: none"> <li>1. Cut casing off at desired depth.</li> <li>2. Mix neat cement slurry (5 gal. water per 94 lb. bag cement).</li> <li>3. Insert tremi pipe (1" i.d. pvc) into well and extend to bottom.</li> <li>4. Slowly pump slurry under low pressure through tremi pipe.</li> <li>5. Slowly withdraw tremi pipe - making sure bottom of pipe remains below pure slurry.</li> <li>6. Continue slow pumping until all formation water and the watery slurry mix is displaced from top of casing.</li> </ol>
	I-B ...if backfilled with soft sediments (cuttings) above bentonite seal and/or sandpack:	<ol style="list-style-type: none"> <li>1. Knock out and remove thin surface concrete plug, if present.</li> <li>2. Re-auger entire length of well.</li> <li>3. Remove well casing from re-augured borehole.</li> <li>4. Mix neat cement slurry (5 gal. water per 94 lb. bag cement).</li> <li>5. Insert tremi pipe (1" i.d. pvc) into augers and extend to bottom.</li> <li>6. Slowly pump slurry under low pressure through tremi pipe.</li> <li>7. Continue slow pumping until all formation water and the water slurry mix is displaced from top of casing.</li> <li>8. Slowly withdraw tremi pipe - making sure bottom of pipe remains below pure slurry.</li> <li>9. Pull a flight of augers (5" if in unstable materials and hole collapse is likely or 10" if in competent material and collapse is unlikely).</li> <li>10. Top off cement slurry after each flight is removed.</li> </ol>
	I-C ...if monitor well construction is unknown:	<ol style="list-style-type: none"> <li>1. Follow procedures in I-A.</li> </ol>
	II. Bedrock Wells	I-A ...All bedrock monitor wells:





Site Number: \_\_\_\_\_

County: \_\_\_\_\_

Site Name: \_\_\_\_\_

Well #: \_\_\_\_\_

State \_\_\_\_\_

Plane Coordinate: X \_\_\_\_\_ Y \_\_\_\_\_ (or) Latitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Borehole #: \_\_\_\_\_

Surveyed by: \_\_\_\_\_

IL Registration #: \_\_\_\_\_

Drilling Contractor: \_\_\_\_\_

Driller: \_\_\_\_\_

Consulting Firm: \_\_\_\_\_

Geologist: \_\_\_\_\_

Drilling Method: \_\_\_\_\_

Drilling Fluid (Type): \_\_\_\_\_

Logged By: \_\_\_\_\_

Date Started: \_\_\_\_\_ Date Finished: \_\_\_\_\_

Report Form

Completed By: \_\_\_\_\_

Date: \_\_\_\_\_

**ANNULAR SPACE DETAILS**

Type of Surface Seal: \_\_\_\_\_

Type of Annular Sealant: \_\_\_\_\_

Installation Method: \_\_\_\_\_

Setting Time: \_\_\_\_\_

Type of Bentonite Seal – Granular, Pellet, Slurry  
(Choose One)

Installation Method: \_\_\_\_\_

Setting Time: \_\_\_\_\_

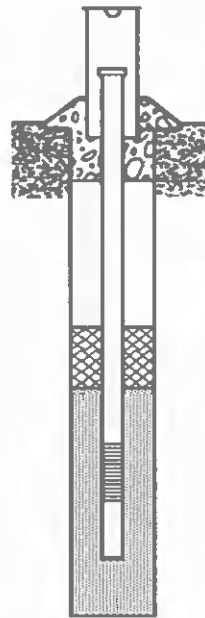
Type of Sand Pack: \_\_\_\_\_

Grain Size: \_\_\_\_\_ (Sieve Size)

Installation Method: \_\_\_\_\_

Type of Backfill Material: \_\_\_\_\_  
(if applicable)

Installation Method: \_\_\_\_\_



Elevations  
(MSL)\*

Depth (.01ft.)  
(BGS)

_____	_____	Top of Protective
_____	_____	Top of Riser Pipe
_____	_____	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level (After Completion)
_____	_____	Top of Seal
_____	_____	Top of Sand Pack
_____	_____	Top of Screen
_____	_____	Bottom of Screen
_____	_____	Bottom of Well
_____	_____	Bottom of Borehole

\* Referenced to a National Geodetic Datum

**WELL CONSTRUCTION MATERIAL**

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

**CASING MEASUREMENTS**

Diameter of Borehole (inches)	_____
ID of Riser Pipe (inches)	_____
Protective Casing Length (feet)	_____
Riser Pipe Length (feet)	_____
Bottom of Screen to End Cap (feet)	_____
Screen Length (1 <sup>st</sup> slot to last slot) (feet)	_____
Total Length of Casing (feet)	_____
Screen Slot Size**	_____

\*\*Hand-Slotted Well Screens are Unacceptable



# Illinois Environmental Protection Illinois EPA

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

**Note:** This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: \_\_\_\_\_

Facility Address: \_\_\_\_\_

Site ID #: \_\_\_\_\_ Fed ID #: \_\_\_\_\_

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

LPC-160 Forms

Groundwater

Leachate

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

Semi-Annual

Semi-Annual

Annual

Annual

Biennial

Biennial

Groundwater Data (without LPC-160 Forms)

\_\_\_ Quarterly – Enter: 1, 2, 3, or 4

Annual

Semi-Annual

Biennial

Well Construction Information

Well Construction Forms, Boring Logs and/or Abandonment Forms

Well Survey Data (e.g., Stick-up Elevation Data)

Notice of Statistically Significant Evidence of Groundwater Contamination (35 IAC 724.198)

Notice of Exceedance of Groundwater Concentration Limit (35 IAC 724.199(h))

Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater (35 IAC 724.199(i))

Gas Monitoring Reports

Other (identify)

**Formatting Requirements for the 01 Record of the Electronically Submitted Groundwater and Leachate Data**  
(the 01 Record portion of the LPC-160 is included for example purposes)

**ILLINOIS ENVIRONMENTAL PROTECTION ILLINOIS EPA  
DIVISION OF LAND POLLUTION CONTROL  
CHEMICAL ANALYSIS FORM**

Page 1 of \_\_\_\_

RECORD CODE							TRANS CODE
L	P	C	S	M	0	1	A
1					7		8

REPORT DUE DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
36 M D Y 41

FEDERAL ID NUMBER \_\_\_\_\_

SITE INVENTORY NUMBER	9 _____ 18	MONITOR POINT NUMBER	19 22
REGION _____	CO. _____	DATE COLLECTED	____/____/____ 23 M D Y 28
FACILITY NAME _____			

**FOR IEPA USE ONLY**

LAB \_\_\_\_\_  
29

DATE RECEIVED \_\_\_\_/\_\_\_\_/\_\_\_\_  
42 M D Y 47

BACKGROUND SAMPLE (X) \_\_\_\_\_ TIME COLLECTED \_\_\_\_\_ : \_\_\_\_\_  
54 (24 Hr. Clock) 55 H M 58

UNABLE TO COLLECT SAMPLE \_\_\_\_\_  
(see Instructions) 59

MONITOR POINT SAMPLED BY \_\_\_\_\_  
(see Instructions) 60 OTHER (SPECIFY) \_\_\_\_\_

SAMPLE FIELD FILTERED - INORGANICS (X) \_\_\_\_\_ ORGANICS (X) \_\_\_\_\_  
61 62

SAMPLE APPEARANCE \_\_\_\_\_  
63 \_\_\_\_\_  
102

COLLECTOR COMMENTS \_\_\_\_\_  
103 \_\_\_\_\_  
142

LAB COMMENTS \_\_\_\_\_  
150 \_\_\_\_\_  
199

II 532 1213  
LPC 160 12/2011

This Illinois EPA is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 ½, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$25,000 for each day the failure continues a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3<sup>rd</sup> Edition, September 1986 or equivalent methods approved by the Illinois EPA. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

\*Only Keypunch with Data in Column 35 or Columns 38-47



**KEY:**

<u>Spaces Numbered</u>	<u>Description</u>	<u>Format</u>
Spaces 1-7	Record Code	LPCSM01
Space 8	Trans Code	A
Spaces 9-18	Site ID	0000000000
Spaces 19-22	Mon Pt ID	G000
Spaces 23-28	Date Collected	000000
Space 29	Lab	
Spaces 30-35	Filler	
Spaces 36-41	Report Due Date	000000
Spaces 42-47	Date Received	000000
Spaces 48-53	Filler 2	
Space 54	Background Sample	
Spaces 55-58	Time Collected	0000
Space 59	Unable to Collect Sample	
Space 60	Monitoring Point Sampled By	
Space 61	Field Filtered – Inorganic	
Space 62	Field Filtered – Organic	
Spaces 63-102	Sample Appearance	
Spaces 103-142	Collector Comments	
Spaces 143-149	Filler 3	
Spaces 150-159	Lab Comments	





**ATTACHMENT D**

**CORRECTIVE ACTION ATTACHMENTS (Section V)**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**D-1. Summary of Corrective Action and Permit Related Submittals at BP/Riverfront**

The following is a list of the corrective action related submittals which have been made to date by BP and that the Illinois EPA approved them. Each submittal was assigned a log number by Illinois EPA and is presented in the order it was received.

Log No.	Topic of Submittal	Date Approved
-----	GMZ Proposal	4/6/94
CA-1	RFI Phase I Wkpln and PRS Corrective Action Plan (for 10 SWMUs and 1 PRS).	9/7/94
CA-1	RFI Phase I Report	12/2/96
CA-2	Conceptual Phase II/III Wkplan (for 10 SWMUs and 1 PRS)	8/6/97
CA-3	FCSA Characterization Report	10/7/97
CA-4	LOD Monitoring Program	1/14/98 (disapproved)
CA-5	Updated GMZ	1/14/98 (disapproved)
CA-6	Phase II Workplan for the CDF and MRSA.	8/7/98
CA-7	CDF Cover Evaluation Workplan	6/10/98
CA-8	CDF Well Evaluation Workplan	11/18/98
CA-9	FCSA Phase II workplan	Superseded by CA-15
CA-10	Updated GMZ	12/5/00 (disapproved)
CA-11	LOD Characterization Report	2/26/01 (disapproved)
CA-12	CDF Cover Evaluation Report	9/7/99
CA-13	CDF and MRSA Phase II/III report	8/17/00
CA-14	Workplan for Vegetative Cover Pilot Study at CDF.	6/15/99
CA-15	FCSA Phase II Workplan, Revision 1	Superseded by CA-20
CA-16	CDF Well Evaluation Report	11/28/00
CA-17	Tree Hydraulic Control Pilot Study Workplan -CDF	10/5/99
CA-18	CDF Slurry Wall Investigation Workplan	5/10/01
CA-19	Plan to Remove 36" and 72" Outfalls (FCSA)	8/2/00
CA-20	36" and 72" Outfall Removal Report (at FCSA); and Phase II/III RFI for FCSA	11/13/03
CA-21	Response to IEPA's CA-13 letter re: the CDF/ MRSA	Superseded by CA-26&27
CA-22	Response to Cond. 8 of IEPA's CA-16 letter re: CDF	6/4/01
CA-23	Proposed GW Program for CDF	Superseded by CA-29
CA-24	Phase II/III Workplan (for 10 SWMUs and 1 PRS).	8/9/01
CA-25	Initial CA725 Determination	2/11/02
CA-26	CMP Report for CDF	1/10/02
CA-27	Determination of Class II GW for MRSA	2/6/02
CA-28	CMP Report for MRSA	2/6/02
CA-29	GW Monitoring Program for CDF	9/13/02
CA-30	CA750 Determination	6/11/02
CA-31	Re-Evaluation of GMZ	4/24/02
CA-32	Parcel A workplan	9/5/02
CA-33	FCSA, Class II Determination	9/5/02
CA-34	FCSA RFI Phase II report	11/13/03



Log No.	Topic of Submittal	Date Approved
CA-35	Comments on IEPA's 2/11/02 CA725 approval letter (B-147-CA-25)	6/14/02
CA-36	CDF CMP Report, Addendum 1	6/14/02
CA-37	CCR/Ph II RFI Wkpln, Parcel B and SW Chan Tract	11/15/02
CA-38	Revised Schedule for completing CA	11/14/02
CA-39	Phase II RFI Work Plan -Hydrocarbon Pool (SWMU 7)	1/29/03
CA-40	MRSA Stage 1 Corrective Measures Report	6/4/03
CA-41	CM Design Report for the MRSA	4/28/03
CA-42	Revised Schedule for completing CA	Superseded by CA-48
CA-43	FCSA Trench Interim Measures Const. Report	11/13/03
CA-44	CDF Stage 1 CM Liquid Extraction System Installation	10/30/03
CA-45	CDF 2003 Phytoremediation Status Report	10/11/05
CA-46	Parcel A Investigation Report and Closure Plan	3/8/05
CA-47	Phase I CMP for FCSA	10/28/05
CA-48	Revised CA Schedule	12/30/04
CA-49	Interim Measures to Seal Joints of 84" Sewer at FCSA	4/12/05
CA-50	Phase II RFI Report for SWMU 7 (Hydrocarbon Pool)	1/11/06
CA-51	MRSA Corrective Action Completion Report (Sheet Pile)	1/12/06
CA-52	Extension request for submittal of Final Construction Report for MRSA Sheet Pile Wall/Interceptor Trench	12/16/04
CA-53	Response to IEPA Letter dated 12/15/04 regarding Permitted Non-hazardous Waste Landfill (PNWL).	4/27/05
CA-54	Revised CA Schedule (response to CA-48 letter)	9/21/05
CA-55	Document of recording of Ordinance & MOU for Parcel A	5/1/07
CA-56	Request to postpone replacement of G101 in FCSA.	11/20/06
CA-58	Plan to move forward and status of the FCSA	1/4/07
CA-59	Establishing Background Values for PNWL	8/1/06
CA-60	Submittal assigned this log number subsequently determined not to be associated with this corrective action program and was removed from the tracking system.	1/19/2023
CA-61	FCSA Underground Pipeline Inv Work Plan	Rec'd 3/17/07, Combined with CA-64
CA-62	Draft ELUC for Parcel A and documentation of removal of impacted soil from Barge Maintenance Area	5/1/07
CA-63	Parcel B Land Reuse Investigation Report & Closure Plan	Comments provided by IEPA on 1/24/07(soil) and 5/11/09(gw)
CA-64	Corrective Measures Study for SWMU 7	6/12/09
CA-65	Revised background values for PNWL	8/21/07
CA-66	Proposed GW monitoring locations for PNWL and well abandonment forms for G07S and G12S at PNWL	5/20/09
CA-67	Final Corrective Measures Plan for the CDF	8/1/07
CA-68	Re-Evaluation of GMZ	Rec'd 4/25/07
CA-69	Revised Appendix J and Figure 6-1 for Parcel B.	Rec'd 6/1/07
CA-70	Recorded ELUC for Parcel A	1/14/08
CA-71	Statistical Proposal for CDF	9/31/09

Log No.	Topic of Submittal	Date Approved
CA-72	White Paper – Vertical Parceling	Rec'd 7/2/07
CA-73	Improvements to the FCSA Interim Measures	Rec'd 8/24/07
CA-74	Demo that PNWL exceedances of background values are not due to significant change in gw quality	5/20/09
CA-75	Proposed BG Values for Well G11S at PNWL.	5/20/09
CA-76	Demo for GW Monitoring at PNWL.	5/20/09
CA-77	Final Design and Construction Work Plan for CDF	11/18/08
CA-78	GW Demonstration PNWL on exceedance of background not significant	5/20/09
CA-79	Groundwater Demonstration and PNWL.	5/20/09
R-CA-1	Demo that PNWL exceedances of background are not due to significant change in gw quality	5/20/09
R-CA-2	Parcel A Uppermost Aquifer GW Data Inventory within Butene Polymerization Waste Area	Rec'd 12/16/08
R-CA-3	Demo that PNWL exceedances of background are not due to significant change in gw quality	Rec'd 4/13/09
R-CA-4	Response to IEPA's 3/31/09 Vertical Parceling Letter.	Rec'd 6/01/09
R-CA-5	Construction Document Report - Final Corrective Measure-CDF	Rec'd 6/29/09
R-CA-6	Revised Background Values for PNWL	Rec'd 7/20/09
R-CA-7	Demo that PNWL exceedances are not due to significant changes in gw quality.	1/19/2010
R-CA-8	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	1/9/2010
R-CA-9	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-10	Response to 10/02/09 Letter regarding FCSA (see B-145-CA-73 above)	1/10/2011
R-CA-11	Proposal to Remove FPH and MNA program @ SWMU 7	3/16/2011
R-CA-12	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill. Also includes an Assessment Monitoring Plan	12/17/2012
R-CA-13	Site Wide Geology Report (note: the approval letter for this report is different than the 12/17/12 letter addressing several submittals associated with the PNWL and log numbers CA-9, 12, 16, 24, 26, 28 and 29)	12/17/2012
R-CA-14	Corrective Measure to address FPH plume at LOD Area (different letter than the 3/6/13 letter for CA-15 and CA-17)	3/6/2013
R-CA-15	Summary of GW Removal Activities in Parcel B/FCSA	3/6/2013 (disapproval)
R-CA-16	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-17	Revised Pages of Parcel B (FCSA) Land Reuse Investigation	3/6/2013 (Disapproval)
R-CA-18	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-19	CCR Workplan Uppermost Aquifer for Parcel A	6/15/16

Log No.	Topic of Submittal	Date Approved
R-CA-20	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-21	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill (4Q, 2010)	12/17/2012
R-CA-22	Proposed background value for PNWL	12/17/2012
R-CA-23	Annual Observation Monitoring Program, Evaluation of SSIs associated with the Riverfront GW Monitoring Program	7/24/2014
R-CA-24	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	12/17/2012
R-CA-25	Additional information regarding SWMU 7 submitted in response to IEPA's 3/6/11 letter (see R-CA-11 above)	03/26/14
R-CA-26	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 2Q 2011	12/17/2012
R-CA-27	Semi-Annual Observation Monitoring Program, Evaluation of SSIs associated with the Riverfront GW Monitoring Program	7/24/2014
R-CA-28	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 3Q 2011	12/17/2012
R-CA-29	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4Q 2011	12/17/2012
R-CA-30	Parcel G Current Report/Characterization Workplan	01/22/2013
R-CA-31	Background values for Wells G090 and G091 at PNWL	12/17/2012
R-CA-32	Semi-Annual Observation Monitoring Program, Evaluation of SSI's associated with the Riverfront GW monitoring program	7/24/2014
R-CA-33	Re-evaluation of GMZ	8/28/13
R-CA-34	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill--1Q12	03/26/14
R-CA-35	Request to incorporate Annual Liquid Level Report into Annual CDF OM&M Report	Rec'd 05/30/12
R-CA-36	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill 2Q 2012	03/26/14
R-CA-37	SSIs identified during 2Q 2012 for CA groundwater monitoring program	7/24/2014
R-CA-38	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 3Q 2012	03/26/14
R-CA-39	Ext request for responding to 12/17/12 letter re: PNWL (see R-CA-9, 12, 16, 18, 20, 21, 22, 24, 24, 26, 28, 29 and 31 above)	2/19/15
R-CA-40	Ext request for responding to 12/17/12 letter re: Sitewide Geology Report and ROST Study (see R-CA-13 above)	11/26/14

Log No.	Topic of Submittal	Date Approved
R-CA-41	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill Q4 2012	03/26/14
R-CA-42	Evaluation of SSIs for the CA groundwater monitoring program	7/24/2014
R-CA-43	Figures in response to 12/17/12 IEPA Letter re: PNWL	2/19/2015
R-CA-44	Response to 12/17/12 letter re: PNWL. Includes gw demo, revised b/g values and proposed assessment monitoring plan	2/19/2015
R-CA-45	Response to comments for the Sitewide Geology Report (see R-CA-13 and R-CA-40 above)	11/26/2014
R-CA-46	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	2/19/2015
R-CA-47	Response to 8/28/13 IEPA comments on Reevaluation of the GMZ (see R-CA-33 above)	7/15/2014
R-CA-48	Response to IEPA letters of March 6, 2013 (regarding the Light Oils Dock) and January 10, 2011 (regarding the Former Channel Seep Area)	5/20/2016
R-CA-49	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4 Q 2013	3/2/2015
R-CA-51	Demonstration that exceedances of BG values at the PNWL are not associated with the landfill	3/2/2015
R-CA-52	Response to Conditions 4-9 of 3/26/14 IEPA Letter RE: SWMU 7 (see R-CA-25 above)	3/31/2015
R-CA-53	Response to Condition 3&10 of 3/26/14 Letter Re: SWMU7 & MNA Status Update (see R-CA-25 above)	3/31/2015
R-CA-54	SWMU 7 Progress Report	3/31/2015
R-CA-55	Monitored Natural Attenuation Status Report @ SWMU 7	3/31/15
R-CA-56	Updated O&M Manual for MRSA	Rec'd 9/4/14
R-CA-57	Request to incorporate the annual liquid report into the Annual OM&M report for the CDF	Rec'd 9/22/14
R-CA-58	Supplemental gw sampling and gw demo report for the PNWL	3/2/2015
R-CA-59	Response to IEPA's 7/15/14 letter regarding the GMZ evaluation 1 (see R-CA-47 above)	1/19/2023
R-CA-60	2nd Progress Report re: LNAPL recovery efforts at SWMU 7	3/31/2015
R-CA-61	Response to Comments re: Site-Wide Geology Report	Appr'd (Amy Butler)
R-CA-62	SWMU 7 update regarding hydrocarbon gauging, hydrocarbon recovery activities and MNA monitoring	3/31/2015
R-CA-63	Progress Report for LNAPL Recovery Efforts at SWMU 7	8/26/2016
R-CA-64	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 1Q15	4/10/17
R-CA-65	Levee Access Status Update/Extension Request for Work at SWMU 7	8/26/2016
R-CA-66	Benzene Results for G090 and G116 @ PNWL	Rec'd 6/17/2015
R-CA-67	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-68	Evaluation of Potential Statistically Significant Increase	Rec'd 4/23/2015



Log No.	Topic of Submittal	Date Approved
R-CA-69	SWMU 7 Hydrocarbon Recovery 90-Day Update	8/26/2016
R-CA-70	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-71	90-day progress report for LNAPL recovery activities at SWMU 7	8/26/2016
R-CA-72	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill for 4Q2015	4/10/2017
R-CA-73	SWMU 7 Hydrocarbon Recovery Update	8/26/2016
R-CA-74	Request to Consolidate Required Reports	Rec'd 1/19/2016
R-CA-75	SWMU 7 Monitored Natural Attenuation Status Report	8/26/2016
R-CA-76	Demonstration that exceedances of BG values in certain gw monitoring wells at the PNWL are not associated with the landfill	4/10/2017
R-CA-77	Response to Condition 2 of IEPA 5/20/16 letter (see R-CA-48—pertains to the Light Oils Dock and Former Channel Seep Area)—requests extension for submitting proposed ELUC for Parcel B	Rec'd 8/16/2016
R-CA-78	Response to Conditions 3 and 4 of IEPA 5/20/16 letter (seeB-14 R-CA-48—pertains to the Light Oils Dock and FCSA)	Rec'd 6/19/2016
R-CA-79	Response to Conditions 2 thru 5 of IEPA 6/15/16 letter (seeB-145 R-CA-19 regarding Parcel A)	04/12/2019
R-CA-80	Parcel B ELUC	Rec'd 10/17/2016
R-CA-81	Response to IEPA's 8/26/16 letter regarding SWMU 7	Rec'd 10/25/2016
R-CA-82	Follow-Up to PNWL 7 Day Notification of BG Exceedances—3Q16	4/10/17
R-CA-83	30 Day Demonstration Report	4/10/17
R-CA-84	Repairs Made to Observation Well R110	Rec'd 3/21/2017
R-CA-85	1Q2017 PNWL 30-day Demonstration Report	Rec'd 7/14/2017
R-CA-86	4Q2016 Demonstration Report	Rec'd 4/24/2017
R-CA-87	30-Day Demonstration Report	Rec'd 8/14/2017
R-CA-88	30-Day Groundwater Demonstration Report	Rec'd 11/13/2017
R-CA-89	Parcel A Groundwater Report	04/12/2019
R-CA-90	Plan for Groundwater Monitoring Plan for Compliance Commitment Agreement	Rec'd 1/22/18
R-CA-91	4Q17 PNWL 30-day Demonstration Report	Rec'd 2/26/18
R-CA-92	4Q2017 demonstration report (SSIE)	08/06/19
R-CA-93	1Q2018 PNWL GW Demo Report	Rec'd 5/23/18
R-CA-94	GW Monitoring Optimization Report	Rec'd 6/29/18
R-CA-95	2Q2018 PNWL GW Demo Report	Rec'd 8/10/18
R-CA-96	PNWL 3Q18 10-Day Notification	04/19/2019
R-CA-97	Site-wide Arsenic/ Inorganic Demo Report	06/24/2019
R-CA-98	PNWL 4Q19 30-Day GW Demo Report	04/19/2019
R-CA-101	PNWL 1Q19 Demo Report	Rec'd 05/23/2019
R-CA-102	4th quarter demonstration report (Statistically Significant Increase Evaluation)	02/08/2020
R-CA-103	2Q19 PNWL 30-Day GW Demo Report	Rec'd 08/22/2019



Log No.	Topic of Submittal	Date Approved
R-CA-104	Site-wide update regarding site-wide inorganics and metals evaluation	Rec'd 11/06/2019
R-CA-105	2nd quarter demonstration report (Statistically Significant Increase Evaluation)	Rec'd 10/28/2019
R-CA-106	3Q19 PNWL 30-Day Groundwater Demonstration Report	Rec'd 11/25/2019
R-CA-107	Evaluation of SSI for semiannual groundwater monitoring	02/28/2020
R-CA-108	4Q19 PNWL 30-Day Groundwater Demonstration Report	Rec'd 02/25/2020
R-CA-109	Proposed modification to 2Q 20202 GW Gauging & Monitoring in response to COVID-19 pandemic	Rec'd 05/19/2020
R-CA-110	4th Quarter 2019 Demonstration Report	Rec'd 05/21/2020
R-CA-111	1 Q20 PNWL 30-Day Demonstration Report	Rec'd 05/26/2020
R-CA-112	3rd quarter 2020 PNWL30-day GW demonstration report	Rec'd 11/23/2020
R-CA-113	Site-wide inorganics and metal evaluation work plan update	Rec'd 12/01/2020
R-CA-114	GMZ Reevaluation Report	Rec'd 12/21/2020
R-CA-115	30-Day GW Demonstration Report. Permitted Non-Hazardous Waste Landfill - Third Quarter 2021	Rec'd 11/29/2021
R-CA-116	Results of the Site-Wide Inorganics & Metals Evaluation Report submitted on 12-20-18	Rec'd 1/26/2022
R-CA-117	Proposed upgrades to the Cone of Depression (COD) Well System, Additional information received on 5/2/2022, 8/1/2022	Rec'd 3/16/2022
R-CA-118	Monitoring Well Condition	Rec'd 3/21/2022
R-CA-119	1Q22 30-Day GW Demonstration Report for the permitted non-hazardous waste Landfill (PNWL)	Rec'd 05/26/2022
R-CA-120	Proposed alternative for riverfront sentinel wells and abandonment of current riverfront sentinel wells	Rec'd 7/18/2022
R-CA-121	Cone of Depression (COD) Well G669/HPW61 Repairs	Rec'd 05/09/2022
R-CA-122	Proposed sentinel well locations	Rec'd 2/22/2022
R-CA-123	4Q21 30-day demonstration report for the PNWL	Rec'd 2/25/2022
R-CA-125	Groundwater management zone hydraulic gradient control notification	Rec'd 3/16/2022
R-CA-126	2nd Semi-Annual 2021 Demonstration Report	Rec'd 5/3/2022
R-CA-127	Monitoring Well Condition Letter for G35D and G403	Rec'd 5/1/2022





**ATTACHMENT E**

**CORRECTIVE MEASURES PROGRAM REQUIREMENTS**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

## ATTACHMENT E

### CORRECTIVE MEASURES PROGRAM REQUIREMENTS

#### 1.0 INTRODUCTION/PURPOSE

RCRA Corrective Action projects typically consist of two phases: (1) A RCRA Facility Investigation (RFI) where an investigation is conducted at the solid waste management units (SWMU's) of concern at a facility; and (2) implementation of corrective measures needed to properly address any contaminant encountered during the RFI. This document has been developed to outline the procedures to be carried out to implement a corrective measure program.

#### 2.0 BRIEF OVERVIEW OF A RCRA CORRECTIVE MEASURES PROGRAM

Typically, at the end of an RFI, the concentration of contaminants present in the soil/sediments/groundwater/surface waters at a SWMU or other area of concern is compared to remediation objectives developed in accordance with Title 35 Illinois Administrative Code (35 IAC) 742. If the contaminant levels are above these objectives, then some type of corrective measure must be completed to achieve these objectives. In addition, certain corrective measures may need to be carried out to support the established remediation objectives (i.e., the establishment of engineered barriers and/or institutional controls). However, at a unit where waste or high levels of contamination remains, a decision may be made to close the unit as a landfill and then provide post-closure rather than removing the material and/or achieving remediation objectives developed in accordance with 35 IAC 742.

To allow for a logical and orderly progression in developing and implementing necessary corrective measures, the Corrective Measures Program (CMP) being carried out in accordance with this RCRA permit should be carried out in five phases which build on each other. It is not necessary for a corrective measures program at a given SWMU or other areas of concern to follow these five phases step-by-step; rather, phases can be combined and/or skipped, depending on the actual remedial measure selected. The overall CMP implemented must set forth a logical path for its implementation and allow for Illinois EPA oversight and approval throughout the entire process.

A brief discussion of the five phases of a CMP is as follows:

1. Phase I is the conceptual design of the selected corrective measure(s).
2. Phase II is the development of final design plans for the corrective measure, including installation and operation/maintenance plans.
3. Phase III is the actual construction/installation of the selected corrective measure.



4. Phase IV is the operation, maintenance, and monitoring of the selected corrective measure to ensure it is properly protecting human health and the environment.
5. Phase V is the final demonstration/verification that the implemented corrective measure achieved the approved remedial objectives.

Sections 3.0 through 7.0 which follow provide a more detailed discussion of each of these five phases. Section 8.0 has been developed to describe the corrective measures program which may be used in lieu of the afore-mentioned five phase procedure when soil removal is the selected remedy. It must be noted that work plans, reports, etc. must be developed to document how the Permittee carries out the required corrective measures program at each SWMU or other areas of concern. All such documents must be reviewed and approved by Illinois EPA prior to their implementation.

### **3.0 PHASE I OF THE CMP**

Phase I of the CMP includes selection of the corrective measure to be taken and developing a basis for completing the final design of the measure. This effort should be documented in a Conceptual Design Report which describes the proposed corrective measure for each SWMU and other areas of concern and provides a conceptual design for these measures. The main criteria for Illinois EPA review is whether the proposed corrective measures are able to achieve the final cleanup objectives previously established by the Permittee and the Illinois EPA and/or provide the necessary institutional controls to prevent the migration of contaminants from the SWMU of concern. Based upon a review of the Conceptual Design Report, the Illinois EPA may approve the corrective measures, require revisions to the proposed corrective measures, or require that a totally new corrective measures proposal be submitted to the Illinois EPA.

The Conceptual Design Report should contain the following sections:

1. Introduction/Purpose. This section should contain: (1) general background information regarding the project; (2) the purpose and goals of the submittal; and (3) the scope of the project.
2. Existing Site Conditions. This section should contain a summary of the investigative activities conducted for each of the units of concern. Investigation analytical results should be provided in tabular form, and maps depicting both the horizontal and vertical extent of contamination at the site should be provided.
3. Evaluation for Potential Future Migration. Based on the existing site conditions, a conceptual model of the site should be developed and presented in this section. The potential for additional future migration of contamination for each of the units of concern must then be evaluated, especially those units which have been determined to have released hazardous waste/hazardous constituents to the groundwater. It may be helpful to develop conceptual models for contaminant migration. Of special concern in this evaluation are (1) the physical properties of the contaminants (solubility, volatility,

mobility, etc.); and (2) existing site conditions (types of soil present, location of contamination, hydrology, geology, etc.).

4. **Corrective Measures Objectives.** This section should discuss the general objectives of the proposed corrective measure to be constructed/installed, and the ability of the proposed corrective measure to achieve the established remediation objectives (unless the selected corrective measure is closure as a landfill which will require proper establishment of a final cover and proper post-closure care of the closed unit).
5. **Identification of Options Available.** This section should contain a brief discussion of the various options available to achieve the corrective measures objectives for each unit. This discussion should identify: (1) a general overview of each option available, including how the option will achieve the stated objective; (2) the advantages associated with each option; (3) the disadvantages associated with each option and (4) an estimate of the cost associated with choosing each remedial option.
6. **Description of Selected Corrective Measure.** This section should contain a qualitative discussion of the corrective measure chosen, along with the rationale which was used to select this measure from all those identified initially. This discussion should include documentation that the selected corrective measure will be effective.
7. **Identification of Design Criteria.** This section should identify what information must be available to design the selected corrective measure.
8. **Review of Available Information.** This section should contain an evaluation of the existing information to ensure that it is sufficient to complete the design of the selected corrective measure. If insufficient information is available, then the report should contain procedures for collecting the required additional information.
9. **Procedures for Completing the Design.** This section should contain a description of the procedures which will be followed to complete the design of the corrective measure. This should include as appropriate:
  - a. Identification of the references and established guidance which will be used in designing the selected corrective measure. Justification for the selection of this procedure should also be provided.
  - b. A description of the procedures which will be used to complete the design of the corrective measure.
  - c. Identification of assumptions to be used in the design, and the impact these assumptions have on the overall corrective measure;
  - d. Significant data to be used in the design effort;

- e. Identification and discussion of the major equations to be used in the design effort (including a reference to the source of the equations);
- f. Sample calculations to be used in the design effort;
- g. Conceptual process/schematic diagrams;
- h. A site plan showing a preliminary layout of the selected corrective measure;
- i. Tables giving preliminary mass balances;
- j. Site safety and security provisions.

This information will form the technical basis for the detailed design of the remedial measure and the preparation of construction plans/specifications.

10. Identification of Required Permits. This section should identify and describe any necessary permits associated with the selected corrective measure, as well as the procedures which will be used to obtain these permits.
11. Long lead Procurement Considerations. This section should identify any elements/components of the selected corrective measure which will require a large amount of time to obtain/install. The following issues should also be discussed: (1) the reason why it will take a large amount of time to obtain/install the item; (2) the length of time necessary for procurement and (3) recognized sources of such items.
12. Project Management. This section should contain information regarding the procedures and personnel which will be involved in completing the design of the selected corrective measure. A schedule for completing the design should also be provided.

#### **4.0 PHASE II OF THE CMP**

Once the Illinois EPA approves the Conceptual Design Report, the facility should complete the design of the approved corrective action (Phase II of the CMP). Upon final completion of the design, a Final Design Report, consisting of final plans, specifications, construction work plan, etc., must be submitted to the Illinois EPA for review and approval.

Several documents must be submitted to the Illinois EPA as part of Phase II of the CMP. The following text describes the expected contents of the various documents which should be developed and submitted to the Illinois EPA as part of Phase II of the CMP.

1. Final Design Report and Construction Work Plan. The Final Design Report and Construction Work Plan must contain the detailed plans, specifications and drawings needed to construct the corrective measure. In addition, this document must contain (1) calculations, data etc., in support of the final design; and (2) a detailed description of the overall management strategy, construction quality assurance procedures and schedule for

constructing the corrective measure. It must be noted that the approved Conceptual Design Report forms the basis for this final report. The information which should be provided in this document includes:

- a. Introduction/Purpose. This portion of the document should: (1) provide background information regarding the project, (2) describe the purpose and goals of the project, and (3) describe the scope of the project.
- b. Detailed Plans of the Design System, including the following:
  - 1) Plan views;
  - 2) Section and supplementary views which, together with the specifications and general layouts, facilitate construction of the designed system;
  - 3) Dimensions and relative elevations of structures;
  - 4) Location and outline form of the equipment;
  - 5) Ground elevations; and
  - 6) Descriptive notations, as necessary, for clarity.
- c. Technical Specifications. Complete technical specifications for the construction of the system, including, but are not limited to, the following:
  - 1) All construction information, not shown in the drawings, which is necessary to inform the contractor in detail as to the required quality of materials, workmanship, and fabrication of the project;
  - 2) The type, size, strength, and operating characteristics of the equipment;
  - 3) The complete requirements for all mechanical and electrical equipment, including machinery, valves, piping and jointing of pipe;
  - 4) Electrical apparatus, wiring and meters;
  - 5) Construction materials;
  - 6) Chemicals, when used;
  - 7) Miscellaneous appurtenances;
  - 8) Instruction for testing materials and equipment as necessary; and
  - 9) Availability of soil boring information.

- d. **Project Management.** A description of the construction management approach, including the levels of authority and responsibility, lines of communication and qualifications of key personnel who will direct corrective measures construction/installation must be provided in the work plan.
  - e. **Construction Quality Assurance/Quality Control.** A construction quality assurance/quality control plan describing the procedures which will be followed to ensure the corrective measure is constructed/installed in accordance with the approved plans and specifications.
  - f. **Schedule.** The work plan must contain a schedule for completion of all major activities associated with construction/installation of the selected corrective measures. All major points of the construction/installation should be highlighted.
  - g. **Waste Management Practices.** This portion of the document should identify the wastes anticipated to be generated during the construction/installation of the corrective measures and provide a description of the procedures for appropriate characterization and management of these wastes.
  - h. **Required Permits.** Copies of permit applications submitted to other Bureaus of the Illinois EPA for the selected corrective measure must be provided in the report. If it is determined that no permit is required for construction/installation and implementation of the corrective measures, rationale and justification must be provided to support this contention.
  - i. **Cleanup Verification.** The report must contain the procedures which will be followed that the approved remediation objectives have been achieved when operation of the system is completed.
2. **Operation and Maintenance Plan.** An Operation and Maintenance Plan must be developed and submitted as part of Phase II of the CMP. This plan should outline the procedures for performing operations, long term maintenance, and monitoring of the corrective measure.
- a. **Introduction and Purpose.** This portion of the document should provide a brief description of the facility operations, scope of the corrective measures project, and summary of the project objectives.
  - b. **System Description.** This portion of the document should provide a description of the corrective measure and significant equipment, including manufacturer's specifications. This portion of the permit should also include a narrative of how the selected system equipment is capable of complying with the final engineered design of the corrective measure.



- c. **Operation and Maintenance Procedures.** This portion of the document should provide a description of the normal operation and maintenance procedures for the corrective measures system, including:
  - 1) Description of tasks for operation;
  - 2) Description of tasks for maintenance;
  - 3) Description of prescribed treatment or operation conditions; and
  - 4) Schedule showing the frequency of each operation and maintenance task.
- d. **Inspection Schedule.** This portion of the document should provide a description of the procedures for inspection of the corrective measures system, including problems to look for during the inspection procedure, specific inspection items, and frequency of the inspections.
- e. **Waste Management Practices.** This portion of the document should provide a description of the wastes generated by the corrective measure, and the appropriate procedures for proper characterization/management of these wastes.
- f. **Contingency Procedures.** This portion of the document should provide a description of the procedures which will address the following items:
  - 1) System breakdowns and operational problems including a list of redundant and emergency backup equipment and procedures;
  - 2) Alternative procedures (i.e., stabilization) which are to be implemented in the event that the corrective measure fails. The alternative procedures must be able to prevent release or threatened releases of hazardous wastes/hazardous constituents which may endanger human health and the environment, or exceed cleanup standards.
  - 3) Notification of facility and regulatory personnel in the event of a breakdown in the corrective measures, including written notification identifying what occurred, what response action is being taken and any potential impacts on human health and the environment.

## **5.0 PHASE III OF THE CMP**

Once the final design report is approved by the Illinois EPA, construction/installation of the approved corrective measure must commence. During this period, quarterly reports should be submitted which contain the following information:

1. Summary of activities completed during the reporting period;
2. An estimate of the percentage of the work completed;

3. Summaries of all actual or proposed changes to the approved plans and specifications or its implementation;
4. Summaries of all actual or potential problems encountered during the reporting period;
5. Proposal for correcting any problems; and
6. Projected work for the next reporting period.

Upon completion of construction/installation of the approved corrective measure, a Construction Completion Report must be submitted to the Illinois EPA documenting that these efforts were carried out in accordance with the Illinois EPA approved plans and specifications. This report should contain a thorough description of the efforts that went into constructing/installing the corrective measure and demonstrate that the procedures in the Illinois EPA approved Final Design Report were followed during this effort. Such a report should be formatted in a logical and orderly manner and contain the following information:

1. An introduction discussing the background of the project and the purpose and scope of the corrective measure described in the report.
2. Identification of the plans, technical specifications and drawings which were used in constructing/installing the corrective measure. These specifications and drawings should have been approved by the Illinois EPA during Phase II.
3. Identification of any variations from the Illinois EPA approved plans, technical specifications and drawings used in construction/installing the corrective measure. Justification regarding the need to vary from the approved plans and specifications must also be provided.
4. A description of the procedures used to construct/install the corrective measure, including the procedures used for quality assurance and quality control.
5. As built drawings, including identification of any variations from the approved plans, technical specifications and drawings.
6. A summary of all test results from the construction/installation effort, including quality assurance/quality control testing.
7. Actual test results, including quality assurance/quality control test results. These results should be located in an attachment/appendix and be well organized.
8. Identification of any test results which did not meet the specified value and a description of the action taken in response to this failure, including re testing efforts.
9. Photographs documenting the various phases of construction.

10. A detailed discussion of how the construction/installation effort met the requirements of the approved Final Design Report.
11. A certification meeting the requirements of 35 IAC 702.126 by an independent qualified, licensed professional engineer and by an authorized representative of the owner/operator.

#### **6.0 PHASE IV OF THE CMP**

Once the corrective measure has been constructed/installed, it must be operated, maintained and monitored in accordance with the approved plans and specifications (this is Phase IV of the CMP). During this period, quarterly reports must be submitted to the Illinois EPA documenting the results of these efforts. These reports include the following:

1. **Introduction.** -- A brief description of the facility operations, scope of the corrective measures project, and summary of the project objectives.
2. **System Description.** -- A description of the corrective measures constructed/installed at the site, and identify significant equipment. Describe the corrective measure and identify significant equipment.
3. **Monitoring Results.** -- A description of the monitoring and inspection procedures to be performed on the corrective measures. A summary of the monitoring results for the corrective measures, including copies of any laboratory analyses which document system effectiveness, provide a description of the monitoring procedures and inspections performed, and include a summary of the monitoring results for the corrective measure. Copies of all laboratory analytical results which document system monitoring must be provided.
4. **Effectiveness Determination.** -- Calculations and other relevant documentation which demonstrates the effectiveness of the selected corrective measure in remediating/stabilizing contamination to the extent anticipated by the corrective measures final design. Copies of relevant analytical data should be provided to substantiate this determination.
5. **System Effectiveness Recommendation.** -- Based upon the results of the effectiveness determination required under Item 4 above, recommendations on continued operation of the corrective measure must be provided. If the corrective measure is not performing in accordance with the final design, a recommendation on revisions or expansion of the system should be provided.

## **7.0 PHASE V OF THE CMP**

Once all corrective measures have been completed, a report must be developed documenting all the efforts which were carried out as part of implementing the corrective measure and demonstrating, as appropriate, that the approved remediation objectives have been achieved. This report should contain a compilation of all previous reports and also contain sufficient information to demonstrate that the approved remediation objectives have been achieved. It must be noted that such a report will not be developed for a unit closed as a landfill until the post-closure care period has been completed.

## **8.0 PROCEDURES WHICH SHOULD BE FOLLOWED WHEN SOIL REMOVAL IS THE SELECTED CORRECTIVE MEASURE**

Sections 2.0 through 6.0 above describe the procedures which should be followed when it is necessary to design some type of physical corrective measure (e.g., a final cover system, some type of treatment system, etc.). However, such detail is not necessary if excavation/removal is selected as the remedial action for the contaminated soil encountered at the site. In general, a work plan should be developed for this effort (for Illinois EPA review and approval) which fully describes each step to be used in removing the contaminated soil from the property. This includes a description of (1) the equipment utilized in the removal effort, (2) the pattern followed in removing the soil; (3) the depth to which the soil will be removed; (4) management of the soil on-site after it is removed from the ground; (5) loading areas; (6) the ultimate destination of the soil; and (7) any other steps critical to the removal effort.

One way to conduct a soil removal effort is to collect and analyze a sufficient number of soil samples to clearly determine the horizontal and vertical extent of soil contamination prior to conducting the soil removal effort. The boundaries of soil which must be removed are defined by the Illinois EPA established cleanup objectives for the project. Soil excavation must extend to sample locations where soil test results indicate that the remediation objectives are met. Closure verification sampling is not necessary in such cases, if a registered professional engineer oversees the soil removal effort and certifies that the remediation limits extend to these boundaries.

Another way to conduct a soil removal effort is to collect and analyze a limited number of soil samples prior to the soil removal effort and to rely mainly on field observation to determine the extent of the soil removal. In such cases closure verification sampling is necessary. Soil samples must be collected for analysis from the bottom and sidewalls of the final excavation. The following sampling/analysis effort is necessary to demonstrate that the remaining soil meets the established cleanup objectives:

1. A grid system should be established over the excavation.
2. Samples should be collected from the floor of the excavation at each grid intersection, including intersections along the perimeter of the excavation.

3. Samples should be collected at 6"-12" below the ground surface (bgs) along the excavation sidewalls at each grid intersection around the excavation perimeter. Samples must also be collected at the midpoint of the excavation wall at each grid intersection along the excavation perimeter.
4. Collection/analysis of all required samples must be in accordance with the procedures set forth in the approved plan.
5. Soil samples which must be analyzed for volatile organic compounds (VOCs) must be collected in accordance with the procedures set forth in Method 5035 of SW-846. In addition, such samples must be collected 6"-12" beneath the floor/sidewalls of the excavation to minimize the possibility of volatilization of the contaminants prior to the collection of the samples.
6. No random sampling may be conducted to verify achievement of cleanup objectives have been met.
7. Additional soil must be removed, as necessary, until it can be demonstrated that the remaining soil in and around the area of concern meets the established cleanup objectives. Additional samples must be collected and analyzed in accordance with the procedures described above from areas where additional soil has been removed.



**ATTACHMENT F**

**CONSTRUCTION CERTIFICATION**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT F  
Construction Certification**

This statement is to be completed by both the owner/operator and the registered professional engineer upon completion of construction in accordance with 35 IAC Section 702.126. Submit one copy of the certification with original signatures and two additional copies. Forward these certification statements and any information required by the permit to the following address:

Illinois Environmental Protection Illinois EPA  
Bureau of Land #33  
Permit Section  
1021 North Grand Avenue East  
Springfield, Illinois 62702

FACILITY NAME: BP Products North America, Inc.

IEPA's SITE CODE: LPC #1191155009

U.S. EPA ID NO.: ILD980503106

PART B PERMIT LOG #145R2

PERMIT (OR MODIFICATION) ISSUANCE DATE:

PERMIT CONDITION NO. REQUIRING CERTIFICATION:

The \_\_\_\_\_ has been constructed in accordance with the specifications in the Permit. Documentation that the construction was in accordance with the permit is contained in the enclosed report. I certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature of Owner/Operator

Name and Title

\_\_\_\_\_  
Signature of Registered P.E.

Name of Registered P.E. and  
Illinois Registration Number

Date

(P.E. SEAL)

**ATTACHMENT G**

**CLOSURE, POST-CLOSURE AND CORRECTIVE ACTION COST ESTIMATE  
SUMMARY**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**

**ATTACHMENT G**  
**CLOSURE, POST-CLOSURE, AND CORRECTIVE ACTION**  
**COST ESTIMATE SUMMARY**

These estimates are based on using 2020 dollars and include the cost of: (1) activities carried out each year (i.e., annual costs); and (2) one-time or non-annual costs. Post-closure care for Pond 1 Landfill requires the cost of the 30-year of post-closure care and one time certification cost. The East Surge Pond is currently operated to store nonhazardous wastewaters including the nonhazardous leachate from the adjacent onsite Permitted Non-Hazardous Waste Landfill in accordance with this permit. The ESP must be eventually closed in accordance with a plan approved by the Illinois EPA. The approved corrective action cost estimates account for costs associated with Parcels A, B, C, D, F, G, I, SWMU 7, PRS-1 and groundwater corrective action for the Riverfront facility.

**COST ESTIMATES**

ACTIVITY	Pond 1 Landfill (HWMU)	East Surge Pond	BP Riverfront SWMUs
Closure		\$538,420	
Post-Closure	\$2,364,068 in 2020 *		
SWMUs and Groundwater Corrective Action			\$10,359,514

**ATTACHMENT H**

**POST-CLOSURE INSPECTION SCHEDULE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



## ATTACHMENT H POST-CLOSURE INSPECTION SCHEDULE

### Inspection Schedule

Post-closure inspections for the Pond 1 Landfill will be conducted on a weekly, quarterly and an after-storm event basis. Documentation of all inspections, surveys, repairs performed, or replacements required to properly maintain the facility will be recorded on the inspection logs/repair logs and stored as a part of the Operations, Maintenance, and Monitoring (OM&M) Manual. The OM&M Manual will be maintained at the BP Main Plant Office or a local Waste Management, Inc., office or storage facility. General post-closure inspection procedures will include the following:

1. Visually inspect the perimeter fence and all gates. Check for fence integrity and note any areas of damage. Note the working condition of each gate and check to ensure that all locks and other security systems are in place and functioning.
2. Visually inspect each benchmark. Report any missing benchmarks and note any damage to the benchmarks.
3. Visually inspect the landfill cover, drainage system, and surrounding areas. Note any evidence of cover erosion, settling, or vegetative stress. Also note any unusual conditions such as odors, ponded water, or bubbling. Report any areas requiring further inspection or repairs so arrangements can be made to efficiently make all necessary repairs.
4. Visually inspect each leachate collection riser and note any damage. Check and record the liquid level in each riser. If the liquid level is found to be approaching or above the maximum acceptable level, make arrangements for leachate removal. Record the amount withdrawn, if applicable.
5. Visually inspect each groundwater well protective casing for damage. Check the protective casing and lock to ensure they are functioning and have not been tampered with. Note area around wells for erosion, settling or negative stress.
6. Visually inspect any required safety and emergency equipment. Report missing and/or damaged equipment.
7. Visually inspect the run-on and run-off control measures. Note any erosion, missing riprap, or other disrepair.

Following each inspection, a copy of the inspection log will be sent to the appropriate BP personnel for review. Arrangements will also be made to repair or replace any items in order to maintain the site at a condition equal to that in the application.

### **Post-Closure Maintenance (Pond 1 Landfill)**

Maintenance activities will respond to the needs determined from the inspections. Items that may require repair include:

- Flood Protection Dike;
- security control fencing;
- areas of differential settlement, subsidence and displacement;
- slopes damaged by erosion;
- run-on and run-off control structures;
- leachate collection systems; and
- benchmarks

Groundwater monitoring wells will be repaired or replaced as needed and will be decommissioned upon Illinois EPA approval.

The final cover system will be mowed at least annually and fertilized as needed (except for areas where shrubbery or other structures are present).

Corrective action for the cover materials will be taken if the following problems occur:

- ponding;
- cracks greater than one inch wide;
- gas problems;
- odor problems;
- larger areas of dead or stressed vegetation (areas greater than 50 square feet);
- vegetation with taproots growing in areas not designed to accommodate such;
- vector problems; or
- leachate pop outs or seeps.

Corrective action measures for these types of problems could include regrading, addition of soils to repair cracks or to eliminate ponding, or re-seeding to re-establish vegetation.

### **Maintenance (East Surge Pond)**

Maintenance activities will respond to the needs determined from the inspections. Items that may require repair include:

- water level staff gauge;
- lift station pumps/ sumps;
- gates/ valves; culverts
- dredging
- dikes
- vegetation
- clay liner



**ATTACHMENT I**

**CERTIFICATION OF COMPLETION OF CLOSURE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**



## Illinois Environmental Protection Illinois EPA

### CERTIFICATION OF COMPLETION OF RCRA CLOSURE

BP Products North American Inc./Riverfront Property (1191155009) – Madison County  
USEPA ID: ILD980503106  
RCRA Permit Log No. B-145R2

To meet the requirements of 35 IAC 725.215, this statement is to be completed by both a responsible officer of the owner/operator (as defined in 35 IAC 702.126) and by a qualified professional engineer upon completion of closure of the East Surge Pond (ESP). Submit one copy of the certification with original signatures and two additional copies.

The hazardous waste management unit, known as the East Surge Pond (ESP), at BP Products North American Inc./Riverfront Property has been closed in accordance with the specifications in the approved closure plan. A report documenting that closure has been carried out in accordance with the approved closure plan is attached.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS5/44(h))

---

**Facility Name**

---

**Printed Name of Responsible Officer**

---

**Signature of Owner/Operator      Date**  
**Responsible Officer**

---

**Printed Title of Responsible Officer**

---

**Signature of Licensed P.E.      Date**

---

**Printed Name of Licensed P.E. and  
Illinois License Number**

---

**Mailing Address of P.E.:**

---

**Licensed P.E.'s Seal:**

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**ATTACHMENT J**

**CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE**

**STATE ID# 1191155009**

**ILD980503106**

**POST-CLOSURE PERMIT LOG NO. B-145R2**





## Illinois Environmental Protection Illinois EPA

### CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE

BP Products North American Inc./Riverfront Property (1191155009) – Madison County

USEPA ID: ILD980503106

RCRA Permit Log No. B-145R2

To meet the requirements of 35 IAC 724.220, this statement is to be completed by both a responsible officer of the owner/operator (as defined in 35 IAC 702.126) and by a qualified professional engineer upon completion of post-closure care of the Pond 1 Landfill. Submit one copy of the certification with original signatures and two additional copies.

The hazardous waste management unit closed as a landfill, known as the Pond 1 Landfill, has been closed in accordance with the specifications in the approved closure plan. Post-Closure care required for the Pond 1 Landfill has been provided and completed in accordance with the RCRA Permit. A report documenting that required post-closure care have been carried out and completed in accordance with the approved post-closure care plan is attached.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS5/44(h))

---

**Facility Name**

---

**Printed Name of Responsible Officer**

---

**Signature of Owner/Operator      Date**  
**Responsible Officer**

---

**Printed Title of Responsible Officer**

---

**Signature of Licensed P.E.      Date**

---

**Printed Name of Licensed P.E. and  
Illinois License Number**

---

**Mailing Address of P.E.:**

---

**Licensed P.E.'s Seal:**

---

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# **EXHIBIT D**



**Legend**

- Main Plant Property Boundary
- Riverfront Property Boundary

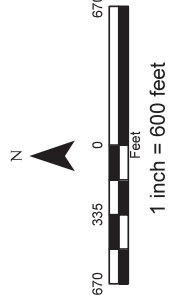


FIGURE 1

RIVERFRONT PROPERTY  
FORMER REFINERY  
WOOD RIVER, ILLINOIS



WOOD GROUP  
SULLY, ILLINOIS

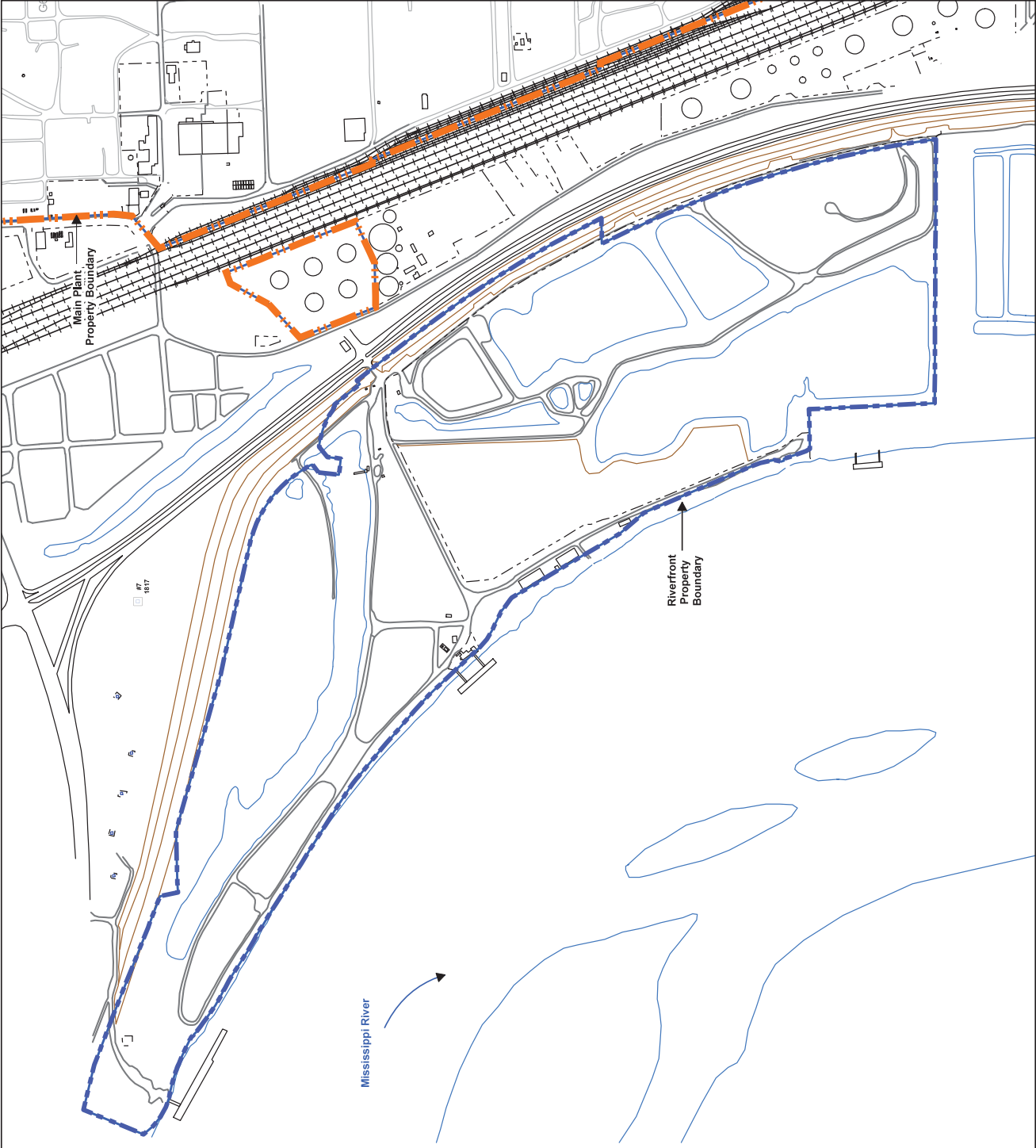
Job No. 656017S030  
 Drawn By: MPB  
 Reviewed By: ECG  
 Date: 12/12/2017



This drawing is the property of Wood Group. It is to be used only for the project for which it was prepared. No part of this drawing is to be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Wood Group.

REVISION DATE: 09/03/2019

ILD980503106



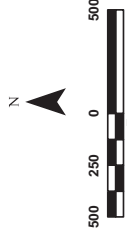
# EXHIBIT E

Legend



Land Reuse Parcel Boundaries

Riverfront Property Boundary



1 in = 600 ft

FIGURE 2

RIVERFRONT FACILITY PARCEL MAP  
BP Riverfront Property  
Wood River, Illinois



1933 CLAYTON ROAD, SUITE 215  
BALTIMORE, MD 21211

Job No. 6560175030

Drawn By: JT

Reviewed By: AV

Date: 7/20/2018

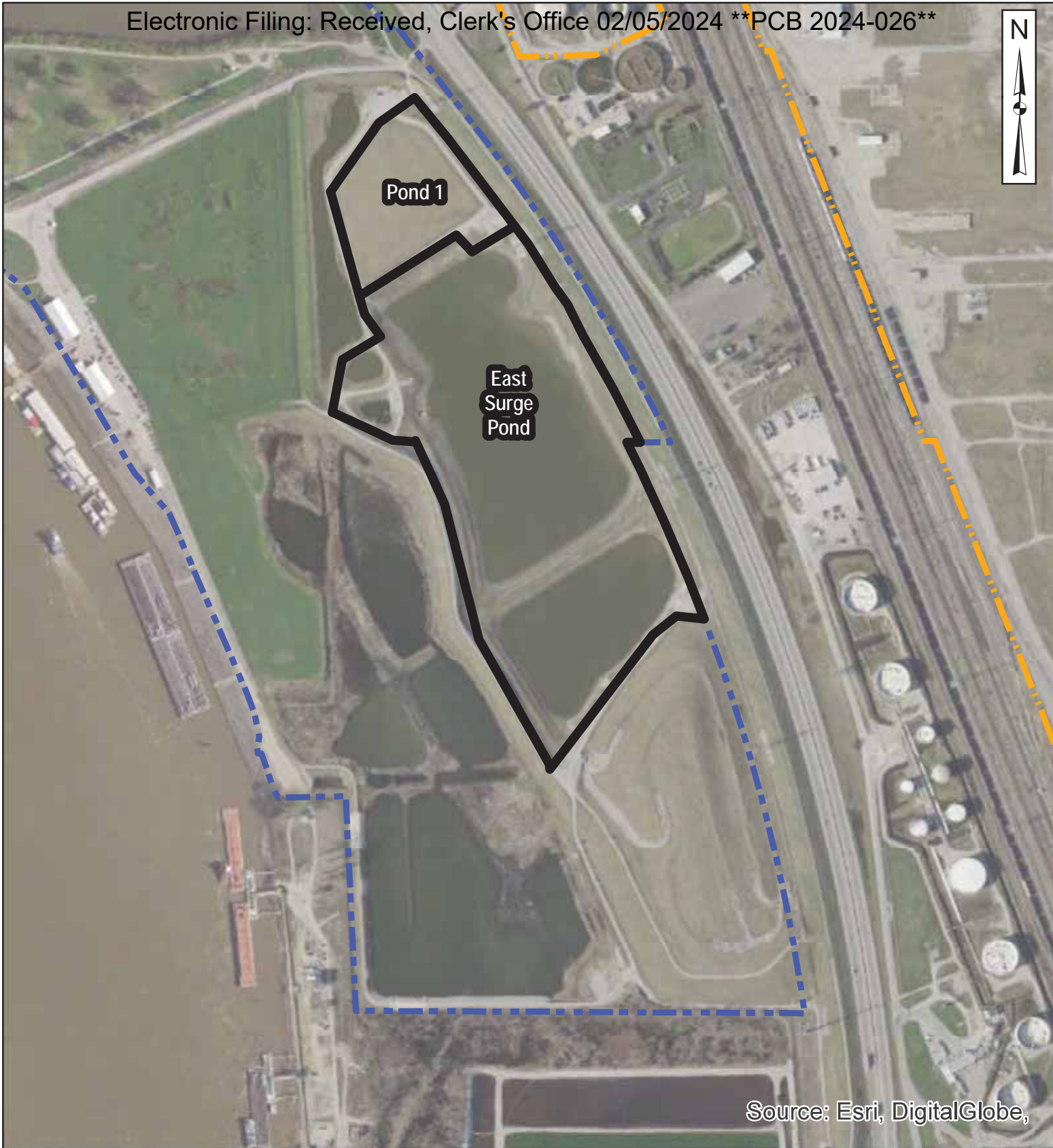
The data shown here has been created from all data not responsible one part to create for use with the  
BP Riverfront Property. This map was prepared by a contractor for the purpose of showing the location of the  
Riverfront Property. It is not intended to be used for any other purpose. The user assumes all liability for  
any use of this data for any other purpose.



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community




# **EXHIBIT F**

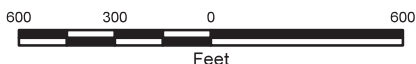




Source: Esri, DigitalGlobe,

**Legend**

-  ESP and P1L Boundary
-  Main Plant Property Boundary
-  Riverfront Property Boundary



1 in = 600 ft

**FIGURE 3**

**POND 1 LANDFILL AND EAST SURGE POND LOCATION**

BP RIVERFRONT PROPERTY  
Wood River, Illinois



15933 CLAYTON ROAD, SUITE 215  
BALLWIN, MO 63011

Job No. 6560185030  
 Drawn By: JT  
 Reviewed By: AV  
 Date: 7/18/2018



The map shown here has been created with all due and reasonable care and is strictly for use with the BP Wood River Project. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood E&I Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.






# EXHIBIT G



Source: Esri, DigitalGlobe,

**Legend**

-  Main Plant Property Boundary
-  Riverfront Property Boundary
-  Former Pond Location



1 in = 600 ft

**FIGURE 4**

**FORMER PONDS 1, 1A, 2, 2A, 3, 3A, 4, and 5**

BP RIVERFRONT PROPERTY  
Wood River, Illinois



15933 CLAYTON ROAD, SUITE 215  
BALLWIN, MO 63011

Job No.	6560185030
Drawn By:	JT
Reviewed By:	AV
Date:	7/18/2018



The map shown here has been created with all due and reasonable care and is strictly for use with the BP Wood River Project. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood E&I Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Path: C:\Users\jenmifir.thompson\Documents\AccGIS\BP\_RF\_Permit\_Renewal\Figure B-4\_FormerPonds.mxd

# EXHIBIT H



217/524-3301

JAN 19 2023

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

7011 1150 0001 0857 9343

BP Products North America Inc.  
Attn: Ms. Michelle Knapp  
180 West Warrenville Road  
Naperville, Illinois 60563

Re: 1191155009--Madison County  
BP Products North America Inc/Riverfront  
ILD980503106  
Log No. B-145R-CA-59, 90, 94  
Received: December 17, 2014; January 22, 2018; June 29, 2018; July 22, 2020;  
October 19, 2022  
RCRA Permit  
Permit CA

Dear Ms. Knapp:

This is in response to the subject submittals listed below, which were prepared and submitted on behalf of BP Products North America Inc (BP), by Ms. Michelle Knapp of BP's Remediation Management Services Company. The subject submittals were provided to address certain aspects of the RCRA corrective action program required by a RCRA Post Closure Permit (Permit) (Log No. B-145R and associated modifications) for the above-referenced BP Riverfront facility located in Wood River, Illinois.

Submittal No. 1 – (Log No. B-145R-CA-59) A document entitled, “Comments Regarding GMZ Reevaluation,” dated December 16, 2014, and received by the Illinois EPA on December 17, 2014. The document is submitted to request an extension to address wells located between the Riverfront and Main Plant properties with respect to the Groundwater Management Zone (GMZ), as required by Conditions 2.a and 2.b of the July 15, 2014 Illinois EPA letter (Log No. B-145R-CA-47). These wells were evaluated as part of the optimization evaluation and are deferred to be addressed in coordination with evaluation of the GMZ.

Submittal No. 2 – (Log No. B-145R-CA-90) A document entitled, “Groundwater Monitoring Optimization Plan,” dated December 29, 2017, and received by the Illinois EPA on January 22, 2018. The plan is provided to submit the final requirement for the Compliance Commitment Agreement (CCA) dated August 30, 2016, and outline the methodology for developing recommendations for long-term monitoring at the facility.

Ms. Knapp

Log No. B-145R-CA-59, 90, 94

Page 2

Submittal No. 3 – (Log No. B-145R-CA-94) A document entitled, “Groundwater Monitoring Optimization Report,” dated June 28, 2018, and received by the Illinois EPA on June 29, 2018.

Submittal No. 4 – (Log No. B-145R-CA-94) A document entitled, “Groundwater Monitoring Optimization Report Addendum,” dated July 20, 2020, and received by the Illinois EPA on July 22, 2020. This addendum revised the initial monitoring optimization plan based on emailed Illinois EPA draft comments sent to BP on April 29, 2020.

Submittal No. 5 – (Log No. B-145R-CA-90) A document entitled, “Additional Information – Illinois EPA RCRA Certification Form (LPC 632),” dated October 18, 2022, and received by the Illinois EPA on October 19, 2022. This submittal was provided to include a Professional Engineer seal with the signed form.

In addition to the above submittals, the following information was considered during the technical review:

- Illinois EPA emailed Draft Comments to Submittal No. 3 above on April 29, 2020; and
- A meeting was held March 12, 2020 between representatives of the Illinois EPA and BP in Springfield, Illinois at the Agency. The purpose of the meeting was for BP to present a summary of the Groundwater Optimization Report to Illinois EPA and discuss any questions relative to supplemental information requested in the Illinois EPA Draft Comments emailed April 29, 2020.

The BP Riverfront facility is located at 301 Evans Avenue, Wood River, Illinois. It is a 231 acre site mainly in Wood River, Illinois, with the 23 southernmost acres being located in the Village of Hartford, Illinois. It is located between the levee of the Wood River Levee District (WRLD) and the Mississippi River, just west of Illinois Route 3. The Riverfront facility is adjacent to and its operation was associated with the former Amoco Refinery in Wood River (BP Main Plant facility). This 555 acre former refinery is located due east of the Riverfront property and the corrective action pumping wells are located there.

BP is conducting a groundwater monitoring/corrective action program at this facility and also general corrective action for the solid waste management units at the facility. The groundwater corrective action program includes: (1) a groundwater management zone and (2) a groundwater pump and treat system whose goal is to maintain hydraulic control of any contaminated groundwater. This system is located at the BP Main Plant facility due east of the Riverfront facility. As part of the general corrective action program, the facility has been broken up into ten parcels and the SWMUs in each parcel are then focused on. For the purposes of this optimization evaluation, the individual groundwater monitoring requirements for each parcel have been included as part of the evaluation yet remain unchanged. Based on the optimization results, the site-wide program outlined in Section IV of the Permit, changes to the Groundwater Corrective Action Monitoring Program have been identified.



Ms. Knapp

Log No. B-145R-CA-59, 90, 94

Page 3

Based on a technical review of the submittals, the optimized Groundwater Corrective Action Monitoring Program can be approved. The following conditions and modifications apply:

1. In order to implement the proposed changes approved herein, within 180 days, submit a Class 1\* modification request to the facility's RCRA Permit for Illinois EPA's review and approval to request the Permit be updated to reflect the changes approved by this letter in accordance with 35 Ill. Adm Code 703.280(d)(2)(A). The approved changes may not be implemented until the Class 1\* modification request is approved by the Illinois EPA.
2. A completed RCRA Permit Application Form (LPC-PA23) must accompany any permit modification request submitted to the Illinois EPA Bureau of Land. The permittee must also submit current 39(i) certifications and supporting documentation with all applications for a permit. All forms must include original wet signatures.
3. Except as modified herein, corrective action at the subject facility must be carried out in accordance with (1) 35 Ill. Adm. Code 620, 724.201, and 742; (2) the facility's RCRA Permit; and (3) Illinois EPA letters regarding these activities.

This action shall constitute Illinois EPA's final action on the subject submittals. The applicant may appeal this final decision to the Illinois Pollution Control Board pursuant to Section 40 of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed 90 days by written notice from the applicant and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the request for an extension, please contact:

Illinois Environmental Protection Agency  
Division of Legal Counsel  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, IL 62794-9276  
217/782-5544

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board, Clerk  
State of Illinois Center  
100 West Randolph, Suite 11-500  
Chicago, IL 60601  
312/814-3620

Ms. Knapp

Log No. B-145R-CA-59, 90, 94

Page 4

Work required by this letter, your modification requests or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This letter does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Should you have any questions regarding groundwater-related matters associated with this project, please contact Amy Butler at 217/558-4716; questions regarding other aspects of this project should be directed to Takako Halteman at 217/524-8115.

Sincerely,

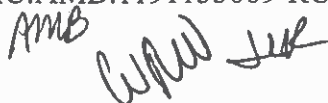


Jacqueline M. Cooperider, P.E.

Permit Section Manager

Bureau of Land

JMC:AMB:1191155009-RCRA-B145RCA59-B145RCA90-B145RCA94-Approval.docx



# EXHIBIT I

**Legend**

- A Uppermost Aquifer Well
- 3 Active Cone of Depression Well
- ➔ Inferred Groundwater Flow Direction
- Inferred Groundwater Elevation Contours
- ▨ Main Plant GMZ
- ▨ Riverfront GMZ
- ▨ Main Plant Property Boundary
- ▨ Riverfront Property Boundary

\* G88L and G31D were excluded from the contour interpretation

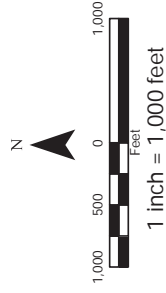


FIGURE C-1

UPPERMOST AQUIFER  
POTENTIOMETRIC SURFACE MAP  
OCTOBER 3-4, 2017  
BP FORMER REFINERY  
WOOD RIVER, ILLINOIS

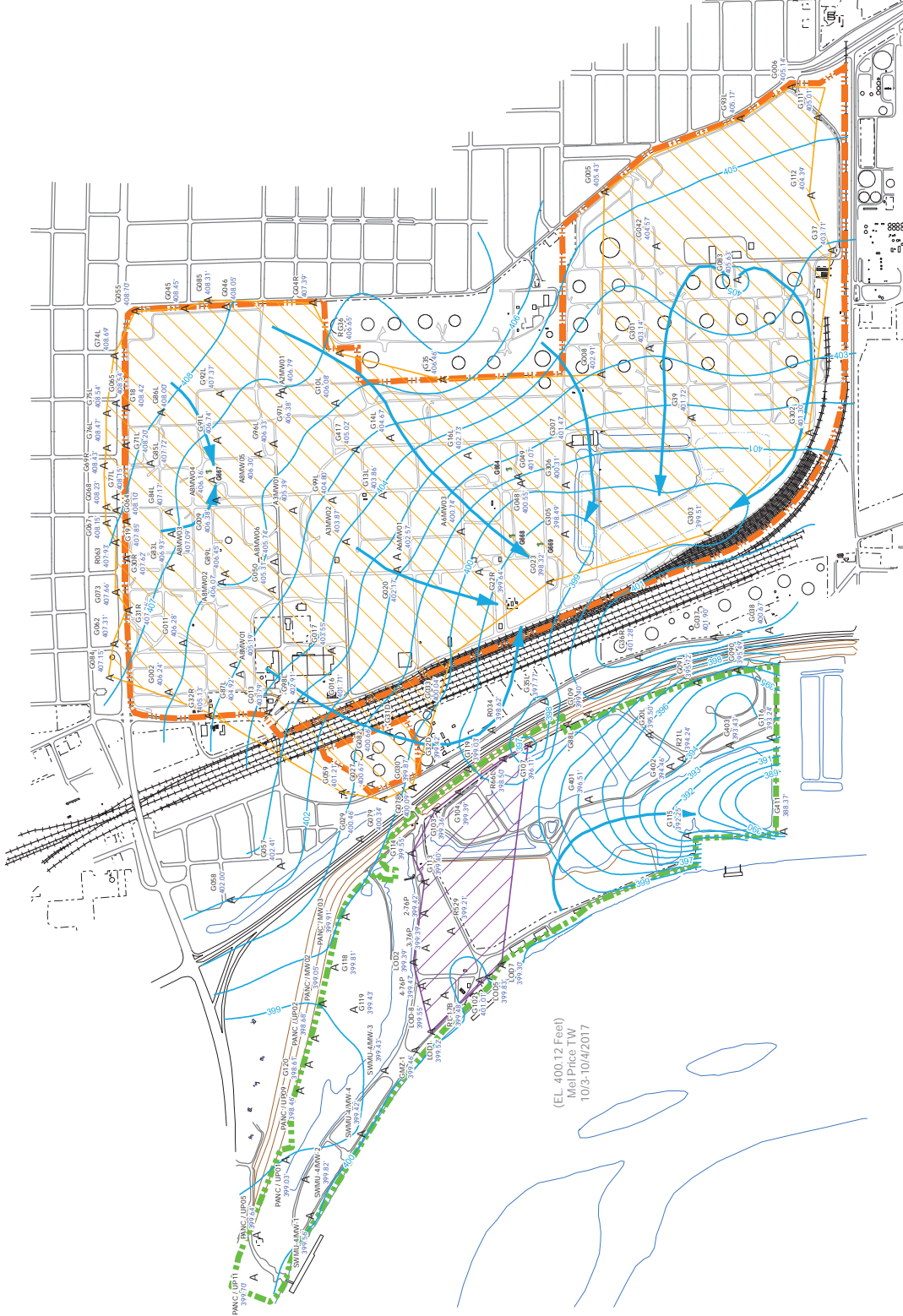


amec foster wheeler  
1699 CLAYTON ROAD, SUITE 215  
BALLWIN, MD 68811

Job No.	6560175013
Drawn By:	KAS
Reviewed By:	ECC
Date:	1/8/2018



BP Wood River Project - This map has been created by a licensed land surveyor and any part of the map which is not shown on the ground is shown as a proposed location. It is not intended to be used as a substitute for a professional survey. © 2017 amec foster wheeler



# **EXHIBIT J**





State of Illinois

## ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director  
217-524-3300

2200 Churchill Road, Springfield, IL 62794-9276

April 6, 1994

RECEIVED

APR 12 1994

REMEDIATION  
SERVICES DIVISIONAmoco Oil Company  
Attention: David V. Kalet  
one Prudential Plaza  
130 East Randolph Drive  
Chicago, Illinois 60680-7513Re: 1191155009 -- Madison County  
Amoco - Riverfront Property  
ILD980503106  
RCRA Permit

Log No. B-145

Dear Mr. Kalet:

The Agency has received the December 22, 1993 proposal to establish a Groundwater Management Zone, submitted pursuant to Section II, Condition E.2 of the Part B Permit. The proposed Groundwater Management Zone for the Riverfront Property was reviewed with regard to 35 IAC 620.250 and is hereby approved with the following conditions:

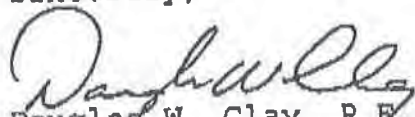
1. The Groundwater Management Zone is defined as a three dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from a site. Therefore, within 180 days of the date of this letter, Amoco shall demonstrate that the effective limit of the corrective action process is at least as reaching as:
  - a. groundwater monitoring wells LOD-7', LOD-5', G102, LOD-6', LOD-1', LOD-8', RL-18', 4-76P', 3-76P', 2-76P', 1-76P', G101, G030, G119, G035, G35L and G35D (as illustrated in Figure 1) (' = Amoco well designation); and
  - b. the vertical extent of known contamination as defined by the approved clean-up objectives.
2. The Groundwater Management Zone is being approved to mitigate the release of benzene, ethylbenzene, toluene, xylenes, chrysene, arsenic, cadmium and lead to the groundwater at the site. If other constituents are detected in the groundwater in excess of applicable groundwater

quality standards, the Groundwater Management Zone shall be reevaluated for those constituents to determine if the approved corrective action process is effective for mitigating impairment to the groundwater caused by the newly identified contaminants. This evaluation must be completed and submitted to the Agency in writing within 60 days of identifying the additional releases.

3. Groundwater monitoring shall be performed with Section II of the approved Part B permit.
4. The Groundwater Management Zone shall be monitored and maintained in compliance with 35 IAC 620.250.
5. Upon completion of the site-wide RFI, the Groundwater Management Zone shall become a part of the final remedy, as determined by the RCRA Corrective Action process, and may require modification at that point.

If you have any questions, feel free to contact Ken Lovett at 217/524-3285.

Sincerely,



Douglas W. Clay, P.E.  
Hazardous Waste Branch Manager  
Permit Section, Bureau of Land

attachment

DWC:kdl *kd*

cc: USEPA Region V

